



Integrated Social Science

A textbook of SOCIAL STUDIES



Teacher's
Resource
Book



**HITAISHI PUBLISHERS
PVT. LTD**

Educational Publishers | New Delhi | INDIA

Contents

HISTORY

| | |
|--|----|
| Lesson 1. Tracing Changes Through A Thousand Years..... | 3 |
| Lesson 2. New Kings and Kingdoms..... | 4 |
| Lesson 3. Delhi Sultanate..... | 6 |
| Lesson 4. Regional Kingdoms (1400-1565 CE) | 9 |
| Lesson 5. The Creation of an Empire | 10 |
| Lesson 6. Medieval Architecture of India | 12 |
| Lesson 7. Towns, Traders and Craftspersons..... | 14 |
| Lesson 8. Tribes and Settled Communities..... | 17 |
| Lesson 9. Devotional Paths to the Divine | 18 |
| Lesson 10. The Making of Regional Cultures..... | 20 |
| Lesson 11. Eighteenth Century Political Formations | 22 |

GEOGRAPHY

| | |
|---|----|
| Lesson 1. Our Environment | 24 |
| Lesson 2. Inside Our Earth | 26 |
| Lesson 3. Our Changing Earth..... | 28 |
| Lesson 4. Landforms of Erosion and Deposition..... | 30 |
| Lesson 5. Atmosphere..... | 32 |
| Lesson 6. Weather and Climate | 34 |
| Lesson 7. Hydrosphere | 36 |
| Lesson 8. Natural Vegetation and Wildlife..... | 39 |
| Lesson 9. Settlement, Transport and Communication | 41 |
| Lesson 10. The Tropical and Subtropical Regions | 43 |
| Lesson 11. Life in the Temperate Grasslands | 45 |
| Lesson 12. Life in the Deserts..... | 47 |

SOCIAL AND POLITICAL LIFE

| | |
|---|----|
| Lesson 1. Democracy and Equality | 49 |
| Lesson 2. Role of Government in Health | 50 |
| Lesson 3. How the State Government Works..... | 51 |
| Lesson 4. Growing Up As Boys and Girls..... | 54 |
| Lesson 5. Women Change the World | 55 |
| Lesson 6. Understanding Media..... | 56 |
| Lesson 7. Understanding Advertising..... | 58 |
| Lesson 8. Markets Around Us | 60 |
| Lesson 9. Stages of Production | 62 |

HISTORY

1. Tracing Changes Through A Thousand Years

Practice Time

- I. 1. (ii), 2. (ii), 3. (ii), 4. (i), 5. (i).
 - II. 1. A 'foreigner' was any stranger even a city dweller on a visit to a village.
 2. The affairs of jatis or sub-castes were regulated and ranked on the basis of their occupations. Their status could vary from time to time and framed their own rules and regulations.
 3. The caste system was very rigid as the society was becoming more differentiated and many people who converted to Islam did not forget their old customs and practices.
 4. Minhaj-i Siraj was a thirteenth century chronicler who wrote in Persian. He coined the term 'Hindustan' that referred to the areas of Punjab, Haryana and the lands between the Ganga and Yamuna but did not include whole of India.
 5. Historiography is the body of historical work on a specialized topic such as *Akbarnama* by Abdul Fazal and *Kitab-ur-Rehla* by Ibn Batutta, an Arab traveller.
 - III. 1. (i) In the medieval period each region had its own religious cults and even affiliations. This period witnessed major developments in old and new religions. (ii) There appeared new religions in the Indian Subcontinent. (iii) The new rulers who were patrons of Islam ensured its acceptance among sizeable sections of Indian population. (iv) Guru Nanak (1469-1539), founded Sikhism which continues to prosper to this day. (v) Another faith the Parsi or Zoroastrian religion founded in 8th century reached India during early medieval period.
 2. It has been stated above that the term Hindustan was used by Minhaj-i Siraj. It did not include whole of India. Later In the early sixteenth century Babur used Hindustan to describe the geography, the fauna and the culture of the inhabitants of the subcontinent.
 3. Pan-regional empire means the empire encompassing the regions beyond its known geographic boundaries. After 13th century large states like those of Cholas, Tughluqs and Mughals arose which encompassed many regions. These were known as pan-regional empires.
 4. The three main developments in religious traditions were: (i) With the rise of regions and empires great regional temples appeared. Jagganatha temple at Puri and Shiva temple in Tamil Nadu are examples. They showed collective beliefs of people related to their social and economic organisation. (ii) With the worship of new deities such as Krishna as incarnation of Vishnu, Radha-Krishna became popular theme. (iii) *Personal deity* is that the devotees could reach without the aid of priests and elaborate rituals. This led to emergence of the Bhakti and Sufi Movements,
 5. In 1318, the poet Amir Khusrau gave an account of the regions and their languages like Sindhi (Sind now in Pakistan), Lahori (around Lahore in Pakistan), Kashmiri (Kashmir), Dvarsamudri (southern Karnataka) Telangani (Andhra Pradesh), Gujari (Gujarat) *Ma'bari* (in Tamil Nadu), *Gauri*, (in Bengal) ... *Awadhi* (in eastern Uttar Pradesh) and *Hindawi* (in the area around Delhi)".
- IV. 1. The names of the Indian Subcontinent have changed over time: (i) In ancient times the Romans named the land 'India' after River Indus; (ii) The people who lived in the North-West called it 'Bharat' after a group of people who ruled there. (iii) Later the people who lived this side of the river Indus called it 'Hindos'; (iv) In the medieval period, the term 'Hindustan' came to be used. The term was used in geographical context in by Minhaj-i Siraj. He referred to the areas of Punjab, Haryana and the lands between the Ganga and Yamuna but did not include whole of India. (v) The fourteenth-century poet Amir Khusrau used the word "Hind". (vi) In the early sixteenth century Babur used Hindustan to describe the geography, the fauna and the culture of the inhabitants of the

subcontinent.

2. The sources of information are broadly divided into *primary* and *secondary sources*.
(i) The literary sources are primary sources of information and generally include the handwritten or typed record or a story, called manuscript. It also includes illuminated manuscript which contained miniature paintings etc.; (ii) Other types literary source are chronicles, a historical record of events arranged in order of the time and life at the court; (iii) The body of historical work on a specialized topic, known as historiography such as *Akbarnama* by Abdul Fazal and *Kitab-ur-Rehla* by Ibn Batutta, an Arab traveller are very important primary sources. (iv) Then there are autobiographies such as those of Firoze Shah Tughluq called *Futuhāt I Firoze Shahi*. (v) Other written sources such as travelogues like those of Marco Polo, Abdur Razzaq's account of Vijayanagar rulers etc. (vi) The archaeological sources include monuments, inscriptions, coins and artifacts. The monuments of this period such as Jama Masjids, forts such as Red Fort at Delhi, numerous temples all over India, palaces like that at Jaisalmer, tombs and pillars like Qutab Minar and many others.

V. 1. F, 2. T, 3. F.

- VI. 1. manuscripts,
2. Ziyauddin Barani,
3. potatoes, corn, chillies, tea, coffee.
4. Foods such as mentioned foregoing answer, Persian Wheel, spinning wheel and firearms in combat.

VII. 1.-(iv), 2.-(v), 3.-(ii), 4.-(i), 5.-(iii)

- VIII. 1. Rajputs were not just rulers or chieftains but followed a chivalric code of conduct and served in army. Marwaris were a group of trading communities.
2. Primary sources of information are like literary sources and secondary sources of information are such as archaeological sources.
3. The autobiography is self-written account of life whereas a chronicle is a factual or historical account of some person or place.

HOTS

1. Many social groups who were powerful sections of society controlled agricultural surpluses and gradually acquired political power over the region of their influence. Other like Rajputs followed a chivalric code of conduct and served in army. They also included Marathas, Sikhs, Jats and Ahoms who inhabited different regions.
2. A scribe is one who made handwritten copies of the manuscript. Before invention of printing, the scribes acquired great political importance. Kayasthas, for example, were a caste of scribes and secretaries. They acquired great political importance as a distinct social group.

Activity Time

□ Map Activity

Similarities: (i) The sub-continent by al Idrisi and the one in early 18th have same features.
Differences: al Idrisi's map shows these features upside down, the early 18th century while depicting the features correctly describes Indes a wide in area than the present day sub-continent.

□ Life Skills

Today the records are kept by different government departments like revenue, employment, statistics departments etc. There are archives both at state and union levels where such records are deposited. With computerisation, the Government of India, Ministry of Information Technology has specialised departments responsible for such information.

□ Imagine

I would be interested in finding out the economic, political and social history of the area where I live. This would enable me to trace the changes that have taken place since ancient times. This local knowledge will later enable me to construct the historical happenings in broader context.

2. New Kings and Kingdoms

Practice Time

- I. 1. (iii), 2. (ii), 3. (ii), 4. (i), 5. (ii).
- II. 1. The three parties involved in the 'tripartite struggle' were the Gurjara-Pratiharas, Rashtrakutas and Palas.
2. Two major cities under the control of

Chahamanas were Delhi and Ajmer.

3. In the Tamil region tank irrigation had been developed.
 4. The later Chola kingdom was divided into provinces, called *mandalam*, under the charge of a governor.
 5. Shudras were the untouchables in the Chola society in the 9th century.
- III. 1. **The qualifications necessary to become a member of the committee of the sabha in the Chola empire were:** (i) Must be a male adult between 35-70 years of age; (ii) Must be from landowning class; (iii) The members were expected to have knowledge of the Vedas; and (iv) Be well versed in administrative matters as well as be honest.
2. **Rashtrakutas became powerful by using these means:** (i) Build up an image and called themselves as descendants of Satyaki, a powerful warrior clan to which Lord Krishna also belonged; (ii) In the mid-eighth century, Dantivarman or Dantidurga, a contemporary of Chalukya king Pulakeshin II, overthrew his Chalukya overlord; (iii) This victory was described as the rebirth as a Kshatriya and performed a ritual called *hiranya-garbha* (literally, the golden womb) with the help of Brahmins; (iv) Dantidurga was succeeded by Krishnaraja (768-772) who constructed Kailasha Temple of Ellora and the rock-cut caves.
 3. **The new dynasties adopted the following means to gain power:** (i) The new dynasties like the Rashtrakutas resorted to image building of belonging to a warrior class; (ii) Samantas, also described above, after gaining power declared themselves as maha-samanta, mahamandaleshvara or the great lord of a "circle" or region and so on; (iii) After sometime they asserted their independence from their overlords; and (iv) In many cases such as in the case of the Gurjara-Pratihara Harichandra who were originally Brahmanas but gave up their traditional profession and took to arms and used their military skill to successfully carve out their kingdom in Rajasthan.
4. **Taxes and land revenue of Cholas:** (i) A Chola inscription shows that more than 400 terms for different kinds of taxes; (ii) Taxes could also be in the form of forced labour called *vetti*; (iii) Land revenue called *kadamai* was levied after elaborate survey of land was done and the government share of land revenue was fixed; (iv) There were different committees like law and order, justice, revenue collection and irrigation committee; and (v) A cess was levied on succession to family property.
 5. **Bhakti and Advaita philosophy:** (i) The early Bhakti movement that emerged in the South centred around devotion to god cutting across all castes and villages were important for its propagation; (ii) A kind of social innovation of this period it was led by Vaishnavite Alvars and Saivite Nayanmars; (iii) Besides, the advaita philosophy, Shankaracharya preached oneness of mankind; (iv) This philosophy of oneness was also preached by Ramanuja and Madhvacharyas during this period
- IV. 1. **Game of thrones:** (i) The way the samantas gained power described in Short Answer Questions 2 and 3 (repeat details here) above, has best been aptly described as the 'game of thrones of feuding kingdoms'.
2. **Turkish and Arab invasions:** (i) Prophet Muhammad, born in 570 CE in Mecca, founded Islam. His followers spread this new religion through conquests and migrations. (ii) In 712 CE the Arabs conquered Sind and Multan. It was the first victory of Islam in India; (iii) The first Turkish invader to invade India was Mahmud (971-1030 CE), the ruler of Ghazni in modern Afghanistan. Between 1000 and 1025 CE he carried out 17 raids to merely raid and loot the wealth of temples in Kangra, Punjab, Thaneshwar, Mathura and Kathiawar; (iv) After Mahmud's death the Arabs the first foray into India in 1192 when Muhammad Ghori (1162-1206 CE), ruler of a small town Ghor in Central Afghanistan captured the city of Ajmer from Prithviraja III. (v) Ghori later annexed Kanauj after defeating Jaichand, the ruler. (vi) In 1193 his slave, Qutb-ud-din Aibak captured Varanasi and Delhi. Ghori thus was the real founder of

Islamic empire in India.

3. **Agrarian expansion during Chola period:**
(i) The time Cholas came to power in 9th century the population was predominantly rural, as a result agrarian expansion was undertaken; (ii) It was made possible with large scale tank irrigation, land revenue system and relatively autonomous village administrative organs like the *ur* and the *sabha*. (iii) Growth of population during this period further helped to strengthen agrarian expansion. (iv) The traders' guilds or associations ensured better prices to farmers for their produce. (v) There had developed occupational divisions like Valangai, peasant castes and Idangai, artisan and trader castes. This division helped strengthen the village society and ensure progress of agriculture. (vi) The crops cultivated included paddy, wheat, barley, rice, millets, pulses, sugarcane, cotton, indigo, etc.

V. 1. T, 2. T, 3. F.

- VI. 1. Ghazni was only interested in invading and looting small kingdoms and temples of Northern India.
2. Control over Kanauj, a district in modern Uttar Pradesh, was in the centre of Ganga Valley. So control over the city was of strategic importance.
3. The southern kingdoms between 10th and 12th centuries were generally large and their rulers were also powerful and unlike the rise and fall of dynasties in the north, the kingdoms in the south remained stable.

VII. 1.-(iii), 2.-(i), 3.-(ii), 4.-(iv).

- VIII. 1. Kings were rulers and samantas were big landlords who later gained power.
2. The Ghaznavids were Turkish invaders of India between 1,000 and 1,500 CE and only looted small kingdoms and temples in India. Ghorids were Arab invaders of India between 1192 and 1206 and established Islamic rule in India.
3. Cheras first ruled in modern Kerala around BCE 120 and later second Chera Empire was established around 800 CE which lasted until

1102 CE.

4. In Chola Empire was divided into provinces, called mandalams and a number of villages were called nadu.

HOTS

1. The Rajputs in the 12th century controlled vast territories in North India from Bengal to Gujarat. In Sind and Multan Rajput kingdoms co-existed with Muslim states. Prithviraja III (1168-1192) was their most famous ruler. He ruled in Delhi and Ajmer. In 1191 he first defeated Afghan ruler Sultan Muhammad Ghori but lost to him when he was again attacked in 1192. Some Rajput rulers are said to have sided with Gori and this was the beginning of the Islamic rule in India.
2. Efficient Chola administration was characterised by certain amount of decentralisation. The kingdom was divided into provinces, which were under the charge of governors belonging to royal family. Villages too enjoyed a large measure of autonomy. Separate committees were constituted to look after irrigation works, gardens, temples etc. All these measures ensured prosperity of the Chola Empire that lasted for about four centuries.

Activity Time

Life Skills

The Tang Dynasty in China was like the Gupta Empire in India. Both periods are known as golden ages of respective countries. The system of rule by bureaucracy has other equivalents in the history of the world. It was because of efficiency that the system remained in vogue for over centuries.

3. Delhi Sultanate

Practice Time

- I. 1. (iii), 2. (iii), 3. (ii), 4. (i), 5. (ii).
II. 1. The Persian was the language of administration under the Delhi Sultanate.
2. The Sultanate reached its farthest extent under Muhammad-bin Tughluq.
3. Ibn Battuta travelled to India from Morocco.
4. The iqta system was the system of assigning land to nobles and others in lieu of salary.

5. Sultan Muhammad-bin Tughluq had imposed land revenue at a time when the doab region between Ganga and Yamuna was suffering from draught. The peasants were forced to abandon their lands and the Sultan had no alternative but to withdraw the order.
- III. 1. According to '*the Circle of Justice*' that the Fakhr-i-Mudabir wrote in the thirteen century, it was it was important for military commanders: (i) To ensure regular salaries to soldiers because it was their livelihood. (ii) A king needed the soldiers in order to rule; and (iii) salaries come from land revenue which the peasants can pay only when they are prosperous.
2. (i) By internal frontiers is meant the frontiers of the hinterlands of the garrison towns where Ala-ud-din Khalji undertook campaigns in the first instance in order to consolidate his reign. (ii) By external frontiers is meant the territories outside the extent of the Sultanate. (iii) Ala-ud-din Khalji undertook the military expedition into southern India which was outside the rule of the Delhi Sultanate. (iv) The southern campaigns, however, culminated during the reign of Muhammad Tughluq.
3. Ala-ud-din Khalji undertook the work of assignment of territories to provincial chiefs called *muqtas*. (i) It helped in streamlining the administration. (ii) The provincial chiefs though may have been ambitious to defy the orders of the Sultan but could not do so. If found laxity or dishonesty even governors were not spared physical beating.
4. The authors of the 'tawarikh' or histories, written in Persian, the language of administration under the Delhi Sultans, could certainly have given information about the lives of ordinary men and women because: (i) They were learned men and worked as secretaries, administrators, poets and courtiers. (ii) Their travelogues, inscriptions, coins and works of art and architecture speak of the talents, skills, preferences and give this type of information.
5. There was great impact of Mongol invasions during the period of Delhi Sultanate: (i) In the reign of Ghiyas-ud-din Balban (1266-1287) reorganization of the army took place so as to safeguard north-west borders against Mongol raids. (ii) Again Jalaluddin (1290 – 1296) was an incompetent ruler and his lenient policy towards Mongols led finally to his downfall. (iii) Mongol invasions across North-West Frontier posed great challenges to Delhi Sultanate as many regional kingdoms like in Bengal and Bihar withdrew their allegiance to Delhi Sultanate.
6. Lodhi dynasty ruled from 1451 till 1526. (i) Bahlol Lodhi, governor of Lahore belonging to the Afghan dynasty ascended the throne in 1451 and ruled until 1489. Thereafter Sikandar Lodhi (1489-1517) and Ibrahim Lodhi (1517-1526) were other rulers. (ii) The Lodhis were by and large competent rulers and took many measures to control prices, defeated nobles of Afghan origin who had rebelled. (iii) During the rule of Lodhis many new independent kingdoms like Malwa, Gujarat, and Rajasthan and in entire South India had emerged. (iv) Ibrahim Lodhi was overthrown in the First Battle of Panipat in 1526 and the Mughal Dynasty came to power
- IV. 1. Instead of Ghiyas-ud-din Tughluq read Muhammad-bin Tughluq whom Ibn Battuta, the traveller from Morocco who had been appointed chief Qazzi of Delhi and was sent as ambassador to China, calls him 'a mixture of opposites' although a great scholar. (ii) Muhammad-bin Tughluq correctly conceived many projects but was a miserable failure in execution of these projects. (iii) In 1327, he decided to shift the capital of the empire to a central place that would also be safe from Mongol invasions and chose Devagiri or Deogir in Deccan and renamed it Daulatabad but the transfer proved a failure and in the re-shift thousands suffered innumerable hardships and many died. (iv) Similarly his token currency in 1329, two expeditions to Kangra region and another to conquer Khurasan in Central Asia were badly executed. (v) In the Doab region Sultan imposed land revenue at a time when the people were suffering from draught. The peasants were forced to abandon their

lands rather than pay taxes. Sultan had no alternative but to withdraw the order.

2. **Rise and fall of Delhi Sultanate:** (i) The feuding small kingdoms in India in 11th and 12th centuries were mainly responsible for the success and rise of Delhi Sultanate. (ii) The main drawback of Delhi Sultans was their political style which reflected traditional Persian kinship and lacked any other tradition to draw upon. (iii) There was no central authority except under Ala-ud-din Khalji and Muhammad-bin Tughluq for some short periods of time. (iv) Sultans considered themselves as protectors of Islam rather than their subjects. This mistrust was mainly responsible for the rise of small kingdoms in 16th century. (v) Mongol invasion of Persia in the thirteen century was on account of struggle between traditionalists and those converted to Islam.

3. **Positive Features of Delhi Sultanate:** (i) With the establishment of Delhi Sultanate, there was transformation of Delhi into a capital of the Indian Subcontinent. It has continued this prominence since then. (ii) The Delhi Sultanate had brought into prominence many authors, historians, poets, bards, many able and qualified bureaucrats that were a part of governance. (iii) The Sultanate threw light on gender distinctions which actually helped women to come in the forefront. (iv) During campaigns many forested regions in the Ganga Valley were cleared. (v) Delhi Sultanate threw new light on governance, dispensation of justice and many such elements of modern governments.

- V. 1. Bandagan, 2. Siri Fort, 3. Devagiri, Daulatabad, 4. Ibrahim Lodhi, 5. Protectors

- VI. 1. Slaves were poor people forced to serve others and were their legal property. Nobles in medieval times were a high ranking social class who had considerable influence over the monarch.
2. Kizir Khan (1414-1421) was Timur's deputy in India whom he choose after raiding and leaving Delhi. Mubarak Shah was the last ruler of Khalji dynasty who was murdered in 1320.

3. Ala-ud-din Khalji (1296-1316) and Muhammad-bin Tughluq (1324-1351) were rulers of Delhi Sultanate of two different dynasties.

HOTS

1. India is one of the few Old World Civilisations which survived in its original shape after the Muslim invasions between 12th and 16th centuries. The Old World Civilisations were the four River Valley civilisations namely Mesopotamian, Egyptian, Indus Valley or Harappa and Chinese civilisations. The Harappa Valley civilisation prospered in India. It was succeeded by Vedic period during which Hinduism together with Buddhism and Jainism emerged as the main religions of the people. There took place large scale or en-masse conversions to Islam in many countries of the Old World after Islamic invasions in the medieval period but India after Independence continued with its own religions and civilisations.

2. Main features of Delhi Sultanate were (i) The whole period of Delhi Sultanate from the time of defeat of Prithviraj Chauhan in 1192 until 1526 when the last Sultanate ruler Ibrahim Lodhi was overthrown by Babur represented one of ceaseless military campaigns in Indian Subcontinent. (ii) Their political style reflected traditional Persian kinship and lacked any other tradition to draw upon. (iii) The rebellions of the nobles, governors and commanders occurred on account of the slavery that was practised. (iv) Mongol invasion of Persia in the thirteen century was on account of struggle between traditionalists and those converted to Islam in which Afghanistan had become a region of bone of contention. (v) Almost all the Sultans were fiercely orthodox Muslims and therefore an inbuilt threat to its continuance.

Activity Time

Life Skills

1. We learn that Mongols, from whom Mughals in India have also descended, though a warrior tribe were great builders. They adapted to the prevailing situation and were tolerant of other cultures.
2. The political situation in India in the 14th

century was very fluid although the Delhi Sultanate had completed about a century of its rule yet it had not consolidated the empire.

4. Regional Kingdoms (1400-1565 CE)

Practice Time

- I. 1. (ii), 2. (i), 3. (i), 4. (iii), 5. (i).
- II. 1. The king of Kashmir Sultan Zainu'l-Abidin was known passionately in Kashmiri as Budshah, meaning Great King, who ascended the throne in 1414.
2. Mughals in the sixteenth century annexed the kingdom of Bengal.
3. Some of the industries of the Vijayanagar kingdom were the textile, mining, metallurgy and perfumery.
4. Vijayanagar kingdom was defeated in the Battle of Talikota in 1565 by all the erstwhile Bahamani kingdoms except Berar.
- III. 1. The three Rajput kingdoms are mentioned in Long Answer Question IV below. The main causes of the downfall were: (i) They were always at war with each other that made them very weak. (ii) They had not modernised their army and did not even possess horse-mounted cavalry. (iii) Many puppets came to the thrones and conspired against each other.
2. (i) The Vijayanagar kingdom was founded in 1336. (ii) Initially the kingdom extended from Krishna River in the north to Kaveri River in the south. Later its ruler Bukka annexed the territories Hoyasala and Madurai. (iii) Its capital was at Vijayanagar, modern Hampi. The kingdom was ruled by three dynasties of Sangam (1336-1485), Saluva (1485-1505) and Tuluva (1505-1565). Krishnadeva Raya (1509-1530) of Taluva Dynasty was the most outstanding ruler.
3. There is lot of literature available about the existence of Vijayanagar kingdom because: (i) Krishnadeva Raya of Taluva dynasty was himself a great patron of art and literature. He was the author of Telugu work *Amuktamalyada*. (ii) Krishnadeva Raya's court was adorned by many celebrated poets. Besides Telugu, he encouraged Sanskrit,

Tamil, Kannada and Malayalam. (iii) There were many travellers especially from Europe who wrote travelogues. The visitors provide us information and insights into the rise and glory of Vijayanagar Empire in the fourteenth century.

- IV. 1. **Feuding kingdoms of 15th century:** (i) The Sisodia Rajputs ruled Mewar and the Rathors ruled Marwar. Both were at war with each other until both were defeated by Babur in 1527. (ii) The doab, the fertile plain between Ganga and Yamuna, was the centre of attention of many kingdoms including those of Gujarat and Malwa. It was how Jaunpur had become independent during the reign of Firoz Shah Tughluq and was ruled by Sharqi Sultans and in 1484 Bahlul Lodi had defeated Jaunpur. (iii) Husain Shah, ruler of Bengal, invaded the kingdom of Assam and occupied it. Mughals in the sixteenth century annexed the kingdom of Bengal while Raja of Assam had retired into hills after being defeated by Husain Shah. (iv) Muzaffar Khan who had founded the western India kingdoms of Gujarat and Dilwar Khan who had founded kingdom of Malwa in the fifteenth century were constantly at war with each other and were both annexed by Mughals in the sixteenth century. (v) About Vijayanagar and Bahmani kingdoms refer to Question VI below.
- V. 1. F, 2. T, 3. F.
- VI. 1. The Sisodia ruled Mewar and the Rathors ruled Marwar. Both were feuding Rajput kingdoms.
2. Vijayanagar, a Hindu kingdom ruled in the south, for 20 years till 1377. The Bahmani, an Islamic kingdom, ruled Deccan from 1347 until 1527.
3. Sorry! A printing error.
4. In the Battle of Talikota in 1565 all the kingdoms that were earlier parts of Bahmani kingdom except Berar joined hands together to defeat Vijayanagar kingdom. In the battle of Panipat in 1526, Babur defeated Sultan of Delhi Ibrahim Lodi and captured Delhi and Agra to establish the Mughal Empire.

HOTS

1. Regional kingdoms between 8th-12th centuries and 15th-16th centuries: (i) In the earlier period they were all Hindu kingdoms but in the later period they were split between Islamic and Hindu kingdoms. (ii) The Hindu kingdoms in the later period mainly were found in Deccan and South India. (iii) In the earlier period Cholas were a formidable power in the South and in the later period Vijayanagara and Bahamani were formidable powers and prosperous.

Activity Time

□ LIFE SKILLS

So many travellers wrote about Vijayanagar kingdom because of the following reasons: (i) At this time Islamic empires ruled major parts of India. Vijayanagar was the sole exception with Hindu kings who ruled from 1336 until 1565. (ii) Since the kingdom had access to Malabar Coast, flourishing tourism and trade existed that made it popular with travellers as well; (iii) The foreign travellers such as Abdur Razzaq, Nicolo Conti and Domingo Paes give a fair account of the prosperity of the empire.

5. The Creation of an Empire

Practice Time

- I. 1. (ii), 2. (ii), 3. (ii), 4. (i), 5. (ii).
- II. 1. The central provinces were like Kabul, Multan, Lahore, Ajmer, Awadh, Bengal, Allahabad, Bihar, Gujarat and Delhi.
2. Debates with religious scholars were important for the formation of Akbar's ideas on governance because ruling such a vast territory as the Indian Subcontinent with its diversity of religions and cultures required some sort of compromise and mutual accommodation.
3. The lineage Mughals on Babur's mother's side is traced to Genghis Khan, ruler of the Mongol tribes of Central Asia and from his father's side to successors of Timur so the Mughals are sometimes referred to as Timurids.
4. Peasants were exploited by zamindars and as commerce had not penetrated the rural India

of this time, their condition was miserable and they were divided on caste lines.

5. The dahsala system introduced in 1580, was a system of land revenue, determined on the basis of average price and average produce for the last ten (*dah*) years.
- III. 1. **The relationship between mansabdar and jagir:** (i) The jagirs were like territories which were assessed and the revenues were roughly equal to the salary of the mansabdar; (ii) Thus revenue assignments were like jagirs but many mansabdars did actually reside on their jagirs and could even administer their while ruling or living somewhere else; and (iii) This relationship changed during Aurangzeb's reign when actual revenue collected was less than the salary paid to mansabdars.
2. **Zamindar in Mughal administration:**
3. (i) During Mughal period many types of intermediaries from local headmen of villages to powerful chieftains who collected tax on farm produce were called zamindars. (ii) Besides *zabt*, the revenue system, collection, the zamindars who were intermediaries, exercised a great deal of power in some areas. (iii) At sometimes these zamindars allied with peasants to stage rebellions.
4. **Mansabdars from diverse backgrounds:** (i) Akbar absorbed many chieftains, not just the existing nobles like Turanis and Iranis, into Mughal nobility to secure their allegiance to the empire; (ii) The mansabdars from diverse backgrounds included Indian Muslims, Marathas, Rajputs, Afghans and many other groups who each commanded the loyalty of a sizeable section of population; and (iii) The expanded empire needed new ideas of governance.
5. **Malik Amber:** (i) Malik Amber was an Ethiopian slave brought to India and sold to a prominent noble at the court of Nizam Shahs of Ahmednagar. (ii) Amber played a significant role during Jahangir's reign in the history of rebellions of Deccan kingdoms. (iii) During his father's (Shah Jahan) reign, Amber had even revolted against Jahangir. Jahangir in his *Memoirs* refers to Amber several times often in abusive terms such as

'Ambar, that black wretch' and that 'crafty, ill-starred one', and so on.

- IV. 1. (i) In *Baburnama*, the Memoirs of Babur, besides tracing his Timurid descent, he calls himself a Turk. It is from his memoirs that historians get the name of dynasty, the Mughals. (ii) The *Akbarnama*, the Memoirs of Akbar, written by Abul Fazl, commissioned by Akbar himself, is an official chronicle of the reign of Akbar. (iii) The *Tuzuk-i-Jahangiri*, the Memoirs of Jahangir, was written in the form of annals giving in chronological order the main events of his reign. (iv) Shah Jahan appointed Abdul Hamid Lahiri to write *Badshahnama*, the memoirs of his reign. It contains some crucial information about Taj Mahal, besides many episodes of his 30 year's reign. (v) Iradat Khan, a noble at the court of Aurangzeb, observed at first hand the decline of Mughal rule during the emperor's hey days. His memoirs also include extracts from Aurangzeb's last letters.
2. **Struggle for succession:** (i) The Mughals followed the Timurid custom of coparcenary inheritance or a division of inheritance among all the sons. (ii) They did not believe in primogeniture of eldest son inheriting his father's estate. This custom was the root cause of rebellions by Mughal princes. (iii) For example, after Akbar's death, in the struggle for succession prince Khurram defeated his brother and ascended the throne as Shah Jahan; (iv) Again Shah Jahan had misfortune of being deposed by his son Aurangzeb over succession struggle in 1657-58 in the course of which his other three brothers Dara Shukoh, Shuja and Murad were killed.
3. **Trade and Commerce:** (i) In the time of Jahangir the East India Trading Company, that had been founded in London, got many concessions to trade with India. (ii) After the discovery of sea route to Goa by Vasco de Gama in the 15th century the Portuguese admiral Alfonso Albuquerque attacked Goa in 1510. (iii) In 1613-14 the British East India Company had set up trading post at Surat. It was the time that commerce penetrated the

village economy. (iv) The peasants who had to pay taxes to Mughals took to cultivation of such crops as could be easily sold in the market. Artisans were in the same position as the peasants. (v) The peasants and artisans took advance money that obliged them to deal with a particular class of merchants. (vi) The European merchant activities were aided by the uniform currency in gold, silver and copper that Mughals introduced throughout their dominions. This helped trade and commerce gain importance in the late medieval period.

- V. 1. T, 2. T, 3. F, 4. F, 5. F
- VI. 1. Akbar moved his capital to Fatehpur Sikri because a Sufi Saint Salim who resided near the city had prophesied that Akbar's second son would become a great ruler. Salim was to be future Jahangir.
2. Akbar had concluded that all religions preached the same message of love and peace and formulated his own religious movement called *Din-i Ilahi* (Divine Faith).
3. Mughal zamindars were intermediaries for collecting land revenue.
4. The Mughals followed the Timurid custom of coparcenary inheritance or a division of inheritance among all the sons.
5. Kandhar, a city in Afghanistan, was on major trade route between India and West Asia.
- VII. 1.-(vi), 2.-(ii), 3.-(iv), 4.-(i), 5.-(v), 6.-(ii)
- VIII. 1. Kandhar, 2. Bijapur, Golconda. 3. The number of horse that could be maintained. 4. Sulh-i-kul (universal peace).

HOTS

1. Political and cultural importance of Mughal court: (i) Mughal court was the nucleus of all political, social and cultural activities. (ii) Mughal emperors also followed the Persian custom of paibos and sajdah or kissing the feet of the monarch in the court originally introduced in India by Balban. (iii) In the beginning of the eighteenth century a literary language based on a blending of Hindi and Persian in the form of Urdu also appeared in the Mughal court. (iv) The two great divisions of Mughal court were the *Diwan-i-Am* (Hall of Public Audience) and

Diwan-i-Khas (Hall of Private Audience) where all activities and policies emerged. (v) Some literary works and laws emerged from the court such as the *Fatawa-i-alamgiri* in Arabic.

2. **Merits and demerits of mansabdari system:** (i) The system was very popular with all the Great Mughals so much that their number had gone up from 33 during Akbar's time to 70 during Aurangzwb's time. (ii) It was particularly beneficial to erswhile local rulers like Rajputs who were assigned their own territories as *Watan Jagir* under the system. (iii) The mansabdars had mainly military duties to perform and were drawn from diverse backgrounds. (iv) This system was also used for territorial expansion. For example, Raja Mansingh, a Rajput *mansabdar*, brought whole of Orissa under Mughal rule

Activity Time

□ LIFE SKILLS

Strategies and policies of creating an empire: Beginning from Asoka in ancient times to Mughals in medieval period there have been different strategies. (i) Only skillful rulers such as Ashoka and Akbar could build an empire. (ii) The rulers have to attain certain degree of popularity which both Ashoka and Mughals also did. (iii) Not only should there be stronger rulers but the policies too have to be stronger. The advisors like Chanakya in Mauryan times or nine jewels, courtiers or advisors of Akbar made the difference. (iv) Religious tolerance as demonstrated by Akbar is another strategy.

6. Medieval Architecture of India

Practice Time

- I. 1. (ii), 2. (i), 3. (i), 4. (iii), 5. (i).
- II. 1. The inscription in diwan-i-khas, Delhi, '*If there is paradise on Earth*' was created from from an inscription of Firdaus in Persian.
2. The temples communicated the power and wealth of a king in that they gave rulers opportunity to emphasise their superiority and closeness with their subjects as well as their close relationship with god.
3. Pietra-dura, derived from an Italian architectural technique, is a method of

fashioning the walls of a monument with decorated precious and semi-precious stones like marble.

4. The Shikhara is the spire above the sanctum sanctorum of the North Indian style of temple.
5. The examples of hydralaulic structures before coming of Islam are the Suraj Kund and the Anangpur Reservoir in Delhi and those of Islamic period water reservoir at Hauz Khas in Delhi and many baolis and canals elsewhere.
6. The king Rajarajadeva named the temple Rajarajeshvara Temple after the god Rajarajeshvaram because one the one hand the names of the king and god are similar which was considered auspicious and on the other he wanted to appear like a god wielding power and commanding the loyalty of ministers and subjects.
- III. 1. The kings and courtiers in the past built large fortified houses, constructed platforms where they received guests, accepted tribute from their subordinate chiefs and watched amusement, dancing and music programmes. Today the rich and powerful sometimes try to copy similar construction but they lack the medieval flavour for many different reasons. Instead of the huge and sprawling mansions there are today towering buildings with ultramodern facilities, elevators, etc. where the rich and powerful spend their leisure time.
2. **Mughal char-bagh gardens:** (i) The concept was introduced by Babur after the gardens of Timur at Samarkhand. (ii) They are placed within rectangular walled enclosures and divided into four quarters by artificial water channels. (iii) Akbar, Jahangir and Shah Jahan followed this char-bagh concept in construction of gardens in Kashmir, Agra and Delhi. Amongst these most notable is Ram Bagh at Agra.
3. **Trabeate and Arcuate Architecture:** (i) Both are Vitruvian factors and have two basic but different structural systems. (ii) Trabeate or corbelled style is based on a unit of two verticals (posts) supporting a horizontal

(lintel) which translates into a rectangular frame in three dimensions in which a structure is actually built. It prevailed in India before coming of Islam. (iii) Arcuate is the arc between the posts that supports the dome or wedge-shaped superstructure. A building resembles a dome or a vault.

4. **Temples by kings:** (i) It is not surprising that temples of rival kings were destroyed merely as symbolic destruction of power. (ii) A Buddhist monk and chronicler writes about the Pandyan king Shrimara Shrivallabha who invaded Sri Lanka and defeated Sena I (831-851). He removed all the valuables including the statue of Buddha made entirely of gold in the Jewel Palace. (iii) Muhammad Ghazni's destruction of Hindu temples including that of Somnath needs to be seen in this backdrop.
 5. **Shahjahanabad:** (i) It was built in Delhi, when Shah Jahan transferred the capital from Agra to Delhi in 1648. (ii) Now known as Red Fort or Lal Qila, the structure was completed in 8 years on the river front. (ii) The diwan-i-khas in the Red Fort complex bears an inscription of Firdaus in Persian which when translated means, "*If there is a paradise on earth, it is this, it is this*". (iii) The nobles other than his eldest son Dara Shukoh were not given access to river front.
- IV. 1. **Sultanate period architecture:** (i) The art and architecture of this period was a blend of Islamic art and architecture of Central Asia and Hindu architecture of India. (ii) Some of the monuments were built using pre-existing materials removed from temples. (iii) The Muslim rulers built both religious and secular architecture. The religious architecture includes masjids (mosques), tombs and temples. Among the secular architecture are included the palaces, forts and tanks. (iv) Some magnificent monuments of the Delhi Sultans include Quwwat-ul-Islam or the "Might of Islam" built in 1193, Qutab Minar a 73 metre high tower in today's New Delhi area; Alaudin Khalji's unfinished work Alai Minar is next to Qutab Minar. (v) During Tughluq rule Firuz Shah Tughluq initiated several building projects such as hunting pavilions, palaces, madrassas, mosques and hydraulic structures. Tughluqabad Fort, Firuz Shah Kotla, Bara Gumbad etc. are some remarkable monuments of this dynasty. (vi) Lodi sultans built tombs, gardens etc. such as Lodi royal tomb in Lodi Gardens in Delhi.
2. **Taj Mahal:** (i) It is a monumental work in architecture, a dream in marble that took 20 years and 20,000 labourers to complete. (ii) It was built by the Persian architect Ustad Isa Khan Effendi and his pupil Ustad Ahmad Lahri. (iii) The onion-shaped main dome is 35 metres high. The interior has the marble cenotaphs of Mumtaz Mahal and Shah Jahan. (iii) The tapering minarets tilt away from the dome in the centre. (iv) It is decorated with marble screens, chattris and pietra dura inlays on white marble. (v) The complex includes a large garden, a swimming pool, a mosque and other mausoleums
 3. **Regional architecture:** (i) The regional kingdoms and break-away provinces, after Delhi Sultanate went into decline, were also influenced by both the native and Islamic architectural styles and technological developments of their time. (ii) In Bengal before 13th century temple building activity continued. Bengal sultanate between 1342 and 1415 built arch and pillar shaped facades known as "Bangla-Dome". Later in the 18th century when Bengal again asserted its independence temple building activity again flourished. (iv) The Rajputs and Marathas built hill-fort complexes, stambas (towers) such as Jayastamba (Victory tower), and found new cities with vast palace complexes. Early Maratha architecture included Shivaji's shrine at Raigad, Purandhar and Pratapgarrh. Sawai Raja Jai Singh built astronomical observatories between 1727 and 1734 at Delhi, Jaipur, Mathura, Ujjain and Benaras (Varanasi). (v) The Vijayanagar Empire at Hampi was the site of several temples such as Virupaksha Temple, Vithala Temple and Hazara Rama Temple which the battle at Talikota in 1565 had into ruins. (vi) The Deccan Sultanate of Bahmani mainly tombs such as the Jama Masjid at Gulbarga.

Charminar, a remarkable monument with a ceremonial gateway, was built by Qutb Shahi rulers and Bidar fort built by Mahmud Gawan.

V. 1. F, 2. F, 3. F, 4. T.

VI. 1. An inclined path to the top of the Rajarajeshvara temple at Thanjavur was built because there were no mechanical systems or cranes in those days and it was too heavy to lift a 90 tonne stone manually. The architects placed the structure on the boulder on rollers and rolled it all the way to the top.

2. Art and architecture after Sultanate period is called Indo-Islamic Architecture for two main technological developments that the new rulers introduced in India. These were the use of arches to carry the weight of superstructure above the doors and windows; and use of new building materials like cement and limestone that made the construction of arches, beams and lintels possible.

3. The architecture of Fatehpur Sikri has definite all India character because the buildings such as 'Ibadat Khanah', 'Din Ilahi', 'Jorokha Darshan', 'Buland Darwaza', Diwan-i-Khas', Diwan-i-Am', Panch Mahal', etc. remind us of features found all over India.

4. Shah Jahan did not give access to the river-front to Nobles to build their homes in order to save the river from turning into a dumping yard of their wastes.

VII. 1. Refer to Short Answer Question 3 above.

2. A fort is a secular architecture like a defence structure but a temple is religious architecture built in honour of some deity or a place of worship.

3. Vesara is hybrid architectural style of North Indian (Nagara) and South Indian (Dravida) styles. The style is prevalent in Karnataka. Dravida or South Indian style has intricately carved tower (*vimana*) on top of the sanctum sanctorum.

4. Pietra dura is a method of fashioning the walls with decorated precious and semi-precious stones like marble. Char-bagh are Mughal style of gardens placed within rectangular walled enclosures and divided into four

quarters by artificial water channels.

HOTS

1. **Technological developments that made structural construction easier and faster:** (i) Use of arches to carry the weight of superstructure above the doors and windows; (ii) Use of building materials like cement and limestone that made the construction of arches, beams and lintels possible. (iii) There were more technological developments like improved tools, high quality cement which was mixed with stone chips and hardened into concrete. All this made the construction of large and imposing structures easier and faster.

2. **Importance of hydraulic structures of medieval India:** (i) Water-harvesting and conservation especially in dry areas. (ii) These helped new rulers in logical political control; and (iii) Such structures like lakes and other water reservoir attracted tourists, made fishing, boating possible as well as attracted birds and animals.

7. Towns, Traders and Craftspersons

Practice Time

I. 1. (i), 2. (ii), 3. (i), 4. (ii), 5. (iii).

II. 1. Water was supplied to the Thanjavur from wells and tanks recharged from the nearby aqueduct.

2. In the parts of towns that Europeans called 'Black Towns' native people lived and were confined to congested settlements.

3. The towns grew around temples because when pilgrims flocked to the temples and were visited by people in thousands, the rulers endowed them with grants of land and money to carry out elaborate rituals, feed pilgrims and priests and celebrate festivals. The markets and craft centres developed around these sites.

4. We have first posts of medieval India international trade from Alberuni (973-1048) in his book *Tahkik-Hind* (Enquiry into India), Athanasius Nikitin (1470-74), a Russian horse merchant and Durante Barbosa (1500-16), a Portuguese official in India who visited Vijayanagar.

5. Gujarati trading communities are for example Hindu Baniyas and Muslim Bohras.
- III. 1. **Importance of craftspersons for building and maintenance of temples:** (i) The medieval period commercial revolution had resulted in great demand for Indian craft products. (ii) In Bidar the Panchalas or Vishwakarma community, consisting of goldsmiths, bronzesmiths, blacksmiths, masons and carpenters provided specialised services for building of temples. (iii) In South India the traders' guilds such as the Manigramam and Nanadesi and other such communities such the Chettiars, the Marwari Oswals, Gujarati trading communities of Hindu Baniyas made substantial donations for temple building.
2. **Surat:** (i) Surat along the West Coast of India in Gujarat was called emporium of western trade. (ii) The textiles of Surat with their gold lace borders (*zari*) had a thriving market in West Asia, Africa and Europe. (iii) Its fame led to fierce competition among European trading companies such as those of the British, French, Portuguese and the Dutch in establishing their 'factories' in Surat.
3. **Crafts production in Calcutta and Thanjavur:** (i) There were many internationally famous production centres in Bengal like at Dacca and Chandernagore around what later came to be known as Calcutta. At Thanjavur and at nearby town of Uraiyur Saliya wearves produced cloth for flags to be used in the temple festival. (ii) Dacca muslin of Bengal was famous since ancient times and in early 18th century commanded huge international market. At Thanjavur fine cottons for the king and nobility and coarse cotton for masses were produced. (iii) In late 18th century in Calcutta both Indian merchants and craftspersons were moved into the Black Towns established by the European companies. However, Calcutta rose in prominence as the new administrative centre. This was the beginning of colonial rule and decline of Indian industry. Thanjavur too shrank in size and importance because of neglect and loss of commercial importance.
4. (i) Between 1096 and 1270 eight crusades or military campaigns led to new ideas as well as trade in household goods of all types such as foodstuffs of coffee, sugar, spices, mirrors, cloth, writing paper and spread of new ideas like Arabic numerals 0 to 9, algebra, wheel, chess and many more. (ii) Most of these articles originated from India and entered international trade. (iii) A catalyst of this commercial revolution was the opening of the Mediterranean trade routes between 15th and 17th centuries. Crafts items like Chola bronze statues led to new ideas of craft production.
5. **Ralph Fitch and Peter Mundy:** (i) They were English merchant-travellers who give us an eyewitness accounts of the types of towns from Agra to Bengal such as Benares which Peter Mundy describes as "*a great town, and great store of cloth is made there of cotton.*" (ii) Ralph Fitch who spent eight-years (1583–91) and Peter Mundy, who was in India between the years 1628 and 1634 wrote about medieval period urbanisation which received a great stimulus under both Sultanate and Mughal rulers.
6. **Craft towns:** (i) These towns specialized as craft centres that had come up almost over whole of India. (ii) These towns were as a catalyst of the commercial revolution of the medieval period. (iii) Crafts such as bronze-statues with its own distinctive look, Bidri work from Bidar, gem cutting from Hyderabad including trade like silk trade of Murshidabad and cotton cloth from Benares made crafts towns famous.
7. **Masulipatnam and Surat:** (i) Masulipatnam, founded in the 14th century, was a flourishing seaport of Satavanas. It was later annexed by Bahamanis, then by Orissa kings and in the 17th century it was a centre of French, British and Dutch trade. (ii) Surat along the West Coast of India in Gujarat was the most prominent city of the Mughal Empire. It was a leading centre of trade and textiles and was called emporium of western trade. European trading companies - the British, French, Portuguese and the Dutch - established their 'factories' in Surat. (iii) In 1864 Sumatra tsunami swept away the entire town and destroyed the port. Thereafter, the English

East India Company shifted its activities elsewhere and the port was never revived. Surat, with the English East India Company having shifted its activities elsewhere again went into decline in the late 18th and 19th centuries.

- IV. 1. Types of towns:** (i) These urban centres that came up in medieval times in late 17th century can best be studied on the basis of some special function to perform. (ii) Administrative centres: Thanjavur, for example was the capital city of Cholas and Kanchi became a great seat of learning. Similarly, during the reign of Akbar Fatehpur Sikri became the administrative centre and capital and so on. (iii) Temple towns and pilgrimage centres: In Orissa Jagannath Temple in Puri and Temple at Konark are still visited by people in thousands. Other such towns are Ajmer (Rajasthan), Thanjavur, Varanasi and others. (iv) Craft towns: Several specialized craft centres such as Murshidabad, Hyderabad and Bidar etc. had come up almost over whole of India.
2. **Surat:** (i) Surat along the West Coast of India in Gujarat was the most prominent city of the Mughal Empire and a leading centre of trade and textiles. (ii) It had given rise to several trading communities such as the Kathiawad *seths* or *mahajans* (moneychangers). Surat *hundi*, a negotiable financial instrument or a kind of modern bill of exchange, was honoured in far-off markets of Cairo in Egypt, Basra in Iraq and Antwerp in Belgium. (iii) In 1664 Shivaji sacked Surat, plundered and looted the city for four days but later left Surat on arrival of the Mughal army. (iv) The city after a brief decline again rose in prominence and according to John Ovington's travelogue *A Voyage to Surat in the Year 1689*. (v) Its fame led to fierce competition among European trading companies such as those of the British, French, Portuguese and the Dutch in establishing their 'factories' in Surat.
3. **Activities of European Trading Companies:** As aforesaid these trading companies were those of the British, French, Portuguese and the Dutch. (ii) Through engaging in trade

they established new port towns both along the east coast and west coast of India in late 17th century. (iii) By early 18th century cotton cloth woven by Indian weavers reached Britain via the sea route. Soon the East India Company's main settlements (factories) were established in Mumbai (Bombay), Kolkata (Calcutta) and Madras (Chennai) near the sea coast. (iv) The Indian merchants and artisans moved there to do business with the Company. (v) The Europeans called these native people as the "blacks" and were confined to congested settlements called 'Black Towns' while the Europeans occupied superior residencies of Fort St George in Madras or Fort St William in Calcutta. In this manner India came under colonial rule which will be studied in next class.

- V.** 1. 1009 CE, 2. Khwaja Muinuddin Chishti, 3. Vijayanagar, 4. Masulipatnam.
- VI.** 1. T, 2. T, 3. F, 4. F, 5. T.
- VII.** 1.-(v), 2.-(i), 3.-(iv), 4.-(ii), 5.-(iii)
- VIII.** 1. Temple towns are those where pilgrims flocked in great numbers and markets came up selling goods of pilgrims use. Pilgrims centres may be permanent or temporary.
2. Ajmer in Rajasthan is a famous pilgrimage town where Khwaja Muinuddin Chishti shrine is found. Delhi became capital of the Indian Subcontinent since Sultanate period.
3. Baniyas are Gujarati Hindu trading community whereas Bohras are a Muslim trading community.
4. Chettis of Tamil origin were horse merchants who thronged the markets in Hampi. Moors were a group of Muslim inhabitants of Iberian Peninsula engaged in import-export trade in Hampi.

HOTS

1. The urbanisation was necessary for increased trading activities in medieval period. The urban centres gave stimulus to demand as well opened doors for artisans and craftspersons. Most temples were found in urban centres where markets also opened.
2. The impact of the Europeans settlements were:

(i) establishments of new port towns, (ii) great demand for Indian crafts initially, and (iii) subsequent colonisation through making Indians as dependents.

8. Tribes and Settled Communities

Practice Time

I. 1. (ii), 2. (iii), 3. (i), 4. (iii), 5. (ii).

II. 1. The Banjaras were important for the economy of both Delhi Sultans and the Mughals as they moved from place to place, travelling 5 – 6 km daily, and transporting grains, sugar, salt, butter etc. from markets where it was cheap and carried it to other places.

2. Gonds practised shifting cultivation in which in a forested region all the vegetation is burnt on a plot of land and crops cultivated for 2-3 years and then abandoned in favour another plot of land.

3. Ahoms are said to have migrated from their original homeland in China via the forested region of Burma (Myanmar) and carved out a kingdom in modern day Assam in the medieval period.

III. 1. **Administration of the Ahom state:** (i) The Ahom Kingdom (1228-1826) ruled in the region in the present day Assam (Asom). (ii) The Ahoms initially suppressed the older political system of the *bhuiyans* (landlords) but had essentially a tribal set up. (iii) The Ahoms used forced labour called *paiks* for the state works which came from villages on rotation basis. (iv) They had carved out a large state with the help of their army. (v) They conducted population census and then shifted people from heavily populated to less populated areas.

2. **Changes in varna-based society:** (i) Many tribes and social groups were taken into the caste-based society. (ii) The people who were known as Gonds, Santhal and Bhil etc. were now given a new identity of *jati* like Vanyajiti. (iii) Sometimes they were known by their occupations rather than *varna* such as Anusuchit Jati, Adimjati and more. In this way the tribes became a part of the caste-based society.

3. **Changes in tribal societies after being organised into state.** (i) The Ahoms in the North-East, the Gonds and Bhils in Central India brought about new changes in society by carving out large states under tribal set up. (ii) It was now widely accepted that the social order prescribed by Brahmans in earlier times was not necessarily a part of society. (iii) Development of new regional languages, dress, food habits and even new methods of warfare contributed to this change.

4. **History of Gonds and Ahoms:** (i) Gonds are widespread in Central Asia and are one of the largest groups living all over Central India. (ii) The history of Ahoms is linked to Tai Ahoms who are said to have migrated from their original homeland in China via the forested region of Burma (Myanmar) and then carved out their kingdom in modern day Assam. (iii) Similarities: (a) Both tribal societies have come from outside India. (b) Both carved out kingdoms in India.

5. **Rani Durgawati:** (i) Princess Durgawati was the daughter of Salbahan, the Chandel Rajput raja of Mahoba. (ii) She was married to Dalpat, the son of a Gond raja of Garha Katanga; (iii) Rani Durgawati began ruling on behalf of her five-year-old son and proved a capable ruler. (iv) She expanded the kingdom further but in 1565 the Mughal forces under Asaf Khan defeated Rani Durgawati. She preferred to die in the battlefield than surrender. (v) Akbarnama: Refer to Long Answer Question 2 below.

IV. 1. **Ahoms:** (i) The ceremony of ascending the throne, normally called coronation, was known by Ahoms as 'singari-ghar-utha'. It was the occasion of release of new coins under the king's name. The coronations of some kings were not performed. (ii) For administration refer to Short Answer Question 1 above.

2. **Garha Katanga:** (i) Garha Katanga was the name of the Gond kingdom according to the *Akbarnama*, history of Akbar's reign by Abu Fazl. (ii) It says that this kingdom of about 70,000 villages was governed under a centralized system of administration. (iii)

The kingdom was divided into *garhs* and each *garh* was controlled by a particular Gond clan. (iv) The subdivisions of *garhs* were known as *chaurasis*. Each *chaurasi* was made up of 84 villages. The subdivisions of *chaurasis* were called *barhots*. (v) Each village had a headman called by local names such as *mukhia*, *mahji*, *patel* etc. (vi) The decisions were taken by a village council called *panchayat* whose members were chosen by the villagers. Brahmans were given land grants.

3. **Banjaras:** (i) Refer to Very Short Answer Question 1 above. (ii) They moved in caravans for which they are also known as *Karwanis* and the caravan is called *tanda*. Each caravan consisted of 10,000 or 20,000 bullocks. This was important to both Sultans and Mughals to keep their subjects under control as well as for price control of the economy. (iii) The Banjaras also transported for Mughals during wars. They were thus an integral part of the Administration.

V. 1. T, 2. F, 3. F, 4. F, 5. T (uneven)

VI. 1. Jatis, 2. Buranjis, 3. Akbarnama, 4. Brahmans, scholars.

VII. 1.-(ii), 2.-(iii), 3.-(vi), 4.-(i), 5.-(v), 6.-(iv)

HOTS

- The Ahoms did not have kings during certain periods for following reasons: (i) Ahom Kingdom did not have hereditary system of succession. (ii) The king could be appointed only with the concurrence of the *patra matris* (the council of ministers). (iii) During certain periods like between 1364 and 1369, 1376 and 1380 and then again between 1389 and 1397, the kingdom had no kings as the acceptable candidates were not found.
- Chief characteristics of tribal groups: (i) They are bound by kinship as an instrument of social bonds and are divided into clans and not on caste basis. (ii) They strongly believe in coexistence and interdependence with the settled people or even caste based people. So they do not accept social or technological changes. (iii) They have retained their old ways of life and preserved their own separate culture and oral tradition

Activity Time

LIFE SKILLS

(a) and (b) For present day government policies towards tribals and nomadic pastoral groups visit:

- <http://www.hrdiap.gov.in/87fc/policies/NATIONAL%20POLICY%20ON%20TRIBALS.pdf>
- <http://r4d.dfid.gov.uk/PDF/outputs/ZC0181b.pdf>

9. Devotional Paths to the Divine

Practice Time

1. (iii), 2. (ii), 3. (i), 4. (ii), 5. (iii).
1. Many teachers rejected prevalent religious beliefs and practices as they had led to class, caste and religious divide in the society.
2. Ordinary people preserved the memory of Mirabai (1503-73) because after being widowed at a nearly age, she believed in spiritual marriage and recited poems in praise of the Lord which became popular among people.
3. Sufi saints led a spiritual movement in West Asia from ninth century onward and some came to India and laid great stress on equality and brotherhood and won the hearts of the people of the subcontinent.
4. The two incarnations of Lord Shiva and Vishnu were Krishna and Rama respectively.
5. The Bhakti and Sufi saints conveyed their messages, works, beliefs and songs in regional languages and became immensely popular with masses that contributed to growth of regional languages.
1. **Main ideas of Kabir:** (i) Sant Kabir (1440-1518), mystic poet and philosopher, expressed his ideas through couplets in the form of poems or dohas that emphasise toleration in religious matters; (ii) He laid great emphasis on Hindu-Muslim unity and was opposed to idol worship, performing rituals, going on pilgrimage, caste and practice of untouchability (iii) He equally condemned Muslim orthodoxy and in their place he stressed need for purity of character and conduct.

2. **Nathpanthis, Siddhas and Yogis:** (i) These mystics criticised rituals as well as social order and advocated rigorous training of mind through *yogasanas* as breathing exercises (ii) They favoured renunciation of the world as reaction to class, caste and religious divisions in society and believed in formless (*nirankar*) Ultimate Reality. (iii) To them the path to salvation lay in meditation and the realisation of oneness with it. They became popular among some sections of the society.
 3. **Major beliefs and practices of Sufis:** (i) Contrary to *ulema*, the Sufis were mystics and opposed display of wealth in public life. (ii) They laid emphasis on free thought and were against any rigidity or fanaticism in religion. They were divided into different orders (*silsilas*) with each *silsila* headed by a *pir*. (iii) Sufis organised *samas* or recital of holy songs or even *qawwalis* to arouse mystical ecstasy.
 4. **Ten gurus of Sikhs:** (i) Guru Nanak chose his successor, Lehna, in his life time and established him as the future Guru; (ii) Angad as Lehna was named. (iii) Guru Amar Das; (iv) Guru Ram Das; (v) Guru Arjun Dev; (vi) Guru Hargobind; (vii) Guru Har Rai; (viii) Guru Harkrishan; (ix) Guru Teg Bahadur; and (x) Guru Gobind Singh. The last of these ten gurus Guru Gobind Singh having completed the founder's mission ordained that after his death his successor will be Guru Granth Sahib, the holy book of Sikhs. This meant the end of guruship and formed the *Khalsa Panth* or the Sikh community.
 5. **Four Sufi silsilas in India:** (i) *Suhrawardiyya order*; (ii) *Chishtiyya order*; (iii) *Qadiriyya order* and (iv) *Naqshabandiyya order*: Among these four orders the *Chishtiyya silsila* was instrumental in spreading Islam in southern states. Khwaja Muin-ud-din Chisti who came to India around 1192 made Ajmer his main centre of teaching where he died in 1236. Ajmer is now a leading pilgrimage centre and 'Urs' festival is held there every year.
- IV. 1. Main teachings of Baba Guru Nanak:**
- (i) Langar, a common kitchen where his followers ate together was established by Guru Nanak but popularised by the wife of Guru Angad; (ii) The most commonly known institutions of the Sikhs are the *Gurudwara* (Sikh sacred space), *Sangat* (General Assembly), *Pangat* (Holy Congregation), *Amrit Sanchar*, *Anand Karaj* (Marriage), *Sarae* (Rest house), *Pingalwaras/hospitals* (Educational/medical institutions), *Kirtan seva*, *Khalsa Panth* (community of Sikhs), *Akal Takht* (Throne of God) and Sacrifice and Martyrdom. (iii) The central Gurudwara of Sikhs called Harmander Sahib (Golden Temple) was developed around 17th century in Ramdaspur (Amritsar); and (iv) Guru Nanak wanted his followers to earn their livelihood through useful occupations.
 2. **Main features of Bhakti and Sufi movements:** (i) Both believed in monotheism or one God and should be worshipped through love and devotion. Their interaction laid the foundations of a very liberal movement that is still echoing around us. (ii) They contributed to growth of regional languages, rich regional culture and other forms of diversity. (iii) Both composed poems expressing their feelings, and created a rich literature in prose, including anecdotes and fables, developed around them a new atmosphere of singing *bhajans*, *kirtans* or *qawwalis*. (iv) Their teachings have been passed down from generation to generation and have left a great impact on Indian society.
 3. **Importance of Bhakti and Sufi Saints:** (i) The service to poor and people in need was the creed of both Bhakti and Sufi saints. (ii) The atmosphere was further based on mutual cooperation and respect for each other's views. (iii) Asia did not lag behind Europe in initiating its own reformation and of religious ferment during the period from 13th to 17th centuries as was done in Europe by Martin Luther (1483-1546). (iv) They have left a deep impact on our present day lives and beliefs throughout the Indian Subcontinent. (v) They rejected prevalent religious beliefs and practices which had led to class, caste and religious divide in the society. (iii) The saints, sants and Sufis were great masters in transmitting knowledge from heart-to-heart rather than merely mouth-to-mouth.

- V. 1.-(iii), 2.-(i), 3.-(iv), 4.-(v), 5.-(ii)
- VI. 1. Advaita, 2. Alvars, 3. Allana Prabhu, Akkamahadevi, 4. Pandharpur.
- VII. 1. Bhakti movement originated in South India in ancient times and then spread to North India in the middle of medieval period. The Sufi movement originated in West Asia and reached to India with the Islamic rulers.
2. The early Bhakti saints, Nayanars were worshippers of Siva and Alvars, were devoted to Vishnu.
3. The *nirankar* aspect is formless form of God whereas *sakar* is personified form of God.
4. Tulsidas (1532-1623 CE) composed his great Hindi (Awadhi) Indian epic *Ramcharitmanas* at Varanasi. Surdas (1483-1563) was disciple of Vallabhachara composed *Sursagar* which recounts the exploits of Krishna during his childhood and youth. His other works expressing same devotion are *Surasaravali* and *Sahitya Lahari*.
5. The Vaishnavite movement is centred around the worship of Rama and Krishna in *sakar* form. The persons belonging to Virashaivism are worshippers of Shiva in the form of Shiva *linga* especially belong to Lingayats of Karnataka whose leader is Basava.

HOTS

1. **Origin of Bhakti and Sufi Movements:** The growth of Bhakti movement can be traced *Bhagvata Puranas*, one of the oldest *Purana* texts of ninth century from where the word '*bhakti*' meaning devotion to a deity comes. It is drawn from the root word *bhaj* meaning to partake or share These Puranic stories as well as methods of worship centred on Krishna's child and youth. The early Bhakti movement from seventh to ninth centuries was led by Nayanars and Alvars devoted to Siva and Vishnu respectively. This movement almost remained confined to South India. In 14th century it spread to North India. The use of regional local languages in 14th and 15th centuries made their outreach very wide. Regarding Sufi movement, the origin of the Arabic word 'sufi' though referring to woollen garments worn by these saints is shrouded in mystery. A similar pronounced word 'sophy' in

Greek means wisdom. In spite of the controversy over origin of the word, the Sufi movement originated in West Asia from ninth century onward. The Sufi saints in India interacted with Bhakti saints in different ways.

2. **Political situation in medieval period:** During 14th and 15th centuries the Delhi Sultanate was on the decline. Many regional kingdoms in Bengal, then Rajputana and Deccan had appeared. They remained at war with each other. This had created a very fluid situation on socio-religious fronts. The rise of Bhakti and Sufi saints was there well to its time.

10. The Making of Regional Cultures

Practice Time

- I. 1. (iii), 2. (i), 3. (iii), 4. (iii), 5. (i).
- II. 1. Manipravalam is a literary style from which Malayalam emerged as an independent language in the fourteenth century. The *Lilatilakam*, a literary work dealing with grammar and poetics of Malayalam, was written in this language.
2. The major patrons of Kathak were the courtiers of Mughal court particularly the last Nawab of Awadh.
3. The conquerors tried to control the temple of Jagannatha at Puri because of its immense popularity and in order to be accepted as rulers by the local people.
4. The temples were built in Bengal through the late fifteenth century to the nineteenth century by many individuals or groups in order to demonstrate their power and proclaim their piety and they were also important from cultural stand.
5. The Rajput ethos means their culture of clan system which is a major factor in social, cultural, political and military fields such as their tradition of chivalry and heroism.
- III. 1. **The important architectural features of the temples of Bengal are:** (i) with improvements in social and economic position, the double-roofed (*dochala*) or four-roofed (*chauchala*) structure of the thatched huts were built in late 18th century. (ii) In the four-roofed structure, four triangular roofs were placed

on the four walls that rise to converge on a curved line or a point. (iii) This typical 'Bangla Dome' was usually built on a square platform. The interior was relatively plain, but the outer walls of many temples were decorated with paintings, ornamental tiles or terracotta tablets.

2. **The minstrels or the medieval singer or musician in Rajput courts proclaimed the achievements of heroes because:** (i) Rajputs loved the stories about legendary Rajput heroes and recorded their own stories of valour in poems and songs. (ii) These singers recited the heroic deeds to a musical accompaniment for nobility; and (iii) These preserved memories were expected to inspire others and the new generations.
3. **We know much more about the cultural practices of rulers than about those of ordinary people because:** (i) These cultural traditions and aspirations of the rulers have been preserved than those of ordinary people; (ii) The rulers like the Rajputs also popularised some very old cultural practices, customs, dress, festival etc. mentioned in many Hindu scriptures; and (iii) Rulers, e.g. the Islamic rulers like Babur, Akbar and Shah Jahan and even those of regional kingdoms of Vijayanagar, Bahmani or Ahmad Shah in Gujarat were influenced by existing regional cultural practices and variations in art and architecture.
4. **There are dialectical differences among people speaking the same regional language because:** (i) These dialectical differences are on account of the regional differences from one region to another; (ii) For example, Malayalam dialect of Travancore is different from northern dialect because proximity of Travancore to Tamilian influence; (iii) Also influence of historical is also at work. For example, the fifteenth century Bengali groups of dialects were united by a common literary language in what is today known as West Bengal.
- IV. 1. **The most important features of the culture of my region (e.g. NCR Delhi), focusing on buildings, performing arts and painting are:** (i) While there is continuity since ancient times, the buildings, performing arts and paintings have changed with time. (ii) Right from the ancient times till modern times some external

influences as well as influences of different regions of India have been at work; (iii) These influences can be seen in gateway of Rai Pithora Fort of ancient times at Adchini Village, Qutab Minar of early Sultanate period, Shahjahanabad of Mughal period and Rashtrapati Bhavan of modern times or in the dance forms including classical dances and paintings of various periods. (iv) There was interaction through trade, commerce, migration of artisans and exchange of new ideas which are manifest in these buildings, performing arts and paintings; (v) These buildings, performing arts and paintings of various periods remind us of artistic tastes especially of Mughals as well of the regional courts such as those of Deccan and Rajput courts of Rajasthan which have all shaped present day culture of Delhi.

2. **The cultural influences at work in medieval times:** (i) There was intermixture of cultures in medieval period but most powerful influence was during Islamic period. This helped in development of their distinctive cultures of different regions of India. (ii) The influence of Islam was more in urban areas of north-western India, Gujarat, Bengal and eastern Uttar Pradesh, than in other parts of the subcontinent. (iii) The teachings of both Bhakti and Sufi saints had regional variations and provided the fertile ground for rise of regional cultures. (iv) India is home to several thousand ethnic groups, pastoral and foraging tribes who have their own culture marked by kinship and clan loyalties. It became more manifest and visible during medieval period especially after the rise two powerful states of Gonds in Deccan and Ahoms in Assam. (v) Because of these cultural influences at work, the society continues to be fragmented into class and caste divisions which have left their own stamp on the Indian cultural practices.
- V. 1. The rulers of early Kerala introduced Malayalam script so as to establish their own identity.
2. The new rulers had to gain control of Jagannatha temple because of its immense popularity and in order to be accepted by the

people.

3. Rajputs queens, elderly and children committed jauhar to avoid molestation at the hands of victorious invading army.
4. Maynamati encouraged Gopichandra to take to asceticism in the face of variety of obstacles that the queen mother faced.

VI. 1.-(v), 2.-(iii), 3.-(vi), 4.-(i), 5.-(ii), 6.-(iv)

VII. 1. Mahodayapuram, 2. 15th, 3. Jagannatha, 4. Ministreals, 5. Pahari.

HOTS

1. The regional languages emerged as independent languages well suited to their respective region for following reasons: (i) Their evolution is best characterised by development of their own literature such as poems, plays, novels and other written works. (ii) They used a literary style well suited to their respective region. (iii) During medieval period the influence of Persian was on the rise whereas of Sanskrit was on the decline. (iv) Many non-Sanskrit words including those of tribal dialects peculiar to the region had entered the regional languages.

Activity Time

□ LIFE SKILLS

- (a) I do use different languages such as Hindi for speaking, English for reading but both English and Hindi for writing. On major composition in English language that I often use and discuss is 'The Three Passions I Live For' by Bertrand Russell. I find it interesting because it helps me to master and communicate in English. I also use it to build my English vocabulary, syntax and grammar.
- (b) For list of foods or cuisine of each state of India visit:
<http://www.mapsofindia.com/maps/india/indian-cuisine-map.html>
- (c) For traditional costumes and make up of people of India, visit Hindu Online:
<http://hinduonline.co/HinduCulture/IndianTraditionalCostume.html>

11. Eighteenth Century Political Formations

Practice Time

- I. 1. (iii), 2. (ii), 3. (i), 4. (i), 5. (ii).
- II. 1. Burhan-ul-Mulk Saadat Khan held the rank of 6,000 horses under Mughal emperor Muhammad Shah and was appointed as governor (*subedar*) of Awadh in 1722.
2. In mid-17th century Marathas under Shivaji wanted to expand beyond the Deccan because at this time the power in Deccan was shared between three Islamic Sultanates of Bijapur and Golconda and Shahji, father of Shivaji was imprisoned by Adil Shah, the ruler of Bijapur.
3. The *watans jagirs* were the homelands of Rajput rulers.
4. Under Banda Bahadur (1670-716), the Sikhs had declared their sovereign rule and minted their own coins and as such he was captured and executed in 1716 by the Mughal forces. 5. In 1659 when Afzal Khan attempted to strangle Shivaji he immediately plunged his concealed tiger claws (*bagh nakh*) and inflicted mortal wounds on the general.
- III. 1. The Nawabs of Awadh and Bengal tried to do away with the *jagirdari* system because: (i) The *faujdari* (military head) was a powerful position and was often combined with the *diwani* (head of revenue) by the governors. (ii) Both the Nawabs of Awadh and Bengal took various measures like abolition of *jagirdari* system in order to reduce Mughal influence in their respective territories. (iii) Bengal depended on local bankers and *mahajans* for loans. In Awadh, Muhammad Shah, the governor, had suppressed the rebellions of zamindars that refused to pay taxes and reformed the revenue system in the rich Yamuna-Gangs Doab.
2. The Sikhs were organised in the eighteenth century in following manner: (i) Guru Gobind Sing organised the Sikhs into a military group called *Khalsa* (pure) and fought several battles against the Rajput and Mughal rulers. (ii) Under Banda Bahadur (1670-1716), the Sikhs had declared their sovereign rule

and minted their own coins in the name of Guru Nanak and Guru Gobind Singh (iii) In the 1770s, confederation of about 60 Sikh chieftains was formed which later became princely states of Nabha and Patiala under the English East India company.

3. **Policies adopted by Asaf Jah:** (i) Nizam-ul-Mulk *alias* Chin Qlich Khan was *mansabdar* under the Mughals founded Hyderabad state during the reign of Farrukh Siyar. (ii) After declaring his independence he continued to acknowledge the authority of Mughal Empire in name only; (iii) To strengthen his position he appointed his own *mansabdars* and granted *jagirs* to them. He also brought skilled soldiers and administrators from north India.
4. **Influence of merchants and bankers:** (i) The influence of merchants and bankers today is not the same as they had the eighteenth century or even before that. (ii) The state depended on local bankers and local *mahajans* for loans which they willingly financed and later influenced the policies of the state. (iii) The state sold the right to collect taxes to the highest bidder. These kinds or revenue farmers or *ijaradars* who agreed to pay a fixed sum of money to the state also do not exist today. (iv) The kind of freedom the revenue farmers enjoyed like in the assessment and collection of taxes also do not exist today.
5. **Shivaji's escape from prison in Agra:** (i) Shivaji after being imprisoned at Agra along with his son in 1666 but both escaped from the prison concealed in baskets. (ii) They disguised themselves as *faqirs* (wandering monks) and somehow made their way to Deccan. (iii) Resuming his guerrilla warfare, he recovered major portions of his territory.

- IV. 1. **Political conditions in the eighteenth century:** (i) In the eighteenth century despite communal harmony there was political turmoil throughout the period of a century. (ii) The two provincial governors famous as Sayyid Brothers namely Husain Ali and Abdullah in the beginning of this period played the role of king makers by placing on throne Farrukh Siyar whose reign lasted from

1711 to 1719. He too was put to death like his predecessor by the brothers after refusal to toe their line. (iii) Aurangzeb's long stay in Deccan had made treasury bankrupt and there was total neglect of army and navy. (iv) Consequent to this neglect the Europeans especially the French and British were fighting each other for supremacy in India and both succeeded in the light of decline of Mughal Empire. (v) The neglect and political turmoil was further compounded when in 1739, Nadir Shah, a Persian ruler and invader, and two decades later in 1759 another Afghan invader Ahmed Shah Abdali advanced to Delhi and looted the people. (vi) There was also some acrimony among the heirs to Maratha throne. (vii) This political turmoil resulted in India coming under colonial rule in the beginning of the modern period.

2. If Mughals and Rajputs had joined hands in the eighteenth century India would have been saved from foreign domination and partition in next three centuries. Mughals were always beset with succession problems but had successfully managed to solve this until the time of Aurangzeb. His orthodoxy sowed the seeds of future disintegration of the Mughal Empire. Marathas though had strong navy as well as Guerrilla warfare techniques to take on the European trading companies. It is where strong Mughals and modernised Marathas could have together save India from colonial rule. But the Mughal states from Aurangzeb's time were based on ethnic and sectarian groupings like the Rajputs, Marathas, Sikhs and the Jats. Like in the case Islamic invaders in 13th century some of the ethnic groups specially Rajputs joined hands with European trading companies against other local rulers.

- V. 1. Deccan, 2. Administration, 3. 1725, 4. Burhan-ul-Mulk Sa'adat Khan
- VI. 1. F, 2. F, 3. T, 4. T,
- VII. 1.-(iii), 2.-(v), 3.-(i), 4.-(vi), 5.-(vii), 6.-(iv), 7.-(ii)
- VIII. 1. Great Mughals are Mughal emperors from Babur to Aurangzeb. Mughal rulers after

Aurangzeb until Bahadur Zafar II are known as Later Mughals.

2. Nadir Shah sacked Delhi in 1739. Two decades later in 1759 Ahmed Shah Abdali invaded Delhi.
3. After Aurangzeb's death, Rajputs of watan jagirs declared their independence and were completely independent of the Mughal Empire. The Old Mughal Provinces own allegiance to Mughal Empire. They were founded by the members of the nobility who were appointed as governors of these large provinces.

HOTS

1. The map 'India in 1751' shows the decline of once strong Mughal Empire. Its few remnants centred around Delhi just like the Delhi Sultanate. It also shows the spheres of influence of the French and English around the western and eastern sea-coasts unlike the Islamic invaders who all came from the north-west.
2. **Relevance of Guerrilla warfare and Terrorism of today:** (i) Both are irrelevant in modern democracies which demand peaceful solution through dialogue and voting. (ii) Guerrilla warfare is a kind of wartime terrorism and has been studied at depth by Leo Tolstoy and he wrote, "*This sort independent action is always seen in wars that assume a national character.*" It has prevailed since ancient Roman times. Shivaji used it to best advantage and was crowned as title *Chhatrapati* (paramount sovereign) in 1674 after capturing vast territories. Terrorism which simply believes in spreading terror by killing innocent people and destroying their property is akin to barbarianism. It has not been endorsed by any sane ruler.

GEOGRAPHY

1. Our Environment

Practice Time

- I. 1. (ii), 2. (i), 3. (iii), 4. (ii), 5. (ii), 6. (iii)
- II. 1. An ecosystem is formed by the interaction of living organisms with each other and with the physical environment in which they live.

2. The natural environment is a sum total of the things around us that exist naturally in a form that one can touch or see.
 3. The lithosphere is the upper-most solid crust of the earth that includes the upper mantle and consists of the rocks and minerals covered by a thin layer of soil.
 4. The photosynthesis is the process of converting light energy of the sun into chemical energy that is passed from one organism to another in the form of food.
- III. 1. The major components of the environment on the basis of life are the *Physical Environment* and the *Biological Environment*. (ii) The things around us that exist in a form that one can touch or see are termed as physical environment. They are like land, mountains, air, water etc. (iii) The biological environment is the living environment of organisms - plants, animal and bacteria.
2. The two major components of biotic environment are the animal and plant kingdoms. (ii) They exist in a narrow zone, called biosphere covering parts of lithosphere, hydrosphere and atmosphere.
 3. (i) The two main divisions of the physical environment are Biotic and Abiotic environment, (ii) The biotic environment consists of the living organisms like plants, animals and micro-organisms around us that have their habits within the physical environment. (iii) The Abiotic Environment is the environment of non-living elements such as land, mountains, air, water etc. that help the living environment to live and grow.
 4. The energy flows through the ecosystem as the sun is the only source of energy in the ecosystem, a system formed by interaction of all living organisms with each other and with the physical and chemical factors of the environment in which they live. (ii) The energy flow takes place through the process known as photosynthesis. (iii) In this process the energy is passed from one organism to another in the form of food on which all living organisms depend. (iv) The system of interactions among the organisms and with their physical environment though is very

complex it no doubt ensures constant flow of matter.

- IV. 1. The four examples of human made environment are:** (i) The human and the human-made environment is an imprint on physical environment or the natural environment such as land, air and water. (ii) Humans modify the physical environment and build roads, bridges, houses, industries, parks and many more things. (iii) In the beginning humans made changes such as domestication of wild animals and growing crops, build houses, transport vehicles etc. all for their comfort and convenience. (iv) The components of human made environment such as roads, buildings, bridges etc. depend on physical environment which makes all the resources available for supporting them.
- 2. The four examples of gravitational force in everyday life are:** (i) The gravitational force is the force of attraction between two particles or bodies proportional to their mass. (ii) It occurs at all distances, for example, a rock sliding down a hill or water flowing along sloped surfaces. (iii) This force of attraction holds the atmosphere around earth as a result of which water in oceans does not escape into space. (iv) At lower layers of atmosphere dust and water vapour are found. Consequent to the gravitational force they cause precipitation which too falls down on earth's surface rather than escaping into space.
- 3. The importance of the three spheres of our environment to biosphere:** (i) The three spheres of our environment are the Lithosphere, Atmosphere and Hydrosphere. The biosphere is the narrow interacting zone of these three spheres beyond which life does not exist. (ii) The lithosphere consists of the rocks and minerals and is covered by a thin layer of soil. The soil is the source of all plant life which makes nutrients available for existence and growth of other forms of life. (iii) The atmosphere is the gaseous envelope found in layers surrounding the earth. Its gaseous composition and heating by sunrays provides us all the light and heat as well as air to breathe necessary for growth of life on

earth and makes weather and climate on the earth's surface. (iv) The Hydrosphere is the sphere of water held to the earth's surface by gravitational force as well as the atmosphere. The domain of water includes water found in different types of water bodies like rivers, lakes, seas, oceans, including ground water, water vapour found in atmosphere and that frozen in glaciers in Polar Regions and on high mountains. The water like air is essential for all living organisms.

- 4. Health of an ecosystem:** (i) The health of our ecosystem affects the health of our planet earth. Ever since the dawn of domestication people began to modify the environment for their own well-being and benefit without caring for the damage to environment. (ii) Today damage to the natural environment is a burning topic and of great concern on account of global warming which is affecting animal and plant life including that of humans. (iii) The major cause of damage to natural environment is the huge human population of the world that has shot up from 5 million 10,000 years ago to more than 7.3 billion in early 2015 leading to huge pressure on the resources of the earth. (iv) Other causes are pollution of all the three realms of earth – land, air and water - deforestation, huge gap between poverty and affluence of people and faulty waste disposal systems. (v) The health of an ecosystem affects and in turn is affected by the interaction of living organisms with each other and with the physical environment in which they live. This environment is what makes up our surroundings affecting an organism during its lifetime. This being in danger the whole the physical environment is also affected.
- V. 1.** Man modifies his environment so as to build human-made environment such as bridges, houses, industries, parks and many more things.
- 2.** Plants and animals depend on each other in order to draw the resources upon which they depend.
- 3.** Biological environment is also natural environment because both plants and animals

including man exist naturally.

- Both poverty and riches have negative impact on environment as the rich people consume more resources and produce large quantities of wastes. The poor people even lack proper sanitation, suffer from hunger and malnutrition.

VI. 1.-(iv), 2.-(i), 3.-(ii), 4.-(iii).

- VII. 1. Biotic environment is the environment of living organisms like plants, animals and micro-organisms surrounding us. Abiotic environment has no life but form its external factors like air, water and land on which the biotic life depends.
- Natural environment is the environment surrounding us naturally of which the biological environment consisting of the living environment of organisms - plants, animal and bacteria.
 - Environment is everything that makes up our surroundings. Ecosystem is the system formed by the interaction of living organisms with each other and with the physical environment in which they live. In size it may range from a small pond to as large as an ocean.

HOTS

- The balance between natural and human environment is the balance between human population and what the biosphere can support. Secondly, it is balance between all living organisms on the earth. It is necessary because the resources such as soils, minerals, forests etc. on which all life depends are limited.
- The energy flow in ecosystems also transfers the materials through the food we eat. It has formed a chain called foodchain in which all organisms get liked. There is thus interaction of all living organisms with each other and with the physical and chemical factors of the environment in which we live. This has made earth a habitable planet and no other planet is similarly habitable.

Activity Time

Life Skills

The advantages to our environment of waste separation and sorting at source is certainly very

necessary for following reasons: (i) Hazardous wastes cannot be straightaway deposited or dumped in water bodies or landfills. (ii) It can save negative impact on human, animal and plant life. (iii) It will make waste management quite an understandable and manageable aspect.

2. Inside Our Earth

Practice Time

- (i), 2. (ii), 3. (iii), 4.-(i), 5. (iii), 6. (ii), 7. (ii)
- A rock is an aggregate solid mineral material forming the earth's crust.
 - The three types of rocks are igneous, metamorphic and sedimentary.
 - The metamorphic rocks are the rocks which have undergone change in the in their original texture, composition of minerals and the relative abundance of their minerals as a result of temperature, pressure as well as the chemical composition but without melting.
 - The inner-most layer of the earth is core divided into upper and inner core.
- (i) The three layers of the earth represent the structure of the earth from its surface to its interior. (ii) The structure is marked by a layering arrangement of rocks and other materials in different states ranging from solid at the surface to semi-molten and molten state in the interior and in condensed state at the innermost part of the earth. (iii) These three concentric layers from earth's surface to its interior are like that of an onion. They are the *Crust*, *Mantle* and *Core*.
 - (i) The extrusive rocks are formed when magma reaches the earth's surface, cools down and flows as lava. (ii) Lava then undergoes fast cooling which does not allow formation of large crystals. Basalt, andesite, rhyolite and komatiite are example of extrusive igneous rocks. (iii) The intrusive rocks are formed within the earth's crust when magma slowly cools down and solidifies. Some fine examples of these types of rocks are granite, diorite, gabbro and peridotite.
 - (i) By a rock cycle we mean the process of transformation of the rock in cyclic order from one type to another type. (ii) In the

process the destruction and formation into another type of rock takes place. (iii) That means it is a property of rocks to undergo change in form from one type to another.

4. The two reasons for layering arrangement of the interior of the earth are: (i) The temperature and pressure both go on increasing towards the interior. (ii) During the formation stage the materials in the earth's interior were sorted by gravity. (iii) On account of gravity as well as temperature conditions the heavier elements like iron sank towards the interior-most centre of the earth and lighter materials like the silicates and others including water rose to become part of the crust.

IV. 1. Uses of rocks: (i) The rocks are aggregates of minerals and are the building blocks of oceanic and continental crust on which all life exists. (ii) The minerals in rocks undergo many natural processes to form soils essential for plant growth, survival of life and for agriculture. (iii) All rocks are made of chemicals or their compounds that form the minerals. Many sedimentary rocks contain large remains of plants and animals which form fossils that are source of fossil-fuels such as coal, petroleum and gas. (iv) Rocks provide many types of materials ranging from gravel, pebbles, stone and marbles for construction roads, bridges, buildings etc. (v) The fiery rock forming material called magma has also many benefits like building of Deccan Plateau and inspiring technological growth.

2. **The layering arrangement of the interior of earth:** As explained in Short Answer Question 1 above the layering marks the the structure of the earth. (i) **Crust:** The uppermost part of the earth's surface the crust is 0-100 km thick and on it both continents and oceans stand. By volume it weighs only 0.5% of the total mass of the earth. (ii) **Mantle:** The uppermost rigid part of the mantle together with crust makes up the Lithosphere. Below the rigid part, the mantle is in semi-plastic state and deeper down the semi-plastic rock is fiery red molten rock called magma. (iii) **Core:** The innermost layer of the earth is

called core. Like other layers, based on the properties and state of rock it is divided into upper and inner core. By volume core weighs about 8.3% of the total mass of the earth.

3. **For rock cycle refer to Short Answer Question 3 above. Importance:** (i) Rocks undergo change in form from one type to another. (ii) The rock cycle helps explain how rocks are formed and how the earth's is broken into what are called tectonic plates. (iii) It throws light on the fiery rock material called magma and the process of its cooling and solidification.
- V.**
1. We cannot go to the centre of the earth because both pressure and heat go on increasing towards the interior. Apart from this the earth's gravity and magnetic field that flow inside the earth do not allow scientists to dug deep holes.
 2. Sedimentary rocks are formed from sediments because with the passage of time the initial sediments solidify by cementation and compaction under pressure.
 3. Limestone is changed into marble in the process of change in its original texture, composition of minerals and the relative abundance of their minerals under metamorphism.
 4. Sedimentary rocks are easy to work with because they are a result of break-down and accumulation of other two rock types.
- VI.**
- 1.-(v), 2.-(iv), 3.-(ii), 4.-(i), 5.-(iii)
- VII.**
1. Igneous rocks are primary rocks and are formed by cooling and crystallization of silicate melt or magma. Sedimentary rocks are the product of processes operating on the surface of the earth and are formed by solidification of these sediments by cementation and compaction under pressure over time.
 2. Earth's crust is the uppermost part of the earth's surface and is only 0-100 km thick. The innermost part of the earth's surface is called core divided into outer core in semi-molten state and inner core is in condensed solid state.
 3. Deccan Plateau is the oldest landmass and is made up of lava flows of mainly basalt rocks. The Great Plains of India was formed

by riverine sediments brought down by the rivers such as Indus, Ganga, Brahmaputra and their tributaries. It is thus, primarily made up of sedimentary rocks.

HOTS

1. Earth as we know is terrestrial planet closer to the sun. Sun's gravity as well heat pulled the dust and gas and gradually their surface began to condense to form the rocky surface. The molten matter was pulled into the interior of the earth. It is also why both heat and pressure go on increasing from surface to the interior.
2. Rocks are clues of past climates, landscapes and history of humans. The characteristics of different rocks depend on the environment in which they were formed. These characteristics are changed under high pressure and temperature as is evident from the rock cycle. From this as well as from the rock sediments scientists can get clues about past climates, landscapes and history of humans.

Activity Time

□ Project Work

While doing a similar project on studying the predominant types of rocks in their local area of a village called Montignac, Lassaraux, in France four teenagers stumbled upon cave paintings. The nearly 17,000 year-old paintings made history and are best known as Lassaraux Cave Paintings. Now you also do ROCKS AND SOILS project report.

3. Our Changing Earth

Practice Time

- I. 1. (i), 2. (i), 3. (i), 4. (ii), 5. (iii), 6. (iii).
- II. 1. In India we can you find a volcano on Barren Islands of Andaman and Nicobar group.
2. The seismic P-Waves or the *Primary Waves* or *Push Waves* are the *Body Waves* that travel in the interior of the earth about 6 km per second.
3. The intensity of an earthquake is measured on logarithmic Richter Scale that takes into account both amplitude and magnitude of the earthquake.
4. The last earthquake hit Bhuj town of Gujarat

in the early morning at 8.45 a.m. of 26th January 2001.

- III. 1. (i) Plates move because of buoyant force generated by fluid and hot magma beneath the plates. (ii) The Tectonic Plates move in different directions. (iii) The circular movement of magma also offers an explanation of plate movements and rise of convection currents.
2. (i) The exogenic forces are the external forces operating on the earth's surface such as weathering, erosion and deposition that bring about changes of the surface of the earth slowly. (ii) The endogenic forces operate in the interior of the earth. (iii) The endogenic forces build landforms through upliftment, subsidence, folding, faulting, earthquakes and volcanoes.
3. (i) The focus of the travelling seismic waves is where they originate below the ground. (ii) The point directly above the focus on the earth's surface is called epicentre. (iii) Importance: (a) The amount of release of energy by the travelling waves can be measured with reference to these points. (b) They are indicators of types of waves such as the sound waves, seismic waves that travel in all directions away from the source or the focus so the distance from these points.
4. (i) The amplitude is the amount the ground moves as the wave passes by. It is measured by a sensitive instrument called seismograph. (ii) The magnitude of is the size of the earthquake. (iii) The most widely used method that measures the intensity of the earthquake and takes into account both amplitude and magnitude is the Richter scale. It is a logarithmic scale using numbers on scale from zero (0) to 9. (iv) An increase in one point on the scale means that the force of the earthquake is large by 10. The earthquake measuring 4.0 on Richter scale has 10 times more force than the one measuring 3.0. Generally earthquake of intensity 6 and above are very destructive
- IV. 1. (i) The diastrophic movements are forces that are both horizontal and vertical movements and cause 'twisting' of earth's surface. (ii)

The main cause of these endogenic forces is the circular movement of the magma while trying to rise towards the surface of the earth. (iii) It has broken the surface of the earth into a number of plates known as 'Tectonic Plates'. This was explained in 1912, by a German meteorologist Alfred Wegner in his 'Theory of the Continental Drift'. (iv) The theory explains the formation and major features of the Earth's Crust both Oceanic Crust and Continental Crust. (v) Most of the horizontal movements, though slow, affect the oceanic floors and continental masses. Through uplift and subsidence they raise Fold Mountains like Himalayas, build valleys, cause cracks, fractures, faults and contraction and spreading of seafloors.

2. (i) The sudden movements, as against the slow diastrophic movements, are the rapid movements that affect the earth surface by producing vibration, causing cracks, landslides etc. and through volcanic eruptions. (ii) Their impact is felt through volcanoes and earthquakes. Geologically they too, like the Diastrophic Movements, are constructive movements as they build relief features such as volcanic mountains and other volcanic landforms. (iii) A sudden violent shaking of the ground usually causing great destruction is termed as the earthquake. (iv) There are several causes for the occurrence of such an event but all lead to building up stresses in the rocks. The stresses produce a trembling leading to faulting and release of energy which produce vibrations called seismic waves.
3. For the two basic types of seismic waves refer to 'VII – Differentiate Question 2 below. (ii) Where the travelling seismic waves originate is called focus and the point directly above the focus on the earth's surface is called epicentre. (iii) Of the two surface waves, as afore said, L-Waves have shearing motion in the direction of their movement, the Rayleigh Waves move horizontally and vertically. (iv) Of the Body Waves, P-Waves relatively cause less damage and move through both through solid rocks and liquids. (v) The seismic waves have both *amplitude* and *magnitude*. The

amplitude is the amount the ground moves as the wave passes by. It is measured by a sensitive instrument called seismograph. The *magnitude*, the size of the earthquake, takes into account both *amplitude* and *magnitude* is measures on the Richter Scale.

- v. 1. T, 2. T, 3. F, 4. T.
- VI. 1. Buildings collapse due to earthquakes because of vibrations and shaking of the ground caused by surface waves.
2. Magma rises to the earth's surface because of convection or the tendency of hot material being lighter to rise upwards and cold material to sink.
3. Earthquakes are caused by building up of stress in the rock because they may slip past each other along a fault or there may be release of energy which leads to vibrations in rocks.
4. Bhuj in Gujarat is located in seismically active zone because this zone is located close to the fault-line of two colliding tectonic plates, the Eurasian Plate and the Indo-Australian Plate.
- VII. 1. Extinct volcanoes are not likely to erupt again and are considered dead volcanoes. The dormant volcano lie quiet for some time but are not extinct
2. Two surface seismic waves are Love-Waves (L-Waves) and Rayleigh Waves. Whereas the former have shearing motion in the direction of their motion, the later move horizontally and vertically. Body waves travel through the body of the earth or the interior. They are the *P-Waves* or the *Primary Waves* or *Push Waves* and the *Secondary Waves* or *S-Waves*.
3. Earthquake is termed as a sudden violent shaking of the ground usually causing great destruction. A volcano is an opening or a vent in the earth's crust through which molten magma erupts.
4. Refer to HOTS Question 2 below.

HOTS

1. The basic steps to disaster management are: (i) Preparedness: Spreading awareness amongst family members, people in the neighbourhood

and staying away from threatened locations. (ii) Prevention: Natural disasters cannot be controlled but building houses or any other settlements in such areas must be avoided. (iii) Mitigation: A measure towards limitation of the adverse impacts of hazards together with recovery under supervision. (iv) Sustainable Development: Pre- or post-disaster phase should focus on the needs of the present generations without compromising the ability of future generations to cope with disasters.

2. Volcanoes are constructive forces because they build many relief features and are termed as Diastrophic Movements.

Activity Time

Graphic Organiser

Volcano Organiser : The information is given and may be organised in different ways.

| Type of volcano | | | | Example |
|-----------------------------|-----------------------------|------------------------------|---------------------------|--|
| Based on Eruption | Active volcanoes | Dormant volcanoes | Extinct volcanoes | Mauna Lua, Hawai Vesuvius, Italy Kilimanjaro, Africa |
| Based on Shape | Cinder cone | Composite | Shield | Paricutin, Mexico, Mount Fuji, Japan |
| Comment/ Explanation | Erupt anytime/ Rise high | May erupt Build mountains | Dead Covers large area | |

4. Landforms of Erosion and Deposition

Practice Time

- I. 1. (ii), 2. (iii), 3. (i), 4. (ii), 5. (i).
- II. 1. Erosion is a process by which rocks are worn out and the rock material is removed or transported from one location to another location at lower altitude.
2. The sand dunes are mounds of sand deposited by wind that during transport faces some obstacle such as a low hill etc.
3. The ox-bow lakes are formed in a stream or a river when a meander gets cut-off from the main stream on account of continuous erosion and deposition along the sides of the meander. The ends of the meander loop come closer and closer to form oxbow lakes.
4. India's highest waterfall is Gerosoppa or Jog

Falls (260 m high) on the Shrivati River in Karnataka.

- III. 1. (i) The flood plains are formed when the rivers erode their own banks and on account of overflowing action, deposit this load on the land adjacent to the river. (ii) At times overflowing may be due to excess water in the stream creating conditions of overflowing of banks and deposition of load. (iii) If the river deposits its load of fine soils and other material on its banks levees are formed.
2. (i) The beaches are formed when sea waves deposit sediments of sand, gravel and pebbles along the shores. (ii) But if deposition along a beach is on account of wind sand bars are formed.
3. The floodplains are of great environmental concern because: (i) The overflowing action and deposition of load on the land adjacent to the river may contain many hazardous wastes. (ii) At times overflowing may be due to excess water in the stream creating conditions of flooding and damage to natural vegetation, people and their property. (iii) The load of fine soils and other material may have been removed from environmentally sensitive area.
4. (i) A delta is formed in the lower course of the river where it approaches the sea. (ii) If the velocity of water is not very fast the load gets deposited in front of the river. (iii) A large roughly triangular body of sediment develops and delta is formed such as the Sunderbans Delta formed by the Ganga-Brahmaputra rivers.
- IV. 1. (i) The sea waves are the disturbances in ocean water on account of 'to and fro' movement of water particles that face friction of wind blowing above. (ii) Waves vary in size and strength depending on wind speed and with enormous energy while striking rocks on the coast consequently creating many landforms of weathering, erosion such as: (a) **Sea cliff:** It is formed on a steep rocky coast rising almost vertically above sea water, the top of the rock is weakened by weathering while the sea attacks the base. (b) **Sea Cave:** When waves force their way into cracks of coastal

rocks or in the cliff face creating large hollows called caves or small caves called caverns. (c) **Headland:** When sea attacks alternating bands of hard and soft rock it leaves a section of the coast jutting out into the sea which is called headland. (d) **Sea Arch:** If the cave, described above, is in a headland the cavities become bigger and bigger only the roof of the caves remain, thus forming sea arches. (e) **Bay:** The bands of soft rock next to the headland are eroded easily and quickly leading to the formation of bay. It is a sheltered openings found between the headlands jetting out into the sea.

2. **Three landforms in a desert:** (i) **Mushroom rock:** A landform of erosion found in coastal areas or even arid regions. It is formed when winds erode lower sections of the rock more than upper sections leaving the rock standing on a narrow base. In other cases furrowed bedrock surfaces produces similar type of landform called mushroom rock. (ii) **Hammadass:** A landform of erosion found mostly in the famous desert landscape in the Sahara Desert. It is largely a hard rocky plateau where loose particles have been removed by the wind. (iii) **Sand Dune:** The famous landform of deposition found in deserts and on sea coasts. It is formed when wind-blown sand in the course of being transported and gets deposited on facing some obstacle such as a low hill to form sand dunes. Sand dunes in a desert produce breathtaking scenery. In case of such large activity depending on wind velocity dunes remain shifting from one place to another.
3. **Glacier erosion occurs in the following manner:** (i) The glaciers are termed as '*moving rivers of ice*' but pure ice itself has no power of erosion. (ii) When the snow accumulates it picks up loose rock and other sediments which are incorporated into moving glaciers. It is with the action of these sediments that glaciers erode landscapes through *scouring* scratches of various sizes that appear on rock surface. (iii) The glaciers move down the valley, on account of gravity, more materials are *picked and plucked* from rock surfaces. (iv) The intense scouring and plucking action of

glaciers leaves the sides of mountains wide, steep and deep but with a flat floor. Such a landform is known as U-shaped Valley. A smaller valley left hanging during formation of U-shaped Valley is known as Hanging Valley. A hanging valley is often the site of a waterfall.

- v. 1. Some rocks have a shape of a mushroom because winds erode lower sections of the rock more than upper sections and create furrowed bedrock surfaces.
2. Flood plains are very fertile because the river deposits its load of fine soils and other sediments year after year.
3. Sea caves are turned into stacks, a wall like feature on one side and a headland on the other because the sea arch is unable to support its top and collapses.
4. Work of wind is more pronounced in a desert because the air after being heated rises but not much because it carries load of dry sand and other materials and begins to blow at great speed horizontally near the surface.
- vi. 1.-(ii), 2.-(iii), 3.-(i), 4.-(vi), 5.-(v), 6.-(iv)
- vii. 1. A V-shaped valley is a river valley with steep sides and is formed in mountainous or highland areas like for example in Kashmir and Himachal Pradesh. U-shaped valleys are formed in glacier regions by the intense scouring and plucking action of glaciers which leaves the sides of mountains wide, steep and deep but with a flat floor.
2. Sand bars are formed by deposition of sand in the direction of the prevailing wind or in the course materials transported by sea waves along a beach. Sometimes sand is further transported inland forming wide sand dunes.
3. Scouring action of glaciers concerns rubbing and scratching the rock surfaces hard. The plucking action takes place when more materials are picked and plucked as glacier moves down the slope.
4. Snowline is the altitude above which snow fall on high mountains. Snowfield is the place where snow accumulates and glaciers are formed.

HOTS

1. The importance of the working of forces of weathering, erosion and deposition on the surface of the earth: (i) These exogenous forces operate on the surface of the earth and are visible everywhere. (ii) They act against the endogenous or internal forces. (iii) They are mainly engaged in lowering or levelling off the surfaces by wearing away or depositional work of the landscapes. (iv) Through these action they form important landforms such as the Northern Plains of India which today is almost level without any major relief features.
2. The role played by elements of weather on the surface of the earth: (i) The elements of weather are temperature, humidity, precipitation etc. It are these elements that are engaged in weathering, erosion and deposition. The role played by these elements is discussed at previous question 1. (ii) Further, erosion can neither take place in absence of weathering, gravity nor in absence of forces such as running water, wind, glaciers and ocean currents.

Activity Time

Life Skills

1. Landforms mainly used for leisure are V-shaped, U-shaped valleys, Beaches, Bays, Waterfalls, Delta etc.
2. Landforms mainly used for economic activities are floodplains, Meanders for crossing the river, deltas etc. (*Give description of each of these landforms*)

5. Atmosphere

Practice Time

- I. 1. (iii), 2. (i), 3. (iii), 4. (iii), 5. (iii).
- II. 1. The atmosphere is a blanket of air around earth and acts as a protective shield against space debris, harmful sunrays and does not allow water on earth to escape into space.
2. The two gases that form the bulk of the atmosphere are by per cent of volume *Nitrogen* 78.1% and *Oxygen* – 20.9%. together constituting 99% of the atmosphere.
3. The gas that creates greenhouse effect in the atmosphere is carbon dioxide (CO₂) or the one that has the ability to absorb heat.
4. The top-most layer of atmosphere is exosphere. It is where the earth's atmosphere meets outer space.
5. The atmosphere helps in biological activity on Earth as it provides all the resources for its operation of birth, growth and death of all living things. Above all it keeps earth ever so young free of any debris of dead matter.
- III. 1. **The convection in atmosphere:** (i) It is the movement of gases in atmosphere in which warmer air moves up and colder air sinks leading to transfer of heat. (ii) It is so because warmer air is lighter and rises while colder air heavier sinks to fill the gap. (iii) The sun being the only source of energy on earth, it heats the earth's surface and atmosphere more from below than from above. (iv) The convection in atmosphere drives many other life sustaining forces on earth like hydrological cycle, nitrogen cycle, winds, weather, climate and much more
2. **Greenhouse gases:** (i) These gases are vital constituents of atmosphere but in small quantities such as carbon dioxide, water vapour, ozone and methane. (ii) They are so called because of their effect and analogy to a glasshouse in which vegetables are grown that allows incoming sunlight to pass through but absorbs heat generated inside which is radiated back within the glasshouse. (iii) The greenhouse gases in atmosphere act in similar manner and heat the earth's surface from below and do not radiate it back to space.
3. (i) The second layer of atmosphere above the Troposphere is called Stratosphere because 'the spreading out' or what 'strato' in Greek means, occurs on account of horizontal movement of air. (ii) The temperature goes on gradually increasing with rise in altitude although in the first 20 km ascent temperature almost remains constant. Clouds, dust, water vapour and weather phenomena are almost all absent in this layer and so 'spreading out' occurs. (iii) Airflow from the stratosphere to layers above or below occurs on account atmospheric waves and oscillations caused by gravity, heat and day-night cycle.

4. **The location and work of ozone layer.** (i) The ozone layer is located between 15 and 35 km above the Earth's surface in the Stratosphere, discussed above. (ii) This layer absorbs harmful ultraviolet radiation (UV) radiation of the sun. (iii) Ozone is a form of oxygen but is a greenhouse gas and the layer is subjected to great pressure from anthropogenic gases such as smoke from burning of fossil fuels in automobiles and industries.

- IV. 1. The causes of structure of atmosphere:** (i) Variations in temperature arising primarily from absorption of different types of solar radiation at different levels in inclined position of the earth in space is the main cause of the structure of atmosphere. (ii) The density of atmosphere varies as heating caused by solar energy reduces the density of air. (iii) The atmosphere has thus a layered thermal structure and beginning from the bottom to top, these layers are *Troposphere*, *Stratosphere*, *Mesosphere*, *Thermosphere* and *Exosphere*. (iv) The Troposphere is the layer closest to earth's surface varying in thickness varies from 7 km near the poles and about 18 km over the equator. It contains 80% of the mass of the earth's atmosphere and the temperature goes on decreasing at the rate of 1°C per 165 km ascent. (v) Stratosphere from the top of Troposphere it extends up to around 50 km. The temperature goes on gradually increasing with rise in altitude although in the first 20 km ascent temperature almost remains constant. (vi) Mesosphere stretches from 50 km to around 80 to 85 km. Temperature decreases with increase with height and reaches about -100°C. (vii) Thermosphere is characterised by increasing temperature with height and may go up to 1,500°C or more in the lower region. Temperature remains steady but on account of very thin air and presence of oxygen which absorbs most of the heat one does not feel the heat. (viii) Exosphere is characterised by high temperature which may be 4,500°C as one goes up.
2. **Uses of gases in atmosphere:** (i) The atmosphere plays an important role in making earth a livable planet because of gases

constituting it. For example oxygen is critical for breathing, water for drinking, nitrogen for soil fertility and other gases for other types of resources. (ii) The gases have thrown a protective shield all around earth to protect life on earth from space debris and from harmful ultraviolet radiation (UV) and does not allow water on earth to escape into space. (iii) The gases are largely responsible for making climate and weather on earth, (iv) All the means of transport and communication are possible on earth because of composition of its atmosphere. (v) The gases provide all resources for biological activity of birth, growth and death among all living things and keeps earth ever so young free of any debris of dead matter.

3. **Ionosphere:** (i) Located in Thermosphere it is the region of charged particles, called ions, and has upper and lower boundary as a result of which many happenings take place on earth. (ii) The ions affect and make possible long distance radiocommunication on earth. (iii) The sphere of such charged particles is known as magnetosphere present only above the Earth and Jupiter. This magnetic field forms a shield protecting the planet's surface from these charged particles coming from the sun. (iv) Of the many regions of the ionosphere, one region is responsible for absorption characteristics of the Earth's atmosphere as a result of which many physical processes take place on earth. (v) The ionosphere terminates where interaction of solar wind with the planet terminates. It can be seen as a tail like formation from earth.
4. Refer to Question 2 of this section regarding the role of atmosphere in protecting life on earth.
- VIII. 1.** Oxygen is the second most plentiful gas in the air. It is used by humans and animals for breathing. Green plants produce oxygen while absorbing carbon dioxide in the process photosynthesis. Nitrogen gas is found plentiful in air and by a series of natural cyclic processes it is fixed in soil by bacteria where roots of plants use it to grow.
2. Ionosphere, a sphere of ionised molecules and

is present in lower region of Thermosphere. The Thermosphere is above Mesosphere of atmosphere where the temperature of air increases with height and may go up to 1,500°C or more in the lower region.

3. Water cycle or the hydrological cycle operates on the earth's surface. Through this cycle water evaporates from oceans and water bodies to lower layers of atmosphere where it condenses and falls back on the earth's surface in the form of precipitation. Nitrogen cycle makes atmospheric nitrogen available in soil where it is fixed by bacteria and through a series of cyclic processes it moves back to atmosphere.

HOTS

1. It has been explained in Short Answer Question 1 above in which warmer air moves up and colder air sinks transfer of heat takes place. It is this transfer of heat that drives many other life sustaining processes such as nitrogen cycle. Nitrogen is critical for survival of living things. It is not ordinarily available in soil but is found in abundance in atmosphere. It is fixed in the soil through the operation of nitrogen cycle mainly on account of convection in atmosphere. Convection in atmosphere also drives many other life sustaining processes in similar manner.
2. The human beings are causing harm to environment by spewing anthropogenic gases in atmosphere like for example by smoke from burning of fossil fuels in automobiles and industries. These have caused harm in two different ways. Firstly, they have raised the surface temperature by as much as 5%. Secondly, the smoke has created its own sink in atmosphere. This in turn has caused a hole in ozone layer in atmosphere. This hole is allowing harmful ultraviolet rays of the sun reach the earth's surface. These rays are cause of skin cancer and many other lethal diseases among living things.

Activity Time

Life Skills

For preparing an illustrated presentation on how atmosphere protects life on planet earth visit:

http://www.windows2universe.org/sun/effect_on_earth.html

6. Weather and Climate

Practice Time

1. (ii), 2. (iii), 3. (i), 4. (iii), 5. (i), 6. (i).
1. The weather is the state of temperature, pressure, winds, precipitation, cloud and humidity over a short period of time and at a given place.
 2. Air pressure or the weight of atmosphere per unit area is measured with the help of an instrument called *barometer* of which there are two main types – *Mercury Barometer* and *Aneroid Barometer*.
 3. The Sub-Tropical High Pressure Belt is located between 30° and 35° or sub-tropical zones in both hemispheres.
 4. The types of local winds blowing in India during particular periods of the day and in particular areas in summer called *loo*.
1. (i) The state of temperature, pressure; winds; precipitation; cloud; and humidity over a short period of and at a given place. (ii) These elements temperature, pressure; winds; precipitation; cloud; and humidity change from place to place. (iii) They have close correspondence with the Temperature Zones of the earth. Therefore changes in these elements over short periods of time and at a particular place affect weather.
 2. **The processes of heat transfer in atmosphere:**
 - (i) If the temperature of one object is higher than the other, there will be transfer of energy from the hotter to colder object or place until both reach the same temperature.
 - (ii) Actually three types of similar situations arise explained by *conduction*, *convection* and *radiation*.
 - (iii) Conduction and convection are explained in VII. Differentiate Question 3 below. Radiation does not need any substance but a direct source of heat like for example the sun. The earth's surface and the atmosphere are heated directly by the sun. So heat transfer takes place directly.
 3. (i) The winds that blow in a particular direction during particular period of the day or month and in particular season are termed as monsoon. They are Land Breezes and Sea Breezes on larger scale and are known as

Seasonal Winds. (ii) The factors responsible for creation of these winds are unequal heating of the continental interiors and the seas on large scale e.g. the Northern Plains of the Indian Subcontinent and adjoining seas, presence of high mountains like the Himalayas. (iii) They are responsible for causing rainfall by monsoon winds over whole of the Indian Subcontinent and the Himalayas redirects these winds from one part to another but do not allow these winds to escape the Indian Subcontinent.

4. **Cyclone Phailin:** (i) This cyclone hit the Orissa in October 2013. (ii) Phailin affected about 9 million people but lessons had been learnt from the Super Cyclone of 2009. (iii) Most affected people were evacuated and only 17 were killed though crops and property worth several thousand crores could not be saved. (iv) People this time were very alert and followed pre-disaster warnings broadcast over radio, television and other means including loudspeakers.

- IV. 1. **Types of rainfall:** Rainfall though forms a small fraction of total precipitation but it is on the one hand the visible form and on the other most usable and essential resource on earth. The three most common types of rainfall are:
- (i) **Relief rainfall:** It occurs when warm and moist air is forced to ascend a mountain not very distant from the sea. The winds upon rising get cooled, resulting in condensation and cloud formation and precipitation.
 - (ii) **Convective rainfall:** This type is on account of the convection in atmosphere and mostly occurs in summer on hot days when sun heats the earth's surface. The warm air then rises and molecules in air begin to move further apart, air expands and is less dense. Thus, air becomes lighter and rises further. Then water vapour in air begins to condense leading cloud formation and precipitation.
 - (iii) **Cyclonic/Frontal rainfall:** When warm and cold air masses meet the warm air mass being lighter overrides the cold air mass. It is because warm air is less dense and moves inward towards the low pressure centre creating conditions of condensation and consequent precipitation.

2. **Atmospheric pressure influences weather and climate through:** (i) Air is a substance and has weight. The layers of atmosphere press upon each other and exercise their weight known as atmospheric or air pressure. (ii) It influences weather and climate because of its direct relationship with temperature. (iii) The controlling factors of weather and climate being common it influences vegetation and seasons of the year. (iv) Air pressure also influences winds because winds always move from high pressure areas to low pressure areas and greater the atmospheric pressure differences stronger the winds. (v) Air pressure influences heat transfer because of its direct relationship with temperature. If the temperature of one object is higher than the other, there will be transfer of energy from the hotter to colder object until both reach the same temperature.
3. (i) The incoming solar radiation intercepted by the earth is termed as insolation. (ii) It is one of the primary factors affecting both the atmosphere and the unequal heating of the earth's surface. (iii) A little more than half of the solar radiation is received as *insolation* that heats the earth's surface. The earth's surface reflects back this radiation in the form of Terrestrial Radiation. It is this outgoing radiation that heats the atmosphere more from below than from above by insolation. (iv) However, sun being the only source of light and heat, there can be no Terrestrial Radiation without insolation. In this respect its role in heating the atmosphere is incomparable.
4. The atmospheric pressure is distributed over the earth as follows: (i) Temperature of atmosphere being an influencing factor of air pressure, the pressure belts of the earth too coincide with the Temperature Belts. There are alternate low and high pressure belts in similar manner. (ii) Equatorial Low Pressure Belt or the Intertropical Convergence Zone stretches from 50N to 50S. It is a region of light winds and ocean currents. (iii) Sub-Tropical High Pressure Belt is located between 300 and 350 in both hemispheres, (iv) Sub-Polar Low Pressure Belt lies between 600 and 650 in both hemispheres. (v) Polar High Pressure

Belt covers both north and south poles where high pressure prevails.

- V. 1. Wet clothes take longer time to dry on a humid day because air on a humid day has less capacity to absorb water vapour.
2. Amount of insolation decreases from equator towards poles. It is because of the earth's shape and inclination on its axis as a result of which vertical sunrays fall on equatorial region but go on slanting towards poles.
3. Atmospheric pressure decreases with altitude because of decrease in temperature with altitude.
4. Intertropical Convergence Zone is called the zone of Doldrums because this oceanic region is characterised by light and calm winds and ocean currents.
- VI. 1.-(iii), 2.-(iv), 3.-(i), 4.-(ii).
- VII. 1. Weather is the state of atmosphere at a given place over a short period of time. Climate is the average of weather conditions or state of atmosphere at a given place over a long period of time say 35 years.
2. Heat is total energy of motion of molecules in a substance like air. The more the motion of molecules the more heat there will be. The temperature is measure of average energy of molecular motion in a substance. Thus heat not temperature is energy and temperature is a measure of energy.
3. Conduction is the process of heat transfer by direct contact of two substances. It occurs when a substance is heated the particles in it begin to vibrate more and find a way to escape. Convection is a process of transfer of thermal energy from hot area to cold ones. This occurs when hot air rises and makes way for more air from colder areas to move in.
4. Insolation is the incoming solar radiation as intercepted by the earth. Terrestrial radiation is the outgoing radiation reflected back by the earth.

HOTS

1. The factors influencing atmospheric pressure are: (i) Temperature: It is directly related to horizontal distribution of pressure or higher

the temperature, higher is the pressure. (ii) Humidity: The moist air exerts less pressure than dry air because amount of water vapour in air influences the density. (iii) Water vapour: They affect air pressure in similar manner as humidity. (iv) Wind: Although winds blow from high pressure area to low pressure area but at times wind can be strong that it may even lower air pressure in high pressure areas.

2. The temperature and air pressure both decrease with altitude at a given rate. It is why mountaineers carry oxygen masks when going up a high mountain like Mt. Everest.

Activity Time

Life Skills

The news report throws light on climate change. It gives reference of a large iceberg having separated from the Antarctica Pine Island Glacier which has began melting. It may raise sea level of Southern Ocean. It will be global phenomenon if the present trend towards global warming continues.

7. Hydrosphere

Practice Time

- I. 1. (i), 2. (ii), 3. (i), 4. (iii), 5. (ii), 6. (iii).
- II. 1. Tides represent the force of attraction of the sun and moon on the oceans of the earth. The causes of the tides are the earth being pulled towards the sun in the course of its rotation as well as changing phases of moon.
2. The ocean currents represent global ocean circulation or water in motion from equator to poles and back and from ocean surface to ocean bottom and back.
3. The evaporation is more active in the subtropical temperature zones where it is warmer.
4. The runoff is flow of water from precipitation over the ground surface in streams and rivers.
5. The five oceans of the world in decreasing order of their size (area in sq. km) are: (i) Pacific ocean - 155,557, (ii) Atlantic Ocean - 76,762, (iii) Indian ocean - 68,566, (iv) Southern Ocean 20,327 and (v) Arctic ocean - 14,056
- III. 1. The factors affecting the height of the waves

or amplitude are: (i) This maximum vertical displacement of sea surface from still water level is affected by gravity. (ii) The wind speed plays a major role because it imparts energy to the wave. (iii) When sun lines up with the moon and the earth, tides spring higher than normal because the gravitational force of both pulls the ocean water.

2. The factors affecting the movement of ocean water are: Refer to Long Answer Question 1 below.
 3. **Sea level:** (i) It refers to uniform level of the surface of water in seas and oceans as result of circulation of water in interconnected seas and oceans. (ii) Its advantages are: (a) All depths in seas and oceans and heights or altitude on land are measured with respect to sea level, above (+) or below (-). (b) It helps people living on sea coasts as well as ocean-going transport.
 4. **Lunar phases:** (i) The waxing and waning phases of the Moon, as seen from earth, are called Lunar Phases. Their importance. (ii) The tidal effect is higher than normal during the changing phases of the moon from New to Full Moon. (iii) The high tides, are very useful for navigation and help in fishing because rise of water level brings both the ships and fish closer to the shore.
 5. **The significance of ocean currents:** (i) There is direct relationship between General Circulation of Atmosphere and Ocean Currents because surface ocean currents are driven by wind which also aid navigation. (ii) Surface circulation carries warm upper water from the Tropics to Poles. At the Poles cold water sinks and is carried to the Tropics. (iii) Mixing of warm and cold currents leads to upwelling of fish. Most fishing grounds of the world are found near such areas.
- IV. 1. **The causes of oceans in motion:** (i) **Salinity:** The cold and salty water is heavy and sinks to great depths. The water then flows from nearby warmer regions and water in oceans is set into motion both horizontally and vertically. (ii) **Winds:** The General Circulation of Atmosphere operates actively over the oceans and winds drag the water

surface in the direction they are blowing. (iii) **Convection:** Convection like General Circulation of Atmosphere plays a key role in which cold water sinks and warm water rises to surface and thus set water in motion both vertically and horizontally. (iv) **Types of ocean circulation:** (a) **Waves:** The winds blowing over the ocean exert a force on ocean surface proportional to the square of wind speed. This produces a momentum, known as wave, into the surface layer of the ocean. The stronger the wind blows the bigger the wave. (b) **Tides:** Refer to Question 2 of this section below. (c) **Ocean Currents:** There are both horizontal and vertical ocean currents. Both represent global ocean circulation or water in motion from equator to poles and back and from ocean surface to ocean bottom and back.

2. (i) **Causes of tides:** (a) Gravitational attraction of the sun and moon on the oceans of the earth is mainly responsible for tides. (b) Sun being farther from the earth than the moon, sun's tide generation force is about half that of the moon. (c) While the earth is rotating on its axis, it is being pulled towards the sun, two tides occur each day. (ii) **Features of tides:** (a) The waning and waxing of the moon as well as lining up of sun, moon and earth, tidal effect is higher than normal during the changing phases of the moon from New to Full Moon. (b) On account of position in foregoing (a) there are two types of tides – *Spring Tides* and *Neap Tides* – explained in VII. Differentiate Question 3 below.
3. **Warm and cold currents:** (i) The temperature of the sea surface varies between 27-30°C at the equator and 1.9°C at the Poles. (ii) Surface circulation carries warm upper water from the Tropics to Poles. At the Poles cold water sinks and is carried to the Tropics. Thus, there are Warm and Cold Currents. (iii) **Direction and movement:** (a) Due to rotation of earth and Coriolis Force deflection takes place in the same manner as in the case of winds. Current are deflected to the right in the Northern Hemisphere and to the left in the Southern Hemisphere. (b) Warm ocean currents carry moisture and

influence precipitation patterns whereas cool currents do not have much carrying capacity of moisture.

- V. 1. Ocean water is salty because of run-off from continents which washes out all salts and wastes with them.
2. The quality of water is deteriorating on account of pollution and oil slicks by ocean-going transport.
3. Global run-off is main cause of water scarcity because it is highly uneven. For example, of the global runoff, Amazon River in South America alone accounts for 16% world's runoff whereas arid and semi-arid regions have only 2% of global runoff.
4. The Moon as seen on earth undergoes waxing and waning phases because it orbits the earth every 29.53 days and rotates on its axis in approximately the same time. Hence, we see on earth only side of the moon. The sun illuminates half the sphere of the moon at all times. Thus the lit and dark phases change as moon orbits the earth.
- VI. 1.-(iv), 2.-(v), 3.-(i), 4.-(ii), 5.-(iii)
- VII. 1. The Pacific Ocean is more than double the size of Atlantic Ocean and is bordered by North and South American and Asian continents. The Atlantic Ocean lies between Americas and Africa.
2. Sea waves are wind driven ocean circulation. The harbour waves are ocean-water disturbances caused by an earthquake on the sea floor.
3. Spring Tides are strong which happen when sun lines up with the moon and the earth. During these tides water springs higher than normal because the gravitational force of both pulls the ocean water. The low Neap Tides happen during the First or Third Quarter Moon when the ocean waters get drawn in diagonally in opposite directions by the gravitational pull of sun and earth. During this period the gravitational forces of the moon and the sun are perpendicular to one another with respect to earth.
4. Gyre are major ocean currents such as the

North Atlantic, South Atlantic, North Pacific, South Pacific and Indian Ocean Currents. The Ocean Currents represent global ocean water circulation. There are both warm and cold currents moving in both horizontal and vertical directions.

HOTS

1. **Main features of tsunami waves:** (i) They are a result of earthquake on the sea-floor and cause disturbance in ocean water which impacts the life of their on the harbour most. They are also known as harbour waves. (ii) They have long wavelengths and time between successive waves is very long. (iii) Tsunamis travel at a speed of well over 1,000 km per hour. (iv) When tsunami approaches the coast, the trough of the wave hits seafloor first because of shallow waters near the coast. This leads to increase in amplitude and decrease in wavelength. (v) Impact: Most of deaths on the shore are caused by backwash or receding waters due to drowning rather than the forward movement of the wave. (vi) The December 26, 2004 earthquake on seafloor off Indonesia was of the maximum magnitude of 9.0 on Richter Scale. This tsunami left more than 250,000 people in 10 countries in the area including India dead and over lakhs of people besides other types of devastation in the area.
2. **Life of People in India and Ocean Circulation:** India lies at the head of Indian Ocean, the only ocean named after a country. The life of people of the entire Indian Subcontinent is shaped and affected by the ocean circulation in following three predominant ways: (i) Monsoon climate of the Indian Subcontinent is a gift of ocean circulation. On account of Coriolis Force ocean currents are directed to right in the Northern Hemisphere and to left in Southern Hemisphere. (ii) Millions of people in the Indian depend on oceans for their life-support. (iii) Being surrounded by continental landmasses the ocean currents cannot develop freely like winds. As a result life of people of Indian Subcontinent, no matter whether in the interior or on coasts, is dependent on ocean circulation in one way or the other.

Activity Time

Life Skills

Global Ocean Circulation and Life of the People:
View:

http://education.nationalgeographic.com/education/media/ocean-currents-and-climate/?ar_a=1

Bob Ballard describes ocean currents as massive conveyor belts and compares their forces to those of roller coasters. *Video by National Geographic Education*

8. Natural Vegetation and Wildlife

Practice Time

- I. 1. (iii), 2. (ii), 3. (i), 4. (ii), 5. (i), 6. (iii), 7. (i), 8. (iii).
- II. 1. The two hardwood trees commonly found in tropical evergreen forests are maple and oak.
2. The tropical deciduous forests are found in northern Australia, Central America, parts of Africa and India.
3. The citrus fruits cultivated in Mediterranean climate conditions.
4. The dominant vegetation of India is deciduous forests.
5. The rainfall requirement of Temperate Evergreen Forests is generally above 100 cm but less than 250 cm.
- III. 1. Two factors on which the growth of vegetation mostly depends are (i) Temperature including precipitation play a significant role. (ii) Thickness and quality of soils promotes plant growth.
2. The three broad categories of natural vegetation are: (i) Forests such as evergreen, deciduous, coniferous etc. depending on amount and type of precipitation, soils. (ii) Grasslands which are mainly two types – tall grass in humid and very wet areas with hot summers and cold winters and mid-latitude grasslands in interior of the continents with moderate amount of rainfall. (iii) Shrubs or short bushy plants grow in areas of scanty rainfall and also as undergrowth in rainforests.
3. The uses of coniferous forest are: (i) Being evergreen they generate enough oxygen to support life on entire planet. (ii) They have been exploited for many commercial uses like woodcraft, lumber, resins, pulp etc. (iii) Some tree species are 5,000 years' old and provide clues of our own civilisations.
4. The three types of vegetation groups are the forests, grasslands and the shrubs. Their main common features are: (i) Together with grasslands, forests are regarded as vital storehouses of biodiversity or biological diversity. (ii) They are natural home or habitat in a particular environment of an animal, plant or other organism. (iii) The plants and animals each have means of adaptation of living in a particular environment.
- IV. 1. **Factors influencing natural vegetation.** (i) The relief features such as mountains, hills, valleys and plains etc. their direction, height and slope affect types of vegetation. (ii) The direction in which slope of land or a mountain faces the sun, known as aspect, impacts vegetation. The windward slopes receive more rainfall than leeward sides. (iii) The types of soils, their depth and moisture retaining capacity are important consideration for plant growth. (iv) The climate through its elements, the temperature, winds and moisture, plays a significant role in promoting particular type of vegetation.
2. **The plant and animal adaptation in three different climate regions:** (i) Mediterranean region: (a) The trees of this region have broad wax coated leaves and thick bark. These leaves and bark act as a means of adaptation to help them reduce transpiration. (b) Animal like bats and porcupines have similar adaptive means to help them reduce transpiration. (ii) Taiga: (a) This subarctic region in Northern hemisphere has coniferous trees which are evergreen with needle like leaves as a means of adaptation. They do not allow snow to accumulate. (b) Furry animals like silver fox, weasels, raccoons, mink, lynxes and polar bears have fur as a means of adaptation to cold climates. (iii) Desert vegetation adaptation: (a) The desert vegetation is characterised

by thorny bushes, creosote bushes, short grasses and cacti. The plants are capable of storing water and preventing its loss due to transpiration. They have long roots to draw moisture underground. Thorns also prevent animals eating away the plants. (b) Desert animals like Kangaroo in Australia, camel in Arabia and India have stored water in their fats. The smaller mammals, reptiles, mice, rodents and insects live most of the time underground as a means of adaptations.

3. **Temperate deciduous forests.** (i) The temperate regions experience four distinct seasons namely spring, summer, autumn and winter. Winters are cold and summers warm. (ii) Being located near coastal areas, they get rainfall between 750 mm and 1500 mm. The trees shed their leaves in autumn, a dry season. The trees remain dormant in winter and bloom in spring. (iii) Soils being very fertile hardwood trees grow. The fertile soils support agriculture and orchards. On account of the population pressure forest lands are regularly cleared for human habitation and agriculture. (iv) They are found in the north eastern part of USA, China, New Zealand and Chile. They are also found in the coastal regions of Western Europe. (v) Three of these forests include ash, beech, and conifers like spruce. Shrubs are found at middle level of some hardwood trees. (vi) The animals include deer, foxes, wolves are the animals commonly found. Birds like pheasants, hawks, snowy owls and more are found here. Insects, spiders, turtles and salamanders are common. Many animals migrate or hibernate in winter.
4. **Plant and wildlife of Tropical Grasslands and Temperate Grasslands: Tropical Grasslands:** (i) The grasses of Tropical Grasslands grow long more than two metres and are known by different names like tall elephant grasses, star grasses in some parts of Savanna. They have roots deep into the soil. (ii) The three main tropical grasslands are Savanna in East Africa, Campos in Brazil and Llanos in Venezuela. (iii) The animals of these grasslands include giraffes, zebras, buffaloes, kangaroos, mice, moles, ground squirrels, snakes, worms,

termites, beetles, lions, leopards, hyenas, and elephants. **Temperate Grasslands:** (i) These are termed as temperate because they are found in mid-latitude regions. The grasses are tall and short depending on rainfall. They are known differently in different region like needle grass, sunflower, coneflowers, wild indigos, buffalo grass etc. (ii) These grasslands are Pampas in Argentina, South America; Prairie in N. America (USA and Canada); Veld in South Africa; Steppe in Central Asia and Down in Australia. (iii) The wildlife varies from region to region. Some common animals are bison gazelles, zebras, rhinoceroses, wild horses, lions, wolves, prairie dogs, Canadian geese jack rabbits, deer, mice, coyotes, foxes, skunks, badgers, blackbirds, grouses, meadowlarks, quails, sparrows, hawks, owls, snakes, grasshoppers, leafhoppers, beetles and spiders.

- V. 1. The animals in polar region have thick fur and thick skin as a means protection from the cold climatic conditions there.
2. Tropical deciduous trees shed their leaves in the dry season to conserve moisture.
3. The type and thickness of vegetation changes from place to place because the factors affecting natural vegetation such as *relief, aspect, topography, soil* and *climate* change from place to place.
4. Most deserts are found in Trade Wind belt because of these are dry winds on western margins of the continents.
5. Furry animals are found in Taiga region because fur acts as means of adaptation to cold climate prevailing there.
- VI. 1.–(iii), 2.–(i), 3.–(v), 4.–(ii), 5.–(vi), 6.–(iv)
- VII. 1. Herbivore are the grass eating animals such as many domestic animals. Omnivore animals feed both on grasses and other animals chimpanzees, gibbons, monkeys etc.
2. Rainforest trees grow in areas of abundant rainfall and are generally found in tropical regions between 280 N and S of equator. The trees do not shed their leaves in any particular season and therefore look evergreen throughout the year. Coniferous trees are

also evergreen but grow mostly in Taiga, the subarctic region occurring in higher latitudes between 50° – 65° in Northern hemisphere only. These trees are ‘cone-bearing’ with needle like leaves as a means of adaptation. They do not allow snow to accumulate.

3. Campos are the tropical grasslands in Brazil and are closest to the equator and with both dry and a rainy season. The Prairies in N. America (USA and Canada) are mid-latitude temperate grasslands.
4. Taiga vegetation of subarctic region occurs in Northern hemisphere only and is dominated by the Coniferous forests. Tundra vegetation is known as permafrost vegetation and consists of very sparse and scattered trees such as pine, fir and spruce and grasses, mosses, lichens and shrubs that make a thick and colourful carpet in summer.

HOTS

1. **The geographic location of deserts and their vegetation:** (i) In terms of geographical location most deserts are in the interior of the continents such as Sahara in Africa, Gobi and Arabian Desert in Asia, Great Basin and Australian Desert. (ii) The coastal deserts, such as Atacama and Namib, are generally found between 200 and 300 latitude. (iii) Vegetation: The desert vegetation is adapted to climate and is characterised by thorny bushes, creosote bushes, short grasses and cacti. (iv) Tundra is also termed as a cold desert and indeed coldest and driest place on earth. Its geographic location is above 710° N. Its vegetation is described as permafrost vegetation and mostly consists of grasses, mosses, lichens and shrubs with scattered trees of pine, fir and spruce.
2. **Exploitation of Temperate Grasslands by man:** (i) On account of the population pressure temperate grasslands have been turned into croplands and grazing lands. They are regularly cleared for human habitation, agriculture and industries. (ii) Temperate grassland animals such as bison gazelles, zebras, rhinoceroses, wild horses, lions, wolves, prairie dogs, Canadian geese jack rabbits, deer, mice, coyotes, foxes, skunks, badgers, blackbirds, grouses, meadowlarks, quails, sparrows, hawks, owls, snakes, grasshoppers,

leafhoppers, beetles and spiders have been poached for their skin, horns and other body parts. Many animals such as bison are on the verge of extinction.

Activity Time

Life Skills

Herbarium is a kind dried plant museum in which plant and other botanical collections are systemically arranged and scientifically preserved. Now you make a similar collection and draw your conclusions and the knowledge you will gain.

9. Settlement, Transport and Communication

Practice Time

- I. 1. (iii), 2. (iii), 3. (i), 4. (i), 5. (ii), 6. (iii), 7. (i).
- II. 1. The four means of transport are roadways, railways, waterways and airways.
2. By the term ‘settlement we mean living at one place so as to lead a settled life.’
3. India’s total route-length of inland waterways is about 6,000 km.
4. One main advantage of air travel is that we can traverse mountains, seas and other difficult terrain very quickly.
- III. 1. **Communication:** (i) How messages or knowledge is transmitted from person to persons or between their groups. (ii) It also includes the means used for transmission. (iii) Sometimes, it may also include the time taken in this transmission.
2. **Two merits of railways are:** (i) It can carry more passengers and load over long distances and reach the destination in time. (ii) Today the railways have even blasted through mountains like the Himalayan ranges and other difficult terrain and making journey more comfortable.
3. **Houses have slating roofs in rainy areas because:** (i) They do not allow water and dust to accumulate. For example in rural area thatched roofs are almost always slanting or sloping so as to allow water and even dust not to accumulate but to pass through easily. (ii) To suit the environment as in Kashmir and

Himachal Pradesh slopes mountainous areas often correspond with the slope of the houses. (iii) The building materials such as grasses and twigs used for such types of roofs allow rainwater to pass by the slope rather drip through. For example houses in slums have mostly slanting roofs.

4. **Semi-clustered settlement:** (i) It is the result of fragmentation of a large compact village into semi-compact settlements. (ii) They are characterized by a small built up area a little away from the main cluster of villages. In such a case dominant community like the land-owning people may live in the central part of the village. (iii) Such settlements are most common in Uttar Pradesh and in plateau region in India.

- IV. 1. Major types of rural settlements:** Based on their size and shape four types of settlements can be distinguished. (i) Clustered/ Compact/Nucleated settlement in which houses are built close to each other clustered around a central point such as a village. The built up area is compact, farmers have small and productive fields. (ii) Semi-clustered settlement as described in Short Answer Question 4 above. (iii) Scattered or Hamleted Settlement are fragmented settlements of several smaller units. Such smaller units are known as hamlets. Social and ethnic factors mainly account for such fragmentation. (iv) Dispersed Settlement is characterised by smaller clusters of huts isolated from each other and scattered over a large area. Such settlements are found in remote areas or forests where tribals live. They may have a few pastures on hilly slopes.
2. **Waterways and their advantages:** (i) In-land waterways refers to a navigable canal, river or lake deep and wide enough to allow boats or ships to pass. The United States and Canadian Great Lakes region has the world's largest and busiest inland waterways. In India there are 6 inland waterways of Ganga, Brahmaputra, West Coast and East Coast canals including recently opened Barak River is about 6,000 km. (ii) Shipping routes are pre-determined to avoid dangers on high seas. About 90%

of world trade is carried by international shipping and is still expanding. (iii) Canals in the sea link two seas. Suez Canal and Panama Canal are the world's most important sea routes. (iv) Advantages: (a) Waterways are the cheapest and comparatively more safer means of transport. (b) There are over 50,000 merchant ships transporting every kind of cargo emerging from 200 countries of the world. (c) There are also world's longest better known sea routes like the Trans-Pacific Sea Route. (d) Sea routes lead to development of ports, dockyards and development of coasts.

3. **Available communication systems:** (i) Coming of computers has ushered us into digital communication revolution. Means of mass communication such as radio, television, high-definition television, cinema including newspapers and magazines educate, entertain and communicate with large groups of people at the same time. (ii) Cell phones use radio signals and are today available in villages also. (iii) Communication satellites orbit the earth in circular or elliptical orbits depending on their basic goal. Satellites are used for mobile communication with airplanes, ships, vehicles, space probes and in disaster or other emergency situations on earth. (iv) Text messages, commonly known as SMS (Short Message Service), are available on mobile phones. A mobile phone is constantly receiving and sending such messages via a pathway called control channel. (v) Internet chat and text messages are today commonly available instant means of communication available through voice-phone, video and text messages on computers. (vi) e-mail or the electronic mail is exchange of digital messages with or without attachments on computers to one or more recipients.
1. Today's world is shrinking because of fast communication and transport.
 2. Compact rural settlements are built for safety considerations because natural disasters such as floods, earthquakes etc. have fostered such nucleation.
 3. In swampy areas houses are built on stilts so

as to avoid accumulation of water in rainy season.

4. Flyovers and subways are built at busy road-crossings in order to allow smooth passage of traffic and take advantage of modern rapid transit technology systems.

VI. 1.-(iv), 2.-(iii), 3.-(i), 4.-(ii).

HOTS

1. The transport and communication are interlinked through: (i) They are nucleus to almost all aspects of life of people. (ii) Technological developments in both cases have almost been similar. (iii) Rapid technology systems are needed in both cases.

2. For learning about how the handling capacity of ports is measured view the United Nations Conference on Trade and Development (UNCTAD) site:

http://unctad.org/en/Docs/ship4946_en.pdf

Activity Time

Life Skills

The present systems of settlements, transport and communication will not take care of future needs of mankind. The basic constraints are: (i) Fossil fuels which provide main energy sources of the means of settlement, transport and communication are not going to last long; (ii) These are not geared to congested settlements of the future; and (iii) They are efficient.

Analytical Skills

The settlement hierarchy diagram shows: (i) How a settlement has developed from a hamlet of just less than 100 people to a metropolis of 1 or 10 million. (ii) It shows the rapid population growth (iii) The per unit surface area while expanding exponentially grows on reducing in size as compared to population per unit. (iv) As one move up the hierarchy there is growth of services provided per unit area (v) The diagram shows the growing sphere of influence per unit area of settlement.

10. The Tropical and Subtropical Regions

Practice Time

I. 1. (i), 2. (iii), 3. (ii), 4. (i), 5. (ii), 6. (ii), 7. (iii).

II. 1. The Amazon Basin is located in the South

American continent.

2. The crops grown by the people of the Amazon Basin are manioc and cash crops like coffee, maize and cocoa.

3. The one-horned rhinoceros found in Assam in the Ganga-Brahmaputra Basin.

4. Sunderbans is the world's largest fertile delta formed by the Ganga and Brahmaputra together with Meghna rivers.

III. 1. The birds that I can find in the rainforests of the Amazon are: (i) Out of 3,800 species of birds found in South America, 1,300 are in Amazon alone. 28 of these species are endemic to this region. (ii) The birds like toucans and harpy eagle are found. (iii) There also take place migrations from November to March from North Americas to South America.

2. The major cities located on the River Ganga are Kolkata, Delhi, Lucknow, Kanpur, Patna, Ludhiana, Agra, Allahabad, Varanasi and Meerut

4. (i) The wildlife sanctuaries and national parks are conservation areas for wild plants and animals in need of protection of their habitats. (ii) Some examples are Kaziranga and Manas wildlife sanctuaries and Nanda Devi National Park in the Ganga-Brahmaputra basin. (iii) Their importance – (a) These protected habitats help in conservation of the ecosystem. (b) A wildlife sanctuary is a declared protected where some limited human activity is allowed. In a national park no such human activity is allowed. This explains their importance for nature conservation.

5. The environment degradation in the Ganga-Brahmaputra basin: (i) The region suffers from both natural and manmade hazards. The natural hazards include earthquakes, landslides, floods drought, soil erosion and sedimentation, the natural process in which sediments carried gets deposited to form a solid layer preventing proper land use. (ii) There is high level of pollution on land, in atmosphere and in water bodies. Many factors such as flow of municipal and industrial

wastes into rivers and other bodies on a very large scale cause pollution. Accompanied by dense population, industrialization, exhaust emissions from automobiles and large scale deforestation are responsible for environment degradation. (iii) Large scale poaching or illegal killing of wild animals like tiger, rhinoceros and even Ganga River Dolphin for their skin, bones and other body parts has also caused great harm to natural environment.

- IV. 1. Life of people in Amazon Basin:** (i) In the Amazon basin today both indigenous people and settlers live. The indigenous groups such as Yanomamo, Wajapi, Caribs and Kayapo have been living there for thousands of years and still practise nomadic and semi-nomadic people life styles. (ii) The indigenous people besides hunting, gathering wild fruits and nuts, still practise shifting cultivation. Their staple food is manioc, a woody shrub extensively cultivated in South America and known by several names such as cassava, yucca, mogo etc. The settlers cultivate cash crops like coffee, maize and cocoa. (iii) Most indigenous people live in thatched roof tree-houses, others in apartments called 'Maloca' or 'Moloka', still others on high stilts where it is swampy. (iv) In the past 500 years the indigenous have been losing their land to settlers and their numbers too have dwindled. (v) They have fallen prey to many diseases caused by intermixing with settlers. Some of their races have become extinct as well.
- 2. The cities of Ganga-Brahmaputra basin:** (i) The cities with 1 million (10 lakh) and above population in 2011 are more than 12 in number and account for a total population of about 50,000,000 or 50 million. (ii) Some major cities showing their population in millions are Kolkata (14.2), Delhi (16.3), Lucknow (3), Kanpur (3), Patna (2), Ludhiana (1.6), Agra (1.8), Allahabad (1.2), Varanasi (1.5), Meerut (1.5). (iii) The total population of India during the same period was 1,200,000,000. (iv) Apart from above 12 cities, there are large number of other cities and towns. (v) The total population of the Ganga-Brahmaputra-Megna basin in India,

Nepal and Bangladesh is about 630 million. This is almost two-thirds of the whole of Africa. (vii) Major part of the population of India (about 71%) lives in rural area.

- V.**
1. The rainforests are depleting because of pressure of human population and human greed.
 2. Paddy is grown in the Ganga-Brahmaputra plains because paddy needs plenty of water which is made available by rivers.
 3. Rainforest contains most living matter because food and other resources for living are available in plenty.
 4. Most rivers of Ganga-Brahmaputra basin are polluted because of heavy human and animal wastes as it is a heavily populated region of the world.
- VI.** 1.-(iv), 2.-(iii), 3.-(v), 4.-(ii), 5.-(i).

HOTS

1. **Life of people is different in the two climate regions such as Ganga-Brahmaputra basin and Amazon basin for reasons of:** (i) These two regions are in two different climate regions. (ii) Most people in Ganga-Brahmaputra basin have modern life styles. In the Amazon basin both settlers and indigenous people live. (iii) Ecology and environment of the two regions are also different.
2. **Reasons why the Ganga-Brahmaputra region is heavily populated:** (i) It is the seat of world's oldest river valley civilisation; (ii) People have been living in the subcontinent for 5,000 years. In the course of long history many invaders and settlers have made the land their home, (iii) Favourable geographic factors like climate, availability of water, plains topography, trade and transport have contributed to heavy population density.

Activity Time

Life Skills

The image about the humans and the environment can be analysed by different in different ways. For example some of the ways could be: (i) The environment and the indigenous people have most favourable relationship as they their land, water and many other resource as community

resources. (ii) The children too have similar favourable relationship (ii) Earth awareness need to be cultivated among children.

11. Life in the Temperate Grasslands

Practice Time

- I. 1. (iii), 2. (ii), 3. (iii), 4. (i), 5. (i), 6. (iii), 7. (ii).
 - II. 1. The Temperate Grasslands of North America are called the prairies.
2. The cattle farms in the North American Grasslands are known as ranches.
3. The rivers that drain the Velds are the Limpopo, the Orange, and the Vaal.
4. The different elevations of South African grasslands are the High Veld 1,220-1,830 m; the Mid Veld 610 – 1,220 m and Low Veld 150 m – 610 m
 - III. 1. **The flora and fauna of the prairies:** (i) The precipitation increases from west to east which impacts biodiversity as well. (ii) The settlement of Europeans has altered prairie landscapes by destroying the original vegetation and replacing it by agricultural crops. (iii) Bison, the largest land mammal or the American Buffalo, almost double the weight of cow, that once roamed the prairies in large herds in nearly extinct or its species may no longer survive. Even in dry prairies rattle snakes and prairie chicken are no longer seen. Prairie dogs that once numbered 5 billion are now survived by a fraction of that number. (iv) Other animals that are similarly threatened include coyotes, squirrels, badgers, hares, rabbits and gophers.
2. **Rainfall in the Velds:** (i) The climate including rainfall is shaped by its relief and oceans on three sides as well as the Kalahari Desert in the west made by the cold Benguela Ocean Current. As a result of these factors rainfall decreases as one goes east due to rain-shadow effect of the mountains. (ii) Annual rainfall is 635 mm in the west and increases to 2000 mm in the High Veld. (iii) The rainfall is generally scanty and mist prevails almost throughout the year.
3. **Main occupations of the people of prairies:** (i) Extensive agriculture is the main occupation
- of the people of prairies. It is, however, carried out with the help of machines such as tractors, harvesters and combines. A variety of other scientific practices are carried which too are a part of occupations of the people. (ii) The prairies have rich deposits of fossil fuels such as petroleum, coal and natural gas. Other abundant mineral resources include lignite, gold and many other precious metals. The mining, metal working and allied trading activities are also the occupations of the people. (iii) Dairy processing and other industries are well developed in the region. These are also main occupations of the people.
4. **Dairy farming in the velds:** (i) The Velds region is well known for grazing of animals. The beef, fleeces, hides and animal products are major income earners to farmers. (ii) Apart from using completely mechanized systems of producing butter, cheese and other milk products several strategies are adopted to maintain pastoral production. (iii) Dairy technology has contributed to catering to export market. The strategies such as providing winter pastures in cool areas, rotation and resting of pastures in order to maintain supplies at constantly rising levels have contributed to the success of the industry.
- IV. 1. **Agriculture in the prairies:** (i) The climate and settlement of Europeans has altered prairie landscapes by destroying the original vegetation and replacing it by agricultural crops. (ii) The coming of the railways, vast fertile soils, favourable climate, the prairies, known by the new entrepreneurs as the 'Midwest', were turned into the Breadbasket of the World. (iii) Initially potatoes were grown on a very large scale. It was followed by other crops like corn (maize), wheat, oats, barley, sugarcane, tobacco, cotton and alfalfa, a forage crop. Animals too were reared for the meat, wool and hides. (iv) Most of the produce was exported to European countries and later to developing countries as well. (v) Agricultural crops in the prairies region are cultivated on large farms of about 1,000 hectares or more. Known as Extensive

Agriculture, the large farms are known as estates, large cattle farms are called ranches and those who look after the cattle are called cowboys. (vi) In this production system uses small inputs of manual labour but good amount of fertilisers, machines and capital relative to land area.

2. **Life of the people in the veld:** (i) The cattle wealth, mainly reared in warmer and wetter parts on ranches, consisting of dairy and beef-cattle breeds, is estimated at 13.8 million and of sheep at 26 million. Almost 650,000 tonnes of beef was produced in 2012. (ii) Dairy farming is one main occupation of the people. The beef, fleeces, hides and animal products are major income earners to farmers. (iii) For raising agricultural crops dry-land cultivation of crops such as maize, wheat, millets like barley, oats and potato. (iv) Cash crops like tobacco, sugarcane, oilseeds and cotton are also grown. (v) The velds have rich reserves of several minerals and metals and mining industry is one of the best developed in the world.

3. **Main features of agro-based and mineral based industries in the veld:** (i) The land being not much fertile and proximity to large human populations and markets has promoted dry-land cultivation of crops such as maize, wheat, millets like barley, oats and potato. (ii) Cash crops like tobacco, sugarcane, oilseeds and cotton are also grown. (iii) The velds have rich reserves of several minerals and metals and mining industry is one of the best developed in the world. (iv) Gold, diamonds, platinum, manganese, vanadium, coal and other metals are found in the region in abundance. (v) Besides agro-based industry export oriented mineral and metal industry like phosphates, steel, cement, coal and construction industries have flourished.

- V. 1. The Prairies are known as the 'Granaries of the World' because large scale agriculture is carried out mainly for export.
2. Rise of wool industry in the Velds because the fine breeds of sheep include Merino and the Dorper, developed locally.
3. Transcontinental railways was opened before

Europeans settled in the prairies in order to help them move in the interior.

4. Rivers in the Veld make waterfalls because they originate and drain a plateau before falling from considerable heights.

VI. 1.–(ii), 2.–(iv), 3.–(v), 4.–(iii), 5.–(i).

VIII.1. Prairies are temperate grasslands in the Great Plains of North America. The Velds are temperate grasslands at three different altitudes in South Africa.

2. Tropical grasslands are located between the Tropic of Cancer and the Tropic of Capricorn. The temperate grasslands are generally found in the interiors of the continents, north or south, they have larger temperature fluctuations during the year.

3. Rivers of prairies in Canada are such as Saskatchewan River and their tributaries. In the USA, the Mississippi and its tributaries drain the prairies. The rivers of velds include the Limpopo, the Orange, and the Vaal.

HOTS

1. **Prairies as all-season grasslands:** (i) Under the Life Skills below it has been stated that these types of grasslands experience continental climate. The notable feature of this type of climate is erratic rainfall. This prevents forests and large trees from growing. (ii) The grasses survive draught because there both regions of tall and short grasses. (iii) Fires though are common in the area but grasses survive such fires because they grow from bottom instead of top. Their stems grow again after being burnt. These factors make prairies all season grasslands.

2. **The native people of prairies today:** (i) The 'sea of grass' that existed before the Europeans ventured into the interior of the grasslands was host to many native people who lived off the land as hunters and gatherers. (ii) Some took to trading and some were engaged as middlemen in trading of fire arms and guns. (iii) In this way the native people also developed mutual rivalry and enmity. (iv) In addition diseases, outright warfare with the new settlers in 19th century and taking over of their lands disrupted their traditional life styles devastated their population causing steep decline

Activity Time

Life Skills

The factors responsible for creation world's temperate grasslands were: (i) Climate change: This happened about 25 million years when there was world wide climate change. (ii) As a result of this change forest biomes became extinct and animals like dinosaurs too became extinct. (ii) With the passage of time continental climate evolved and new species of grasses and animals took roots leading to evolution of new types of grasslands that we see today.

The precipitation is so erratic that drought and fire prevent large forests from growing. Grasses can survive fires because they grow from the bottom instead of the top. Their stems can grow again after being burned off. The soil of most grasslands is also too thin and dry for trees to survive.

12. Life in the Deserts

Practice Time

I. 1. (ii), 2. (ii), 3. (ii), 4. (i), 5. (iii), 6. (iii).

II. 1. The two main types of deserts found in the world are hot and cold.

2. The Sahara desert is located in the African continent.

3. The trees that grow in Ladakh are willows, elm and poplars found especially in the valleys.

4. The three famous cities of Sahara are Cairo, capital of Egypt, Tripoli, capital of Libya, Nouakchott, capital of Mauritania, El Qued in Algeria and many more.

III. 1. **Climatic conditions of Ladakh:** (i) The climate is extreme type meaning that there is large difference between day and night temperatures and between summer and winter temperatures. (ii) In summer temperature ranges from 5°C to 30°C and in winter from -10°C to -25°C. The winters are thus extremely cold. (iii) Ladakh lies in rain shadow of Himalayas with little rainfall just 10cm per annum. The summer is almost dry.

2. **Tourism in Ladakh:** (i) Some highlights of adventure tourism are Ladakh Festival,

river rafting along 26 km stretch of Indus River, high altitude rock climbing and polo archery. (ii) Its unique flora and fauna such as the snow leopard, chiru, a rare Tibetan gazelle and best known for its wool of which *shahtoosh* shawls are made; yak, seen mostly at heights above 6,000 m and nyan, a wild Tibetan sheep and many rare birds are great tourist attractions. (iii) Ladakh is famous for Buddhist monasteries called Gompas such as Hemis, Thiksey, Shey and Lamayuru. They house relics like thankas, murals and sculptures.

3. **Rivers of Sahara:** (i) There are depressions in the sandy landscape of Sahara where water flows during short rainy season. (ii) These depressions or river-beds locally known as wadis are intermittent rivers or rivers that never reach the sea. (iii) The reasons for their existence are evaporation because of hot weather and sandy landscape. There are harsh climatic conditions with average day temperatures as high as 50°C. The scorching heat and dry desert sand has its impact on the moisture which evaporates faster than it accumulates.

4. **Ladakh a desert:** (i) Though surrounded by a number of rivers, lakes and snow-clad high mountains with glaciers, these very mountains prevent winds from dropping their moisture on the northerly leeward side where Ladakh is located. (ii) High mountains thus shelter Ladakh and deny entry to moisture bearing monsoon winds from the south. (iii) The thin air makes the heat of sun more intense as is characteristics of high altitudes. It is said that a man sitting in the sun with his feet in the shade may suffer from sunstroke and frostbite at the same time. These have mainly contributed to Ladakh being a cold desert.

IV. 1. **Settlement patterns and life of nomadic tribes of Sahara:** (i) In Sahara, the estimated 2 million inhabitants, excluding people in the Nile valley, live mostly around oasis. (ii) Around the oasis, with availability of water and other life support services, they have built houses and undertake cultivation of crops such as

rice, wheat, barley and beans. They also grow date palms, cotton like in Egypt. (iii) The ethnic groups of Sahara are mainly nomadic tribes such as the Bedouins and Tuaregs. (iv) These nomads with herds of sheep, goats, camels and horses live in the drier areas. (v) The animals provide them with milk, hides and engage in trade around oases. They have their own means of adaptation. They wear heavy robes as protection against dust storms and hot winds.

2. **Climate and biodiversity of Ladakh:** (i) The climate of Ladakh is described as extreme type meaning that there is large difference between day and night temperatures and between summer and winter temperatures. (ii) In summer temperature ranges from 5°C to 30°C and in winter from -10°C to -25°C. The winters are thus extremely cold. Ladakh lies in rain shadow of Himalayas with little rainfall just 10cm per annum. The summer is almost dry. (iii) Despite scanty rainfall and sparse vegetation, there is great variety in biodiversity. There are patches of grasses, shrubs and some scattered stunted trees of willows, elm and poplars especially in the valleys. (iv) The flora includes snow leopard, the greatest attraction; chiru, a rare Tibetan gazelle, yak, seen mostly at heights above 6,000 m and nyan, a wild Tibetan sheep. (v) Among birds are hundreds of species of rare Himalayan birds apart from finches, ducks, geese, robins, redstarts and many migratory birds. The Tibetan snowcock, a large majestic bird, is much hunted for its meat.
3. **Major landforms of Sahara:** (i) The land of Sahara is not however either a fully level plain or a complete desert. In the north-eastern part are Atlas Mountain (Al Atlas) ranges and Zemmour hills. (ii) In the central regions principal mountain masses called massifs are found. These include massifs of Hoggar or Ahaggar (2,740 m) in south Algeria, the Tibesti Massif (3,350 m), the highest mountain range of Sahara, in northern Chad and Azbine Mountains (1,830 m) in northern Niger. (iii) The regions of sand dunes called reg. occupy about 15% of the Sahara. The 70% of the region consists of plateaus of

denuded rock, called hammada, and areas of coarse gravel called reg. (iv) The shifting sand dunes and oases, the small fertile parts of a desert where water is found, are the only greener parts of the desert landscape.

- V. 1. There is scanty vegetation in the deserts because of lack of rainfall and sufficient moisture accompanied by high temperature.
 2. People of the Sahara desert wear heavy robes as protection against dust storms and hot winds.
 3. An oasis in a desert is formed when wind blows away the sands from depressions exposing the bedrock enabling the underground water reach the surface.
- VI. 1.-(iv), 2.-(v), 3.-(i), 4.-(iii), 5.-(ii)

HOTS

1. **Adaptations of desert plants and animals:** (i) A camel has fatty hump which enables it to endure long periods without water. It has a double set of eyelashes to keep the desert sand out. It even changes its body temperature so that it does not sweat as the day gets hotter. (ii) Seasonal migration characterises most desert animals and birds. (iii) Some rodents such as the jerboa does not have to drink water and have extremely long legs to catch its prey. (iv) Saharan plant roots go as far deep 24 metres to draw underground water or moisture. Cactus, acacia, baobabs and other thorny bushes are found. (v) Date palms and acacia around oasis have long roots to reach water. (vi) Thorns of most plants are protective devices against being eaten away by animals and as a means of conservation of moisture.

Activity Time

Life Skills

Sahara and Ladakh are results of wind action in two different ways: (i) Sahara in the interior and western margins of the continents lies in the dry trade wind belt. Sahara is largely a hard rocky plateau where loose particles have been removed by the wind. (ii) Ladakh is described as an intermontane (in between mountains) plateau where mountain ranges remain snow clad and since they high mountains they shelter Ladakh and deny entry to moisture bearing monsoon

winds from the south.

□ **Imagine**

Visit for facts about Magnetic Hill

<https://www.youtube.com/watch?v=CU23Y18pIDs>

SOCIAL AND POLITICAL LIFE

1. Democracy and Equality

Practice Time

- I. 1. (iii), 2. (ii), 3. (i), 4. (iii), 5. (ii).
- II. 1. In a democracy universal adult franchise is important as it grants all persons equal right to vote, an essential aspect of all democracies.
2. The direct democracy is one in which people can exercise the authority of directly participating in decision making or through the representatives elected by them.
3. Under dictatorship different forms of government are found such as the military, individual etc. but their key feature is concentration of power in one person or a group of persons.
4. Rosa Parks was an African-American woman who in the late 1950s pushed for equal rights for African-Americans in America.
- III. 1. The Article 15 of the Indian constitution addresses inequality in main two ways: (i) By prohibiting discrimination of any kind on ground of religion, race, caste, sex or place of birth. (ii) One can approach the courts or the judiciary who can enforce the law *suo-moto* in case discrimination comes to its notice.
2. Omprakash Valmiki's experience was similar to that of the Ansaris in following two ways: (i) In both cases dignity was violated. Omprakash was made to sit separately in the class and Ansaris were denied rented accommodation because of their religion. (ii) In both case there was no accommodation of diversity that characterises India.
3. The "all persons are equal before the law" means: (i) That every person is equal before the law. (ii) It prohibits any kind of discrimination and (iii) That every person has equal access to all places and facilities

like markets, parks, clubs etc. (iv) equality is important in a democracy because it is a basic principle of democracy and is inseparable from justice.

- IV. 1. **Forms of the government in the world today:**
(i) **Dictatorship:** The dictatorial forms of government are of many types like military, individual etc. but their key feature is concentration of power in one person or a group of persons. Sometimes, Communist form of government like that in China is also considered dictatorial form of government.
(ii) **Monarchy:** There are two basic types of monarchical forms of government – *constitutional monarchy* and *absolute monarchy*. The constitutional monarchy is also known as ceremonial monarchy in which the king or queen is the ceremonial head of the government like in our neighbouring country Bhutan or in the United Kingdom of Great Britain. The real power is held by the Parliament whose members are elected by the people. Under absolute monarchy the monarch (king/queen) such as in Saudi Arabia, Oman, Qatar etc. holds the absolute power and complete control over the lives of the people. (iii) **Democracies:** There are two main types of democracies – *parliamentary form of government* and *presidential form of government*. In the parliamentary form of government, as in India and UK, the people elect their representatives to the Parliament. In the Presidential type democracy, as in the USA, the President is the chief executive and directly elected by the people.
2. **Equality as key element of democracy:** The right to equality includes the people's participation, the resolution of conflict and the right to vote. It also prohibits any kind of discrimination and gives equal access to all places and facilities like markets, parks, clubs etc. (ii) **Enhancing dignity:** In the case of Omprakash Valmiki and Ansaris dignity was violated. Dr. B. R. Ambedkar, the father of the Indian Constitution, once said, "Nothing is more disgraceful for a brave man than to live life devoid of self-respect." (iii) **Decision making:** In a democracy decisions are taken in a democratic manner reflecting the

opinions of a majority of members. It plays an important role in enhancing the dignity and promoting equality of opportunity as well. (iv) Accommodation of diversity like differences of opinions, faiths, colour of skins, caste, religion and economic status affords an opportunity of not only accommodating these differences and diversities but also establishing equality in the society.

V. 1. T, 2. F, 3. T.

VI. 1. two, 2. Joothan, 3. Establishing, 4. 2009.

VII. 1.-(iii), 2.-(i), 3.-(ii), 4.-(iv).

HOTS

The universal adult franchise is an issue of equality in respect of electoral politics but India is a caste-based society. We need our own Rosa Parks to highlight the caste-politics in India. Despite provisions in the Constitution as in the Article 15 of the Indian Constitution which prohibits discrimination of any kind on ground of religion, race, caste, sex or place of birth discrimination continues to take place. The universal adult franchise needs to address to these issues as well.

Activity Time

□ Life Skills

The Disabilities Act passed in 1995 by the Government of India like any Act of the Constitution of India is merely a law. Disability is not a legal issue that it can change the social outlook. Social awareness needs to be created not enforced to change people's attitude towards disabled. The boy on the wheelchair being carried down the stairs merely is an example of present inaccessibility of public facilities like railways stations and hospitals but it does not address to the larger issue of social outlook. Once the society reaches the stage of equal treatment of all the accessibility issues too can be solved.

2. Role of Government in Health

Practice Time

I. 1. (iii), 2. (i), 3. (iii), 4. (i), 5. (iii).

II. 1. The different ways through which the government can take steps to provide healthcare for all are through providing equal opportunities for being healthy that

is fundamental to the concept of equity in health and closely linked to equal rights to health.

2. The role of central government in health services is equally being concerned with the promotion and development of health services in addition to monitoring and sponsoring various schemes for implementation by the state governments.

3. The hospitals have grown in India substantially from 2,717 in 1959, 11,174 in 1991, 18,218 in 2000.

4. Adequate health to all would mean that we have to provide more primary health centres, hospitals, ambulance services, blood banks etc. and adequate personnel of doctors, nurses, and laboratory technicians etc. to man and manage these facilities.

5. The concept of equity being an ethical principle means that need to focus on the distribution of available resources judiciously taking into consideration that not all disparities in health are unjust and that there are differences in nutritional status or immunization levels between boys and girls.

III. (i) **Living Standard:** It is essential for not only healthcare but also living conditions in the households and the communities as well as the working conditions for livelihood earning. The Indian Constitution also mandates that it is the “*duty of the State to raise the level of nutrition and the standard of living and to improve public health.*” (ii) **Public Health:** It is interlinked to the ‘living standard’ as in order to be healthy the citizens need to have opportunities to be healthy. Two examples of Kerala and Costa Rica show how the key social determinants can be addressed to with ease. In addition, Costa Rican experience shows that there need to be constant upgradation of public and private healthcare services and infrastructure.

2. The differences observed between private and public health services in my area are shown in the table below:

| Facility | Cost of services | Availability of services |
|----------|------------------|--------------------------|
|----------|------------------|--------------------------|

| | | |
|---------|----------------|--|
| Private | Very expensive | Very good and with great ease |
| Public | Almost free | Though available but not satisfactory as far as quality of service is concerned. |

3. Health is not only about disease but concerns human rights and human resource development because. (i) Good health is 'a custodian of values, a protector and defender of health, including the right to health,' says Dr. Margaret Chan, Director-General of the World Health Organisation (WHO). (ii) In addition, according to WHO, "Every country in the world is now party to at least one human rights treaty that addresses health-related rights." (iii) Thus, human rights and human resource development ensure wellbeing of our physical activity as well.

- IV. 1. 'Improvement in water and sanitation can control many diseases,' as explained with examples: (i) Water and sanitation are essential for adequate health to all. This means that in order to control many diseases especially on account of bad water quality and absence of sanitation that we have to provide these essential services as well. This is also shown by Kerala and Costa Rican examples. (ii) Health care has different meanings in different countries and depends on the level of economic development as well. However, the requisite health resources including water and sanitation are as much needed as primary health centres, hospitals, ambulance services, blood banks etc. (iii) It has been found that the large disadvantaged sections of population suffer from water borne diseases and inadequate sanitation facilities. (iv) Equity that focuses on equal rights and opportunities need also to address to improvements in water and sanitation to control many diseases especially for women whose health concerns are more important than health of men in the family.
2. **Kerala and Costa Rican experiences:** (i) The Kerala government in 1996 made some major changes such as providing safe

drinking water, nutritional food, women's development and education. (ii) In Kerala the working of schools and *anganwadis*, child-care centre provided under Integrated Child Development Schemes (ICDS) was ensured. (iii) Though it helped to improve the situation but disparities in terms shortage of medicines, insufficient hospital beds etc. continue to haunt the government because of lack of measurement of health inequities. (iv) Costa Rica has some of the best healthcare in Latin America and compares well with those of the USA and costs are low. (v) In Costa Rica drugs are also much less expensive than the USA and even neighbouring Latin American countries. (vi) The Costa Rican Constitution instead of having army provides for health education and healthcare systems. This along with many measures like promotion of medical tourism has helped in providing best health care to citizens.

V. 1. F, 2. T, 3. T.

VI. 1. Foreign exchange, 2. Rural, 3. Child-care.

HOTS

- ❖ **Equity in healthcare:** (i) Equity is value based and an ethical principle. (ii) Equity focuses on equal rights and opportunities, for example, for women whose health concerns are more important than health of men in the family. (iii) The equity would mean operationalising the concept of right to health.
- ❖ **Equity and equality:** (i) Though two are not same they work towards the same goal. (ii) Thus, the notion of equal opportunities for being healthy is fundamental to the concept of equity in health and closely linked to equal rights to health.

Activity Time

□ Life Skills

There need for improving healthcare services because being healthy is fundamental to exercising our fundamental rights and achieving all other goals. The problems are many that range from livelihood earning to providing best healthcare services. But given the experience of many countries or our own states, there are great prospects for ensuring health for all.

3. How the State Government Works

Practice Time

- I. 1. (ii), 2. (i), 3. (iii), 4. (i), 5. (iii).
- II. 1. Some MLAs become Ministers after being selected by their party and asked by the Chief Minister to be members of the Council of Ministers. They are sworn in, administered the oath of office and allocated the portfolios by the Governor of the State at the advice of the Chief Minister
2. The decisions taken by the Chief Minister and other ministers are debated in the Legislative Assembly because its main work is to make laws. In order to reflect the views of the majority of members the Bills containing such proposals or laws in draft form are discussed and debated in the legislature.
3. By unicameral legislature we mean the state(s) having only one legislative body or the Vidhan Sabha. Of the 29 States and 7 Union Territories, only six States of Bihar, Jammu & Kashmir, Maharashtra, Uttar Pradesh, Telengana and Karnataka have both Vidhan Sabhas and Vidhan Parishads or are bicameral. The rest of the states and union territories are unicameral.
4. The sessions of the State Legislature are held at least twice a year. The interval between the two sessions must not be more than six months.
- III. 1. (i) A constituency is a particular area from which voters choose their representative and after being elected he/she is called a MLA (Member, Legislative Assembly). (ii) The members of the State Legislature represent voters of the constituency and are elected on the basis of the Universal Adult Franchise for a term or tenure of 5 years. (ii) The qualifications required to be a member of the Legislative Assembly is 25 years and that of Legislative Council is 30 years. In both cases a member should be a citizen of India, not be of unsound mind, have no criminal background, should not be bankrupt or hold any office of profit.
2. The difference between the work that

MLAs do in the Assembly and that done by government departments is in respect of: (i) The main work of the MLAs is to hold discussions and debates in a set procedure in order to make laws. (ii) They are responsible for smooth working and functioning of the government. (iii) The work of the government is carried out by the bureaucracy divided into various government agencies, commissions and departments. Their main work is to implement the provisions of the laws and as well as prepare press releases etc. for wide publicity.

3. **The law making function of the Vidhan Sabha:** (i) A draft of a proposed law presented to the Assembly for discussion is called Bill. (ii) The two types of bills, Ordinary Bills and Money Bills, contain provisions of the proposed law. (iii) A Bill which contains any provision for finances of the state is called Money Bill. The decision in respect of a bill being money bill or not rests with the speaker. (iv) Many other conditions have to be satisfied and in order to reflect the views of the majority of members the Bills are discussed and debated in the legislature. (v) All Bills undergo three readings in each House (where in existence) before becoming a law.
4. Based on the debate in the Vidhan Sabha one can infer if a MLA belongs to the opposition or the ruling party: (i) All opposition members are allotted separate seats than occupied by ruling party MLAs, called Treasury Benches. (ii) Opposition MLAs oppose the policies of the government which is reflected in the tone of discussions. (iii) At the time of voting by voice vote one can easily infer whether the particular MLA belongs to the opposition.
5. **Usefulness of holding a Press Conference:** (i) A minister or the Chief Minister may holds a press conference to explain the position or progress made in respect of that particular issue. (ii) At the press conference government officials may accompany the minister and be present. They carry documents and files concerning the case and provide the minister with facts and figures pertaining to the case to get people's support. (iii) The minister

also replies to the reporters' questions so to convince them of government's stand. This information is then published in the newspapers or broadcast on radio and television for wider publicity.

- IV. 1. The powers and functions of the Chief Minister and his Council of Ministers:** (i) The Chief Minister is the real chief executive and his/her constitutional position is more or less similar to the Prime Minister. (ii) The Chief Minister and the members of the Council of Ministers head the various ministries and set the bureaucracy in motion. (iii) Chief Minister presides over the cabinet meetings and plays a key role in framing the laws in the legislature. (iv) The Chief Minister is the chief spokesperson of the policies of the government both in and outside the State Legislature and coordinates the functions of different ministries. (v) The Chief Minister can ask any erring minister to resign. (vi) The Chief Minister is the sole link of communication between the Cabinet and the Governor. (vii) The position of the Chief Minister is more powerful one particularly when his party is in power at the centre as well.
- 2. How the government functions through the bureaucracy:** (i) The system of government working according to some rules and having their own procedures is called bureaucracy. The work of the bureaucracy is to implement the provisions of laws. (ii) The various government agencies, commissions and departments into which the bureaucracy is divided carry out what is specified in the law, for example, provision of drinking water in the villages through digging wells, canals or through tanker trucks for some short period. (iii) Whatever work the government departments do involve the services of a large number of people from labourers to engineers and contractors. They work in accordance with some policy laid down by the minister concerned. (iv) *Conduct of press conferences:* The minister directly or through the departmental head may also ask that a press conference be held to explain the government's position and status of any

particular case. The department concerned prepares a press release for publication in newspapers or broadcast over electronic media.

- V.** 1. T, 2. F, 3. T, 4. F, 5. T.
- VI.** 1. MLC stands for Member of Legislative Council. MLA for Member of Legislative Assembly.
2. Vidhan Sabha or Legislative Assembly is constituted of members directly elected by the people. Vidhan Parishad or Legislative Council is a permanent house constituted of members elected by various typed of professional bodies.
3. Vote is franchise exercised by citizens who are adults to elect members. Casting Vote is usually exercised by a person heading an assembly of voters like the Speaker of the Legislative Assembly in case of a tie.
4. State List is the list of 66 subjects enshrined in the Constitution of India on which state governments can make laws. Concurrent List in same way has 47 subjects on which both the Central Government and State Government can make laws.

HOTS

- 1. Powering sharing is nessary in a democracy because:** (i) Power sharing in a democracy is an inclusive policy that gives wider base to law making or decision making. (ii) It is a peaceful political solution to solve deep divisions or conflict in a multi-racial and multi-linguistic society like India. (iii) It has many other benefits but the law makers do need to be aware of dangers as well like for example communal divide that it may lead to.
- 2. The purpose and usefulness of debates, discussions and press conferences:** (i) They strengthen democracy by enabling to take dissent into account. (ii) It is like power sharing with the people sometimes leading to consensus by highlighting pros and cons of the subject matter under discussion. (iii) Debates and discussions help to highlight the strengths and weakness of the matter or policy under discussion and consequently strengthen democracy.

Activity Time

Life Skills

The Women's Reservation Bill – the Story So Far: view The Hindu online.

<http://www.thehindu.com/news/national/womens-reservation-bill-the-story-so-far/article6969294.ece>

4. Growing Up As Boys and Girls

Practice Time

- I. 1. (ii), 2. (ii), 3. (i), 4. (ii), 5. (ii).
- II. 1. By many ways of growing up we mean the ways we prepare our children for future roles as men and women.
 2. The gender differences that exist in the society relate to the socially constructed roles played by boys and girls, their behaviours, activities and attributes.
 3. The domestic helps are hired domestic workers, mostly women, and the tasks performed by them are not legally recognised as 'work' in India.
 4. The society devalues women's work by not recognising the work women do at home like cooking or upbringing children irrespective of whether she is earning hand or not.
 5. The decision of what kind of work women can do should left to women themselves because otherwise it amounts to discrimination and devaluing women's capacity.
- III. 1. **Care giving work of women:** (i) Care for the young such as looking after their physical needs, changing clothes, washing, feeding and looking after the infants and young. (ii) Care taking of the elderly such as serving meals, looking after their other needs. (iii) In fact, in a family all types of caregiving tasks are performed by women for the entire family and that too without being paid or even complemented.
 2. **Cultural differences in respect of gender:** (i) In some cultures like in India there is more preference for male infants whereas in Samoa or even in some parts of Africa there is preference for female infants because of the importance for the wealth the bride brings. (ii) Samoa mothers even breast-feed their daughters longer and look after them in a better way than boys. Across the world different cultures attach different importance to biological distinctions of male or female.
3. Adolescents learn about gender differences in the society in a variety of ways say for example:
 - (i) Learning about gender differences can come about in adolescence only because gender refers to the socially constructed roles played by boys and girls, their behaviours, activities and attributes; (ii) Because of the socially constructed roles being a boy or girl is an important part of one's identity. It is because the society teaches us what kind of behaviour is expected of boys and what is expected of girls. (iii) Usually they learn in the society that the roles that girls play are valued less than those played by boys
- IV. The terms 'invisible', 'physically demanding', and 'time consuming' actually refers to the household tasks undertaken by women in our home. (i) The home work such as cooking, washing utensils, floors and clothes as well as caring for children are 'invisible' because globally household work of women is rarely recognised although it is physically demanding and time consuming. (ii) In some cultures they are subjected to physical torture which too goes unnoticed and remains invisible. (iii) Moreover in the family care-giving tasks by women are a lifelong process that remains invisible most of the time. Examples are a toddler is looking for towel, it is school time and the children have to be accompanied to the bus stop while the mother is still in the kitchen and so on. These tasks too, besides, being 'invisible', are 'physically demanding', and 'time consuming' performed by women and of course sometimes by men when the woman is either sick or engaged in other similar 'invisible' task.
- V. 1.-(iii), 2.-(iv), 3.-(i), 4.-(v), 5.-(ii).
- VI. 1. Sex refers to the biological and physiological characteristics of men and women. Gender refers to the socially constructed roles played by boys and girls, their behaviours, activities and attributes.

2. Care-giving work refers caring or giving help to someone such as a child or elderly. Domestic helps refers to hired domestic workers who do many domestic tasks such as cleaning, sweeping floors, washing etc.
3. Equality means treating someone as equals in home or in work place. Empowerment is an enabling process and in essence amounts to discrimination.

HOTS

Women want equality and not empowerment because: (i) Empowerment is not same as equality, which actually women want. (ii) It gives low status to women which is against the basic principle of democracy. (iii) Empowerment actually discriminates between men and women which is prohibited in the Constitution of India. (iv) Determining what kind of work, job or careers women want to have should be left to women themselves.

5. Women Change the World

Practice Time

- I. 1. (ii), 2. (iii), 3. (i), 4. (ii), 5. (i).
- II. 1. The stereotypes is a negative perception about women. It naturally affects women's right to equality.
2. The society considers the role of women in crafts like pottery and weaving as supportive it was not that women could not operate the wheel but because of perceptions prevailing in the society that 'skilled' work was the sole prerogative of men.
3. Rashundari Devi (1800–1890), born in West Bengal, wrote her autobiography 'Amar Jiban' in which she reveals how despite being a rich landlord's wife she had to struggle to read and write secretly.
4. Ramabai Pandita (1858–1922) became a poet, scholar and social reformer, although she had never been to school. She learnt to read and write Sanskrit which was considered the sole preserve of male Brahmins.
- III. 1. Learning the alphabet was important to women like Rashundari Devi, Ramabai and Rokeya because: (i) In the case of Rashundari

Devi it was important to overcome many superstitions as in those days it was believed that if woman tried to read and write she would become widow and bring bad luck to the family. (ii) Ramabai Pandita had never been to school yet she learnt to read and write Sanskrit which was considered the sole preserve of male Brahmins. (iii) Rokeya Sakhawat Hussain was prevented from learning Bengali and English though she knew Urdu. She learnt to read and write both Bangla and English with the support of her brother and went on to become a writer when she was barely 25 years' old.

2. The census of India is the official count of people and their other indicators like male-female, education etc. taken every 10 years. (ii) The Census of India 2011 reveals that the female literacy level stood at 65.46% against male literacy rate of over 80%. (iii) It also reveals that though the gap between male and female literacy continues to be very high it has come down considerably particularly in view of the fact that the overall literacy level in 1947 stood at just 12%.
3. The Government of India Committee on the Status of Women recommended in its report in 1974: (i) The reservation of seats for women in municipalities and panchayats. (ii) The provisions of the report were subsequently implemented. (iii) In 1997, the Supreme Court of India at the insistence of some women's groups formulated guidelines to protect women against sexual harassment at work place and within educational institutions.
4. The results of massive public protests of women in 2013 were: (i) The massive protests by women's groups against sexual harassment originated in New Delhi, the capital of India (ii) The protests were so massive that it led the Parliament of India pass the Criminal Law (Amendment) Bill 2013. (iii) Even the United Nations Committee on the Elimination of Discrimination against Women (CEDAW) established 1982 took note of the protests in Delhi. The new Government of India law in 2013 considered sexual harassment a

violation of human rights and gave particular emphasis on women's safety and security.

- IV. 1. (i) **Two methods of struggle:** *Firstly*, I would prefer to organise massive protests like those in Delhi in 2013. They are necessary these days as the massive protests were led by women's groups and led the Parliament of India to take some action. *Secondly*, I would prefer to organise a struggle similar to the autonomous political movement launched by Mahatma Gandhi that also influenced the women's movement in India. The objective is to be free from political influences of any political groups and expanding the base in both rural and urban India. (ii) **Struggle against stereotypes:** I highly value and recommend methods of the struggle against stereotypes like that of the 27 years old Laxmi Lakhra from a poor tribal family in Jharkhand. The stereotype image of women is because of the society pressures that are like prohibition rules but such rules do not prohibit persons wishing to do something. (iii) **Reasons:** I choose these methods of struggle because: (a) They would enable women to play the lead role rather than the supportive role that many expect women to do. (b) That would also help parents to send their girl child to school and see woman as a human being and as equal partner in life. (c) It would change women's life story and women too would dreaming like flying planes and become astronauts or any great inventors etc.
2. **History of Women's Movement in India:** (i) The early social reformers were men like Raja Ram Mohan Roy (1772-1833) and many of his contemporaries who sought ban evil practices among women such as child marriage, sati and dowry and other such evils in the society. (ii) Subsequently many women leaders such as Sarojini Naidu played successful leadership roles in the Struggle for Freedom from the British colonial rule. (iii) In the post-Independence era the Constitutional provision for gender equality provided the foundations of a new women's movement. (iv) Then came Indira Gandhi era and many women leaders emerged not

only on political forefront but also in social, cultural and business fields. However, strong family bonds amid many human rights characterise women of India today.

- V. 1. T, 2. T, 3. F, 4. F, 5. F.a
VI. 1.-(iii), 2.-(iv), 3.-(ii), 4.-(v), 5.-(i).

HOTS

1. **Women thinkers of India:** (i) In the Struggle for Freedom from the British colonial rule that successfully achieved its goal in 1947 women were in the forefront whereas in many other countries they stayed behind. (ii) Subsequently the Indira Gandhi era saw women themselves creating awareness about women's rights. (ii) This led to change in the perception about women the world over and many women thinkers and business leaders such as Arunadhathi Bhattacharya, Kiran Mazumdar, many others established their ranks firmly.
2. **Significant achievements of women in the field of education:** (i) Considering the women's struggle of the past, women have made significant achievement in the field of education in the post independence era. The female literacy rate has risen to about 66% in 2015 though it is still lower than the male literacy rate of above 82% against the overall literacy level in 1947 of just 12%. (ii) Any comparison would be meaningless if other indicators like education of SC, ST and other marginal groups of population are not taken into account. The school dropout rate of these categories including *Advisi* and *Dalits* continues to be very high. (iii) The government has made provisions like free education for children up to 14 years of age but awareness about rights of the girl child continues to be very low.

Activity Time

□ LIFE SKILLS

Many lessons have been learn from the protests in Delhi and other parts of India in 2013. Some such lessons include: (i) The women's groups in India and other neighbouring countries have shown great solidarity in fighting for their rights. (ii) The scope of human rights abuses has been extended. (iii) Many women leaders have emerged (iv) Creation of public awareness both in urban and rural areas. (v) Awareness about some out-moded

institutions that perpetuated such crimes

6. Understanding Media

Practice Time

I. 1. (ii), 2. (i), 3. (i), 4. (i), 5. (ii).

II. 1. The media play an important role in a democracy like India by highlighting relevance of certain government policies as well as its own social responsibility.

2. Media is regarded as an agent of change because it affects the lives of people in various ways such as by early warning about delay in monsoon that helps the farmers and the government to be ready with other alternatives.

3. By the term media as 'watchdog of democracy' we mean that it keeps the constant vigil on the functioning of democracy, the role which it pursues with great passion.

4. Media can help in bringing about positive changes in the society by focusing on the complex interactions between society, technology and political systems and in fact by bringing the members of the global family together.

III. 1. **Media and democracy:** (i) Media exists within the context of human society and helps deciding what is noteworthy by influencing the thoughts, feelings and actions of the people. (ii) Media influences our perceptions of issues such as by highlighting the massive protests in Delhi in 2013. (iii) On account of need for advertising revenue, media's relationship with big businesses often means that a balanced report is difficult to come. For example, unscrupulous elements among builders and chit-fund companies have looted thousands of their clients who have lost their life's savings.

2. **Media and public interest:** (i) By providing a platform for discussions and debates and by reporting the events taking place in the country and elsewhere in the world, the mass media helps citizens make intelligent choices. For example, by reporting high pollution levels in Delhi, the governments, both at the centre and states, are focusing on controlling

vehicular traffic on roads and setting certain norms. (ii) By inviting and assimilating views across diverse fields it defines what is considered the intent of the public at large. For example, the Public Interest Litigation, commonly known as PIL, became possible largely because of the role played by the media. Today even the Supreme Court of India directly entertains and decides on a PIL.

3. **Media and money:** (i) The mass media is constantly thinking of making money to meet the costs of using latest expensive technologies, even travel to remote area as well as be able to pay the salaries of personnel managing the studio, covering the news in the field, mobilising or seeking public opinion. (ii) With a big potential audience media earns equally big money by advertising different things like cars, chocolates, clothes, mobile phones, etc. and by sponsored programmes as well as news. (iii) The social media like Facebook and Twitter are completely dependent on advertising and yet growing many hundreds or thousands of per cent per month. Twitter, for example grew by 3,000 percent in April 2014.

4. **Media and ethics:** (i) Ethics is concerned with distinguishing good from bad by following some moral principles. Its main factors are like not giving one-sided accounts of events to favour influential persons or lobbies. (ii) The Press Council of India as well as the News Broadcasting Standards Authority (NBSA), an independent body set up by the News Broadcasters Association, issue guidelines on media ethics as well as decide public complaints. (iii) The citizens' private lives must be respected and reports should avoid spreading rumours, causing marital discord, avoid violence and vulgarity and should not interfere in family matters.

IV. 1. Students to do it according to guidelines given.

V. 1. Global, 2. Watchdog, 3. Advertising, 4. Ethics.

VI. 1. World today is shrinking because electronic media has brought the people of the world closer.

2. Media always tries to please businesses and powerful politicians in order to hog the limelight and gain audience.
- VIII.1.** Print media refers to printed newspapers and magazines. Electronic media refers to television, radio and internet that run on electronic devices.
2. Social media refers to social networking such as twitter, facebook etc. Micro-blogging is web service that allows subscribers to broadcast short messages.
 3. Public interest is what promotes the interests of the people in general. Private interest is what promotes the interests of an individual or private person in particular.

HOTS

1. **Social responsibility of the media:** (i) Media influence the thoughts, feelings and actions of the people but exist within the context of human society. As such it has enormous social responsibility. (ii) Media influence our perceptions of issues welfare of human and non-human beings both within and outside the human societies. (iii) It can bring positive social changes and help in educating public and provide news and information to them in a democracy. (iv) On account of need for advertising revenue, media's relationship with big businesses often means that a balanced report is difficult to come but this not mean it can ignore its social responsibility
2. If one has been wrongfully charged with some crime by the electronic media, the citizens can defend their honour, privacy and freedom by: (i) By writing to the Press Council of India as well as the News Broadcasting Standards Authority (NBSA), an independent body set up by the News Broadcasters Association, issue guidelines on media ethics as well as decide public complaints. (ii) The citizens can approach the courts and file Public Interest Litigation (PIL) and claim such amount of damages as warranted by case.

Activity Time

□ Analytical Skills

Suggested title: FULL CIRCLE INJUSTICEThe money flows to the media from all sources when big business barons own the media.

Readers, viewers and listeners are just taken for granted

□ Life Skills

For template on Bharat Swachh Abhiyan refer to: <http://inbministry.blogspot.in/p/canvas.html>

7. Understanding Advertising

Practice Time

- I. 1. (iii), 2. (ii), 3. (i), 4. (i), 5. (ii).
- II. 1. Two ways in which advertising affects issues of equality in a democracy are: (i) Social Advertising which relies heavily on sponsorships in order to create certain positive feeling towards a cause. (ii) The role of corporate companies and the media during elections is often skillfully managed either in favour of a certain political party or with some hidden agenda.
2. In advertising the target audience is regarded as the consumer.
3. The marketing strategy is determining what is going on and selling in the market particularly regarding actions that have to be taken to meet the competition.
4. Advocacy advertising, also called social advertising, advocates some cause such as blood donation to save lives, rights of *adivisis* or physically challenged persons etc.
5. The role of advertising in a democracy is one of advertising ethics in depicting equality issues.
- III. 1. A brand in essence is the special identification or name given to a product or a category of products made by a particular company. (ii) It is central to advertising for two main reasons: (a) Assign or stamping a product with a particular name or sign to be able to be identified in a competitive environment. (b) It is necessary for creating brand values to differentiate the product from other competing products.
2. **Brand positioning as a marketing strategy:** (i) Brand positioning is that a brand must differentiate the product from other brands in the market which helps in creating a niche in the market. (ii) The financial returns of

creating a brand and positioning it, called brand performance, have to be taken into account which helps in pricing the product or service. (iii) The product offered under a particular brand name must measure the satisfaction it offers to the consumer, brand value, evaluated by market earnings.

3. **Logos, signs, images and catchphrases:**

(i) They are used as a marketing strategy after taking media trends, competition and technological advancements into account.

(ii) Such strategy promotes a new way of expressing love and care and compelling the consumers in buying the product. (iii)

The logos, signs and images must be very attractive and catchphrases always speak in persuasive language in order to create positive response from the audience.

4. **Role of advertising in a democracy:**

(i) In a democracy advertising ethics is necessary as the messages and images that advertisers use also depict equality issues that concern the democracy. (ii) The role of corporate companies and the media during elections in a democracy is often skillfully managed by advertisers either in favour of a certain political party or with some hidden agenda.

(iii) Equally important is appeal to emotions of the people during political campaigns sidelining the issues of equality, elimination of poverty, hunger, communalism and caste-based divisions of society.

IV. 1. For students to do

2. **Strategies of brand building and creating brand values:**

(i) Brand positioning which refers to differentiating the product from other brands in the market helps in creating a niche in the market. (ii) The brand performance measured in financial returns of creating a brand. It helps in pricing the product or service. (iii) Brand value which is often evaluated by market earnings is often conveyed through the use of visuals which are artistically created or photographed at random. These visuals and words or catchphrases convey an overall image of the product and the brand but leave out social causes.

3. **Social responsibility of advertising:** (i) It is almost similar to social responsibility of the media stated in HOTS Question in previous chapter. (ii) The persuasive methods the advertisers use are often at the expense of the society and appeal to emotions of the people and compel them in buying the product. (iii) In a case reported in May 2015 unnoticed pesticides harmful to the health of the child were found in a fast-selling international brand of noodles manufactured by a multinational company. Along with the company top celebrities who endorsed the product have been sued. There has been instant outcry against the company. The case is bound to highlight the social responsibility of advertising.

V. 1. NGOs mostly do advocacy advertising because they rely heavily on sponsorships in order to create certain positive feeling towards a cause.

2. Political advertising is best called campaigning because it is also aimed at image building of the party or the individual concerned.

3. Advertisers use visuals of appealing lifestyles of rich and powerful in order to build an image distinct from other competitors.

VI. 1.–(iv), 2.–(i), 3.–(v), 4.–(ii), 5.–(iii)

VIII. 1. Brand building refers to building consumer trust. Brand positioning is concerned with how a brand differentiates the product from other brands in the market.

2. Commercial advertising is concerned with what advertising is aimed at brand or image building of a company. Advocacy advertising is also called social advertising that aim at advocating some cause such as blood donation to save lives, rights of *adivisis* or physically challenged persons etc.

3. Advertising has some focus area including campaigning for selling a product or service. Campaigning is aimed at image building of a product or the political party or the individual concerned.

4. Media as the means of communication is concerned with exchange of information

through print or electronic media with target audience. Media as the means of advertising is concerned with earning money or reputation through such transmission of messages or selling a product or service.

HOTS

The role of a vigilant society in a democracy: (i) Brand building adds to the cost of the product at the expense of the society. A vigilant society ensures that the price of branded product, quality, performance and after-sale service offered as well as ethical practices are followed. (ii) The particular brand does not contain such special ingredients such as unnoticed pesticides or harmful substances which may endanger the health of the child or any person. (iii) That in the price of branded product, quality, performance and after-sale service offered ethical practices have been followed. (iv) A vigilant society ensures that even though the visuals may be appealing to the lifestyles of rich and powerful people or even celebrities such as cricketers and Bollywood stars who in reality might not be using the product. It has to take action against such endosers as well.

Activity Time

□ Analytical Skills

The children in the picture are seen eating street food without caring for its quality and dangers. They have been drawn to consuming this food by the shouting vendors who use appealing catchphrases and as well colour the food to make it tempting for children. This sort of advertising by vendors is highly unethical and a vigilant society including their teachers have a considerable responsibility to prevent such unethical practices.

8. Markets Around Us

Practice Time

- I. 1. (ii), 2. (iii), 3. (i), 4. (ii), 5. (iii).
- II. 1. The hawkers are like mobile vendors and have no permanent shops but have roadside stalls or wheeled carts and most often visit the colonies. The shop owners whether big or small have shops at fixed locations and are essentially middlemen between manufacturers and consumers.

2. Buying and selling also takes place through mail order houses, either on telephone or online. For example, just log to www.snapdeal.com.
 3. One useful feature of my neighbourhood market is that it helps me in many ways such as better quality, packaged goods and provides goods on credit and on regular basis.
 4. A mall is also known as 'window to world' because many stores in the malls sell quality imported brands from different countries and even some stores are company owned franchise outlets.
 5. The chain stores are retail stores of the same type under one common management having centralised operations but located at different locations. They deal in similar range of products and even the prices are almost uniform at all stores of the chain.
- III. 1. Comparison and contrast – A weekly market and a shopping

| Market | Kind of goods sold | Prices of goods | Sellers | Buyers |
|------------------|--|-----------------|-----------------------------|---|
| Weekly market | Vegetables, fruits, branded goods, readymade clothes, plastic items etc. | Very cheap | Individuals, family members | Local residents and even neighbourhood shopkeeper |
| Shopping complex | Branded goods, packaged grocery, readymade clothes etc. | High | Owners with many employees | Residents, outsiders and others |

2. **Formation of a chain of markets:** (i) The *producer* is the manufacturer or the factory owner or the farmer, who produce the goods for the market. (ii) The *wholesaler* buys from the producer or manufacturers in bulk and sells goods in large quantities. (iii) *Retailers* sell goods to customers in small quantities for their own use and consumption. (iv) **Services:** Manufacturers produce the goods, wholesalers provide a wide range of services that include packing, transport, storage, refrigeration where required and retailers make goods available in the neighbourhood and sometimes even door-step delivery.

3. 'All persons have equal rights to visit any shop in a marketplace.' (i) It is the essential principle of democracy. No person can be denied the right to visit any market irrespective of whether the shops are selling expensive or inexpensive products. (ii) It has nothing to do with both buyers and sellers being differently placed, meaning that some can afford and some cannot. (iii) Equality and fairness is the fundamental principle of market on which their reputation rests.
 4. For 'chain of markets' and their links refer to Question 2 of this section above.
 5. **History and main features of mall culture:** (i) The term 'Mall' is an abbreviated form of 'market for all' and this culture was first introduced in Canada in 1950s. *The main features are:* (ii) The multi-storeyed building contains stores, hotels and entertainment arenas interconnected passages and walkways with lifts and escalators for smooth transit. (iii) Many stores are directly run by companies and customers visiting these malls expect quality goods and imported brands and for which they are known as 'window to the world'. (iv) Some stores are company owned franchise outlets and some offer discount sales on specific weekdays. (v) Another important feature of these stores is that they place high premium on everything fresh
- IV. 1. Main features of buying and selling:** (i) It takes place in different types of markets and sometimes even while sitting at home. (ii) Different things like grocery such food rice, flour, pulses and cosmetics such as face creams, body lotions, powder etc. or medicines characterise buying and selling. (iii) Buying and selling takes place in different ways and at different means exchange such as credit or cash, wholesale, retail sale, discount sales, stock clearance, off season buying and selling and sometimes even door-step delivery (iv) *Different types of markets:* (a) The weekly markets are most popular in cities and are held on specific week days. (b) Department stores and Showrooms are large scale permanent retail shops in large urban areas and have fixed line of business. They mostly sell branded goods of a particular company or companies. (c) Shops in the neighbourhood are not much varied but are useful in many ways. (d) Mobile vendors and shops on pavements cater to local residents and passersby. (e) Mall is a market place or a shopping arcade in a multistoreyed building or set of interconnected buildings.
2. **Buying and selling in absence of shops:** (i) *Mail order service:* They are like offices with just a store room where goods are stored and packed through channels of distribution like courier. You have just to fill a coupon and mail it or place the order on telephone. (ii) *Online shopping:* They too are like godowns with an office which receive orders online via internet. Some of these may even be located overseas. One has to select a product online and place the order at the price given. Delivery takes place via courier wherever required. Payments are made in advance or upon delivery in cash. (iii) Hire purchase traders who also function as mail order houses but grant credit on providing some security. (iv) Some such buying and selling is also done by factories directly. Many fertilizer factories supply fertilisers directly to farmers.
- VII. 1.-(iv), 2.-(iii), 3.-(i), 4.-(v), 5.-(ii).**
- VIII. 1.** Weekly market in cities are held on specific week days. They sell anything from vegetables, fruits, utensils, clothing and other things of everyday requirements. Supermarket is a large scale retail shop in a city based on the concept of self-service and selling wide variety of consumer goods.
2. Wholesaler buys and sells goods in large quantities. They are the first to buy from the producers or manufacturers in bulk. Retailer is a middleman who procures goods from the wholesalers or at auctions and sells these to final customers or consumers
 3. Mall or 'market for all' is directly run by companies and customers visiting these malls expect quality goods. Many stores in the malls sell quality imported brands. Show rooms show case and sell the goods of a particular company or companies on franchise basis.

- Chain stores are the retail stores of the same type under one common management having centralised operations but located at various locations. Consumer cooperatives are owned and managed by consumers on share-holding basis.

HOTS

- Features of buying and selling in a democracy:** (i) Buying and selling is characterised by competition and economic efficiency. This makes buying often affordable. (ii) Buying and selling in a democracy promotes employment that helps to raise the income levels of the people and promote equality to some extent. (iii) Income redistribution favouring equality takes place and competition in markets encourages production and creation of new opportunities that urge people to earn more. (iv) Equity and equality are two fundamental principles of democracy on which rest the citadels of economy.
- Impact of advertising on buying and selling:** (i) Advertising helps in brand building which acts as a lever of buying and selling. (ii) Advertising represents actions that have to be taken to meet the challenges of competition, media trends and technological advancements. (iii) Objective type of advertising like commercial advertising has some primary focus area like selling a particular product or offering help etc. (iv) Advertising though raises the cost of the product but represents a type of essential marketing strategy necessary for successful performance of the product.

Activity Time

□ Life Skills

A 'mall' is known as 'market for all'. Justify the statement

□ Compare and Contrast

Compare and contrast how both wholesale and retail shopping impacts people's life styles.

9. Stages of Production

Practice Time

- (ii), 2. (i), 3. (i), 4. (iii), 5. (ii).
1. Swapna had borrowed some money from the trader at a very high rate of interest and

had promised to sell the crop to him instead selling at the Kurnool cotton market where she could have earned better returns.

- The primary stage of production includes farming or agriculture like growing cotton crop or raising animals for farm work, wool, meat, hides etc. It also includes extraction of minerals like coal, petroleum etc. fishing and forestry.
 - The operations that come under secondary stage of production include manufacturing or processing of primary goods like, for example, spinning of cotton bolls into yarn, weaving yarn into cloth and dyeing and sewing cloth into a final product.
 - The Co-optex is the handloom weavers' cooperative that buys and sells cotton through the stores so named.
 - An example of human resource development managing people within the organisation to add value to each kind of operation including technological development.
- (i) A garment exporting factory in India may obtain raw materials from far off places in India as it has to meet the tough demands of exporters in Europe and the USA in terms of quality, price and delivery schedules. (ii) The garment exporters fix the wages according to skills and do not retain some workers during lean periods when there is no work. Such workers are mostly employed as helpers for thread cutting, buttoning, ironing and packaging and most of them are women. (iii) Such conditions of employment are highly unfavourable to workers and they do not get a fair deal.
 - The work of Swapna:** (i) Swapna, a small cotton farmer in Kurnool (Andhra Pradesh) grows cotton on a small piece of land. (ii) She has to arrange inputs and funds for growing cotton, buying and sowing seeds, looking after plants, collecting bolls of cotton when ripe, packing and selling. (iii) After toiling hard for four months when the harvest is ready instead of selling it at the Kurnool cotton market she and her husband are committed to sell it to local trader at some paltry money because of poverty and debt incurred from

the trader at a very high rate of interest.

3. **Importance of artisans' cooperatives:** (i) The artisans like the weavers and spinners gain much bargaining power by being members or forming an artisans' cooperative. (ii) The consumers too benefit as these cooperatives come up with new products and designs with improved technology from time to time. (iii) For example, in Tamil Nadu the government buys cloth for its Free School programme as well as for other purposes from the handloom weavers' cooperatives and sells it through the stores known as Co-optex, which today has 260 showrooms spread across the country and has been successful to change the lives of many farmers, spinners and weavers.
 4. **Human resource development:** (i) The human resource development is essentially concerned with managing people within the organisation to add value to each kind of operation including technological development. (ii) It is essential in modern times because of competition. For example, a garment exporting factory near Delhi while using cloth produced by weavers at Erode in Tamil Nadu, meets the tough demands of exporters in Europe and the USA in terms of quality, price and delivery schedules. (iii) In spite of these pressures, it fixes wages according to skills and still retains the workers during lean periods when there is no work. During these periods it takes up the work for local market.
- IV. 1. 'Putting-out system':** (i) It prevailed in rural area before independence and was a kind of arrangement between the merchants and the weavers whereby the merchant supplied the raw material and weavers had to arrange their own looms as well as labour (mostly family members) based on prevalent technology. They worked almost 12 hours a day and earned hardly 3,500 per month. (ii) This system later gave rise to weavers' cooperatives whereby dependence on merchants was avoided and weavers were supplied better tools and equipment by the cooperatives. (iii) The government helped the cooperatives to keep abreast of changing technology and in the other ways. (iv) The putting out system though allowed workers to work from their homes and provided work to agricultural workers was disadvantageous to them on many grounds such as paltry earnings and limited output.
2. **Value addition:** (i) It is a process adding value to the product at every stage of production in the course of which a product undergoes visible change. (ii) It influences and fixes the final market price as well as the export competitiveness. (iii) There is great scope for human resource management at every stage of production. (iv) For instance, a shirt exported from India is displayed at a store in the United States and priced at \$26 or about Rs. 1,200. The cloth and other raw material cost just Rs.70, workers' wages Rs.15 and other office expenses another Rs.15 per shirt. (v) Whosoever, benefits the most it is beyond doubt that the Indian textile garment sector holds a great potential. (vi) Obviously, there is much scope of paying workers better wages, reduction in procurement costs and great entrepreneurship as well as level playing field vis-à-vis other competitors from other countries.
- VII. 1.** Procurement takes place everywhere in the market because it supports operations and activities of all classes of producers, merchants and agents who are involved in buying and selling at various stages.
2. Technical excellence adds value because it enhances overall product development.
 3. Cooperatives are a best option for weavers to prevent exploitation by traders as they help avoid dependence on them and cooperatives also supply better tools and equipment.
- VIII. 1.**-(i), 2.-(ii), 3.-(iii), 4.-(iv), 5.-(v).
- VIII. 1.** Cotton boll is white fruit of cotton plant that contains fibre which is cleaned and sorted. Cotton bale is the packaged and processed soft clean cotton gin is called lint.
2. Secondary stage is the manufacturing stage of an economic activity. The tertiary stage is service stage of production including transport and trading.

3. Spinning involves converting cotton fibre into yarn. Weaving comes after spinning and involves making woven cloth from the yarn.

HOTS

1. *The factors behind the service sector making rapid advances in developing countries are:* (i) The present rate of growth of economic activities is at a faster rate than that of developed countries. (ii) Rural-urban and international migration is driving service sector in developing countries. (iii) Offshore product development is leading to faster growth in developing countries. (iv) Technology of transport and communication is undergoing rapid changes in developing countries.
2. *Staying current with technological advances enhance overall product development and efficiency:* (i) The 'putting-out system' prevalent in rural area for weaving cloth was introduced by the Europeans. It was a kind of technology to convert product to upstream stage and it not much change fixed costs leading to product efficiency. (ii) Similar firms in order to stay current with technological advances, change variable inputs to enhance overall product development and efficiency. (iii) Advances in science take place by always staying current with technological advances and is sometimes called scientific method. (iv) Although the discoveries are important but technology helps in improving the efficiency of the methods of discoveries,

Activity Time

□ LIFE SKILLS

The types of human rights, environmental issues and social justice involved in the production systems: (i)

Issues of human rights: The degree of inequality as well as of variety of types such as high earnings by entrepreneurs and long lay-off periods for unpaid labour, long duty hours especially of women workers. Low safety consideration considerations. (ii) **Environment issues:** Both working environment and ecology are threatened. For maintaining product competitiveness in the market ecology takes the backstage and even water resources are polluted by washing, dying etc. of yarn or cloth. (iii) **Social justice:** Though both skilled and unskilled workers find place in

the market there is high degree of social injustice of overpaid and underpaid workers.

Practice Time

- I. (a) (ii), (b) (iii), (c) (iii), (d) (i), (e) (ii).
- II. (a) Carbon dioxide in atmosphere is essential because it has ability to absorb heat. (b) The two reasons for layering arrangement of the interior of the earth are: (i) The temperature and pressure both go on increasing towards the interior. (ii) During the formation stage the materials in the earth's interior were sorted by gravity and each type formed its own layer. (c) Mutual rivalry brought the downfall of three Rajput kingdoms of sixteenth century because one or the other allied with invaders who then were also subjugated. (d) Some of the major religions of today developed during the medieval period because many saints and teachers rejected prevalent religious beliefs and practices as they had led to class, caste and religious divide in the society. Secondly, reformation and of religious ferment during the period from 13th to 17th centuries left a deep impact on the lives of ordinary people. (e) In 19th century rural America boys were valued more than girls because boys could work on the farms and look after the cattle.
- III. (a) Environment is our surroundings and consists of both physical and biological environment. An ecosystem is formed by the interaction of living organisms with each other and with the physical environment in which they live. (b) A V-shaped valley is a river valley with steep sides and is formed in mountainous or highland areas like for example in Kashmir and Himachal Pradesh. U-shaped valleys are formed in glacier regions by the intense scouring and plucking action of glaciers which leaves the sides of mountains wide, steep and deep but with a flat floor. (c) An autobiography is self-written account of life. A chronicle is a factual or historical account of some person or place. (d) Corbelled or Trabeate, an architectural style that prevailed in India before coming of Islam, is based on a unit of two verticals

(posts) supporting a horizontal (lintel) which translates into a rectangular frame in three dimensions in which a structure is actually built. In Arcuate style building resembles a dome and is based on the arc between the posts that supports the dome or wedge-shaped superstructure.

- (e) Equality issues concern treating people as equals in home or in work place. Ethical issues concern the need to focus on removing all disparities which are unjust and recognizing that there may be level playing field including equality.

IV. (a) The main features of loess plateau of China:

(i) It is the largest high sandy dry soil (loes) plateau of the world covering about 640,000 sq. km. (ii) It also tops the world in highest soil erosion rates and in down stream flood risk. (iii) The wind blown sand and sediments that have made this plateau shape large scale terracing.

- (b) **Distribution of air pressure:** (i) The weight of atmosphere per unit area called air pressure has divided the earth into the pressure belts that coincide with the Temperature Belts. (ii) There are alternate low and high pressure belts in similar manner. (iii) Equatorial Low Pressure Belt or the Intertropical Convergence Zone stretches from 50N to 50S. It is a region of light winds and ocean currents. (iv) Sub-Tropical High Pressure Belt is located between 300 and 350 in both hemispheres; (v) Sub-Polar Low Pressure Belt lies between 600 and 650 in both hemispheres. (vi) Polar High Pressure Belt covers both north and south poles where high pressure prevails. (vii) Vertically the temperature and air pressure both decrease with altitude at a given rate. It is why mountaineers carry oxygen masks when going up a high mountain like Mt. Everest.

- (c) **Taxes and land revenue of Cholas:** (i) A Chola inscription shows that more than 400 terms for different kinds of taxes; (ii) Taxes could also be in the form of forced labour called 'vetti'; (iii) Land revenue called 'kadamai' was levied after elaborate survey of land was done and the government share of land

revenue was fixed; (iv) There were different committees like law and order, justice, revenue collection and irrigation committee; and (v) A cess was levied on succession to family property.

- (d) **Main sources of information during the medieval period:** Refer to Long Answer Question 2 of Lesson 1 of History.

- (e) **Difference between private and public health services:** Refer to Short Answer Question 2 of Lesson 2 of Social and Political Life.

- V. (a)** Stratosphere, **(b)** Physical, Biological Environment. **(c)** cenotaphs, Shah Jahan, **(d)** 12th, 13th, **(e)** Greece.

Practice Time

- I. (a)** (ii), **(b)** (i), **(c)** (iii), **(d)** (ii), **(e)** (iii).
- II. (a)** Today's world is shrinking because of fast communication and transport.
- (b)** Rainforest contains most living matter because food and other resources for living are available in plenty.
- (c)** In the 19th century some minor social groups in Bengal proclaimed their status through the construction of temples in order to demonstrate their power and piety and they were also important from cultural stand as well.
- (d)** Guru Granth Sahib saw the end of guruship among Sikhs in order to complete the founder's mission
- (e)** Universal Adult Franchise is an equality issue as it is important for granting all persons equal right to vote, an essential aspect of all democracies.
- III. (a)**–(iv), **(b)**–(v), **(c)**–(i), **(d)**–(iii), **(e)**–(ii)
- IV. (a)** The different elevations of South African grasslands are the High Veld 1,220-1,830 m; the Mid Veld 610 – 1,220 m and Low Veld 150 m – 610m.
- (b)** Refer to Geography Long Answer Question 3 of Lesson 11.
- (c)** Refer to History Long Answer Question 2 of Lesson 7.
- (d)** Refer to History Short Answer Question 1 of Lesson 9. Impact: It contributed to growth

of Urdu language, toleration in religious matters, reconsideration of the practice of untouchability and recital of his dohas by masses.

- (e) Refer to Social and Political Life Short Answer Question 3 of Lesson 3.

HOTS

- (a) There is direct relationship between General Circulation of Atmosphere and Ocean Currents in following ways: (i) The General Circulation of Atmosphere operates actively over the oceans and winds drag the water surface in the direction they are blowing. (ii) Convection like in the case General Circulation of Atmosphere in which warm air rises and cold air sinks also acts on ocean water. It plays a key role in which cold water sinks and warm water rises to surface and thus set water in motion both vertically and horizontally.
- (b) Refer to Geography HOTS Question 2 of Lesson 8.
- (c) The tribal people refuse to accept social and technological changes because: (i) They strongly believe in coexistence and interdependence with the settled people or even caste based people. (ii) They believe in community ownership of all natural resources without damaging ecology of the region where they live. (iii) They have retained their old ways of life and preserved their own separate culture and oral tradition.
- (d) **Administration under Shivaji:** (i) The state that Shivaji founded comprised about 4.1% of the sub-continent at the time of his death. He established a government that included modern concepts such as cabinet comprising 8 ministers called *Ashtapradhan Mandal*, foreign affairs (*dabir*) and internal intelligence. (ii) The kingdom was divided into two parts known as *Swarajya* and *Mughalai*. *Swaraja* included the territories under direct control of Marathas and *Mughlai* were adjacent to Mughal territories. (iii) The inhabitants of *Mughlai* territories were forced to pay *chauth*, a kind of tax equivalent to one-fourth of the land revenue. The subjugated territories had to pay *sardeshmukhi* in addition to *chauth*. The *sardeshmukhi* was fixed at one-fourth of the revenue paid by rulers. (iv) The *Swaraja* territories were divided into *prants* or provinces.

The provinces were further sub-divided into *parganas*. Each *pargana* consisted of several villages. (v) Maratha military organisation had some novel features in keeping with the guerilla system of warfare. Army was well disciplined and experts in commando action known as *ganimi kava* or enemy trickery. A standing army called *paga*, part-time soldiers, highly mobile pastoralists (*kunbis*) and light infantry and cavalry divisions were the backbone of Maratha army. (v) Marathas built a strong navy that held its own against the British, the Portuguese and the Dutch who were engaged in piracy. He was fully aware of the advantages of a secure coastline and was concerned about growing influence of the Europeans which the Mughals ignored.

- (e) **The women's movement and the Civil Rights Movement of US:** (i) The women's movements of 1960's and 70's drew inspiration from the Civil Rights movement. (ii) Like the Civil Rights Movement in many countries reform legislations were passed and the Universal Adult Franchise was also granted to women on par with men such as in India. (iii) The women movement could not maintain the momentum of the Civil Rights Movement. The result is that the women lag behind in many countries and in many fields such as their numbers in legislatures and in other respects.

Activity Time

□ Graphic Organiser

The missing components of our environment and write below their importance:

1. **Air** (atmosphere) – it is essential for breathing and survival.
2. **Water** (hydrosphere) – it is necessary for growth of terrestrial and aquatic life.
3. **Land** (lithosphere) – All terrestrial life is found on land and soil is formed that helps plants to grow.
4. **Bridge** (human made environment) – it links two land blocks separated by a water channel and provides a means of transport.

□ Analytical Skills

It is stated in the box that medical colleges in India produce a large number of trained doctors (about 15,000 a years) but most settle in urban

area neglecting most of India's population living in rural areas (about 70%). As a result there are large imbalances in providing health care services in India

Activity Time

Diagram Study

The diagram of the global pressure and wind belts: (i) Winds direction shown by arrows is high to low pressure areas. (ii) ITCZ is a zone of converging light winds and low pressure. (iii) the Sub-Tropical High Pressure Belt – In this belt Trade Winds and Westerlies blow. (iv) In the Sub-Polar Low Pressure Belt Polar Easterly winds blow. (v) In the Polar High Pressure belt winds move in all directions.

Template Creation

Students may view the given power point presentation and do a similar one.

<https://oaklandcc.edu/Earthsci/GSC15320.ppt>

Analytical Skills

The Rajput Confederacy was formed on the eve of Babur's invasion under the leadership of Rana Sangha. This information is contained in Baburnama. Babur says that Hindustan was governed by Musalman rulers of Lodis, Bahamanis in Deccan, Gujarat, Malwa and Bengal. The Rajput confederacy had also many Muslim chieftains. The aim of the confederacy was to overthrow Mughal rule but the political discontentment and disintegration of Bahmani kingdom prevented Rana Sangha from launching any campaign against the Mughals. The Bahmani kingdom subsequently broke into five smaller kingdoms who later came under Mughal rule.

Practice Evaluation

The Criminal Law Amendment Act 2013 has had a long journey but the protests in Delhi in 2013 led to enactment of this legislation. The Supreme Court in order to ensure speedy trial had recommended setting up of fast track courts. Recently, after more cases of sexual assault were reported from across places in India some rethinking is underway.

Activity Time

Analysis

1. The pie chart shows that of the earth's total

water resources 97% is saline water in oceans and some lakes. Only 2.60% is fresh water made available on land by the Hydrological Cycle. Of this major part is frozen in glaciers and surface flow is only about 1% which is highly unevenly distributed over earth. Only 0.40% is accessible fresh water for use of terrestrial animals including man and plants.

2. *A river's journey from its source to its mouth.*
The upper course is in the hills where velocity of water is high on account of slope of the land and many tributaries join the river. The middle course is in the plains. Due to low relief and more volume of water river begins to deposit its sediments on its banks and in the flood plain. In the lower course velocity of water is very slow. River has many distributaries and deposition of sediments takes place. Sometimes these sediments are deposited in front leading to formation of a delta. River at its mouth finally joins the sea.

Activity Time

Critical Thinking

Gradual destruction of forests by human action is result of environment degradation. It ultimately turns the forest land into a desert.

Visual Assessment and Understanding

The three different processes of wind action shown by the images are from left to right are wind energy generation at a wind farm on a coastal area, formation sand dunes in a desert and weathering in action on a hill slope. Wind energy is generated by winds in which winds move the turbines to generate electricity. Sand dunes are from when winds deposit their load of on facing some obstruction in the direction they are moving. Weathering takes place on the surface of the earth by agents of atmosphere which break down the rocks in situ. It leads to lowering and levelling off the relief.

Practice Evaluation

Students need to write about the Manufacturers, Distributors/Wholesalers and Neighbourhood Retailers in their respective local areas. How each of them is placed in the chain. They may also write about the types of supplies they get from outside the state and why.

