

Primum Social Science-6

Unit-1 : The Earth



Planet Earth in the Solar System

Section-I

1. Tick (3) the right answer :

Ans. a. iii. b. iii. c. ii.

2. Oral Questions :

Ans. a. Venus is called the morning star and also Earth's twin.
b. Earth's satellite is known as the moon. Its diameter is about one fourth of the Earth's diameter and it is about 3,84,000 km away from the Earth. It is Earth's closest neighbour in space. The moon is the largest and brightest object to be seen in the night sky. It has no light of its own. It reflects the Sun's light which reaches the Earth in one and a quarter seconds.

3. Identify the following :

Ans. a. Jupiter
b. Mercury
c. Mars
d. Akash Ganga

4. Fill in the blanks :

Ans. a. Light travels at a speed of **3,00,000** kilometres per second.
b. The nearest star to the Sun is **Proxima Centauri**.
c. **Uranus** and **Venus** rotates from east to west.
d. The first satellite launched by India in 1975 was named as **Aryabhata**.

5. State whether the following statements are True or False :

Ans. a. False b. False c. False d. True.

Section-II

1. Define the following :

Ans. a. **Asteroids** : Between the Mars and Jupiter, there is a wide gap of more than 550 million km. This gap is filled by tiny heavenly bodies known as Asteroids or Planetoids. The largest of these tiny planets is Ceres which has a diameter of 768 km. Many scientists and astronomers believe that asteroids are fragments of a planet which exploded long time ago.
b. **Meteors** : These are shooting stars but are not stars in the real sense at all. These small pieces of solid mass move about in the space and go around the Sun. When they come near the Earth's atmosphere, as a result of friction they begin to glow and are called Meteors. It is believed that they are tails of comets. When such shooting stars are still in the solar system

but would enter the Earth's atmosphere, they are called meteoroids. After entering the Earth's atmosphere they may partly burn up and fragments that reach the ground are known as meteorites.

- c. **Sattelites** : The word satellite means attendant or companion. A satellite moves round the planet in the same way as a planet moves round the Sun. In other words, while revolving round the planet, the satellites also revolve round the Sun. Our Earth has one satellite which we call Moon while Jupiter has 62 satellites. Mercury and Venus have no satellites. Satellites, like the planets, have no light or heat of their own. They reflect the light of the Sun. Planets revolve round the Sun, while the satellites revolve round the planets.
- d. **Solar system** : The Sun and the eight planets that revolve round the Sun are members of the solar system. These eight planets are Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus and Neptune. Besides the Sun and the planets, there are some smaller celestial bodies as well in the solar system. These small bodies are called satellites. The satellites revolve round the planets in the same way as the planets revolve round the Sun. Our Earth has one satellite which we call the 'moon'.

2. Answer the following questions in short :

- Ans.**
- a. We see a large number of celestial bodies shining in the sky. Some of them produce their own light while others, like the moon, reflect the light received from the Sun. Stars are celestial bodies which produce their own heat and light.
- b. There are millions of stars in the sky. Some of the stars are found in groups. A constellation is a group of stars forming a certain shape. One such constellation is a group of seven stars which is called the Saptarishi. The Saptarishi forms a part of the constellation of the Big Bear, also known as Ursa Major in Latin.
- c. We see a large number of celestial bodies shining in the sky. Some of them produce their own light while others, like the moon, reflect the light received from the Sun. Stars are celestial bodies which produce their own heat and light. Stars are huge bodies made up of very hot gases, and they give out enormous amounts of heat and light. Our Sun is an ordinary, medium-sized star. It looks bigger than the other stars because it is closer to us than any other star. The star nearest to the Sun is Proxima Centauri.
- d. The word 'planet' is originally a Greek word which means 'wanderer'. Planets are so called because they are always in motion around the Sun in fixed orbits. They also rotate on their axes at different speeds. All planets are opaque bodies with no heat or light of their own. They are seen because they reflect the light of the Sun. Out of the eight planets of our solar system, the first four are inner planets, i.e., Mercury, Venus, Earth and Mars. They are made up of rocks and that is why, they are also called Terrestrial Planets.

The outer planets include Jupiter, Saturn, Uranus and Neptune. They are mainly gaseous in nature and are called Jovian Planets.

3. Answer the following questions in detail :

- Ans.**
- The Sun and the eight planets that revolve round the Sun are members of the solar system. These eight planets are Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus and Neptune. Besides the Sun and the planets, there are some smaller celestial bodies as well in the solar system. These small bodies are called satellites. The satellites revolve round the planets in the same way as the planets revolve round the Sun. Our Earth has one satellite which we call the 'moon'.
 - The Earth is the fifth largest planet. It is a sphere which is slightly flattened at the poles. From a spacecraft, the land on the Earth looks a mixture of green and brown. The oceans, which cover more area than the land, look blue. The Earth is therefore, called the Blue Planet.
 - Differences between Stars and Planets :

Stars

- Stars have their own light.
- Stars twinkle.
- Stars are very big.
- Stars are very hot.
- There are millions of stars (in the universe).
- The Sun is a star.

Planets

- Planets receive their light and heat from the Sun.
- Planets do not twinkle.
- Planets are very small as compared to the stars.
- Temperature of planets depends on their distance from the Sun.
- There are eight planets (in our solar system).
- Our Earth is a planet.

Section-III

Ans. Do yourself.



Globe : Latitudes and Longitudes

Section-I

1. Tick (3) the right answer :

Ans. a. ii. b. ii. c. iii. d. iv. e. iii.

2. Oral Questions :

- Ans.**
- Arctic Circle.
 - The equator cuts the globe into two equal halves known as hemispheres.
 - Longitude.

3. Fill in the blanks :

- Ans.** a. **Torrid zone** is also known as Tropical zone.
b. **Arctic circle** lies $66\frac{1}{2}^{\circ}$ N of the Equator.
c. Tropic of Cancer is located at $23\frac{1}{2}^{\circ}$ N degrees.
d. Distance between longitude decreases towards **poles**.
e. The **equator** cuts the globe into **two** equal halves.

4. State whether the following statements are True or False :

- Ans.** a. False b. True c. True d. False e. True f. True.

5. Answer in one sentence :

- Ans.** a. Globe.
b. Equator.
c. The equator cuts the globe into two equal halves known as hemisphere.
d. Prime Meridian.
e. Grid.
f. International Standard Time.

6. Match the following :

- Ans.** a. Equator — i. $23\frac{1}{2}^{\circ}$ N
b. Tropic of Cancer — ii. Globe
c. Arctic Circle — iii. Tropical Zone
d. Model of the Earth — iv. 0°
e. Prime Meridian — v. $66\frac{1}{2}^{\circ}$ N
f. Torrid zone — vi. London

7. Map Work

- Ans.** Do yourself.

Section-I

1. Define the following :

- Ans.** a. **Latitudes** : Latitudes are the imaginary lines that run parallel to equator.
b. **Longitudes** : Longitudes are imaginary lines running between the North and South Poles.
c. **Equator** : The Equator drawn in the middle of the globe, is exactly between North Pole and South Pole.
d. **GMT** : Greenwich Meridian Time is the International Standard Time.

2. Differentiate between the following :

- Ans.** a. **Latitude** : Latitudes are the imaginary lines that run parallel to equator.
Longitudes : Longitudes are imaginary lines running between the North and South Poles.
b. **Torrid Zone** : It lies between the Tropic of Cancer and Tropic of Capricorn. It is the hottest zone of the world.
Frigid Zone : Frigid zone lie between $66\frac{1}{2}^{\circ}$ and 90° north and south of the Equator. There are the coldest zone of the world.

c. **Local Time** : Local time of a place is that time when the Sun is exactly above that meridian.

Standard Time : Standard time is the local time of a particular meridian which is adopted for the whole country.

d. **Grid** : Latitudes and Longitudes cut each other at an angle of 90° and form a network on the globe called grid.

Great Circle : Any circle that divides the globe into two equal halves is known as the Great Circle. All other lines are small circles. Among latitudes only equator is the Great Circle.

3. Answer the following questions in short :

- Ans.**
- A globe is a three-dimensional model of the Earth in miniature (i.e., in a greatly reduced size). It is a true representation of the Earth. A globe is more accurate than a flat map, as it follows the curvature of the Earth. It also gives us the correct shape and size of continents and countries, and shows distances and directions without distortion.
 - The important parallels are Equator, Tropic of Cancer, Tropic of Capricorn, Arctic Circle and Antarctic Circle.
 - The Equator drawn in the middle of the globe, is exactly between North Pole and South Pole. The equator cuts the globe into two equal halves.
 - Torrid Zone** : It lies between the Tropic of Cancer and Tropic of Capricorn. It is the hottest zone of the world.
 - Longitudes** : The imaginary lines joining the two poles at regular distances are called the lines of longitudes or meridians. They are equal in length. Equator is a reference line for locating places in the north and south of it. In the same way we need a references line to locate places in the east and west directions. So it was decided that the line of meridian passing through British Royal Observatory at Greenwich (near London) be called the Prime Meridian (that is, the Chief Meridian). It is also known as Greenwich Meridian.
 - The Frigid Zone is the coldest area of the Earth because they lie beyond the Arctic Circle in the Northern Hemisphere and Antarctic Circle in the Southern Hemisphere. As the angle of the sun rays goes on decreasing towards the poles, the Sun never rises much above the horizon in there two zones. And these regions receive minimum solar energy.
 - Local Time** : The local time of a place is 12 noon when the midday Sun is right above it. All places on the same meridian have noon at the same time if the watches are set according to the time of the overhead Sun at a particular meridian.

4. Answer the following questions in detail :

- Ans.**
- On the basis of the heat received, the Earth is divided into the following :
 - Torrid Zone** : It lies between the Tropic of Cancer and Tropic of Capricorn and is also known as Tropical Zone (Torrid Zone). It is the

hottest zone of the world. At any point in this zone, the Sun is vertically overhead twice a year. Most of the southern half of India, lies in this zone.

2. Temperate Zones : The zone outside the Torrid Zone between $23\frac{1}{2}^{\circ}\text{N}$ and $66\frac{1}{2}^{\circ}\text{N}$ and $23\frac{1}{2}^{\circ}\text{S}$ receives slanting rays of the Sun. This zone is neither too hot nor too cold i.e. it has moderate temperature. The belt between the Tropic of Capricorn and the Antarctic Circle is called the South Temperate Zone. The mid-day Sun is never overhead beyond the Tropic of Cancer or the Tropic of Capricorn.

3. Frigid Zones : These two zones are between $66\frac{1}{2}^{\circ}$ and 90° north and south of the equator. They lie beyond the Arctic Circle in the Northern Hemisphere and Antarctic Circle in the Southern Hemisphere. As the angle of the sun rays goes on decreasing towards the Poles, the Sun never rises much above the horizon in these two zones. As the name indicates, these are cold regions and receive minimum solar energy.

- b. Other than the Equator there are two important parallels of latitude in each hemisphere which correspond with dividing lines of heat zones of the Earth. Since the Earth rotates on its axis and follows a regular path around the Sun, certain parts of the Earth receive more solar energy than others and various other phenomena happen as a matter of routine. The important parallels are the following :

Tropic of Cancer : It is the parallel of $23\frac{1}{2}^{\circ}\text{N}$ in the Northern Hemisphere. It passes through the middle of our country.

Tropic of Capricorn : It lies the parallel of $23\frac{1}{2}^{\circ}\text{S}$ in the Southern Hemisphere.

Arctic Circle : It is $66\frac{1}{2}^{\circ}\text{N}$ of the Equator.

Antarctic Circle : It lies $66\frac{1}{2}^{\circ}\text{S}$ of the Equator.

- c. The lines of longitude and latitude form a network on the globe. The longitudes and latitudes intersect each other at right angles forming a grid. Using the grid we can locate any place on Earth by referring to the point where latitudes and longitudes intersect. The parallels help us to locate a place north or south of the Equator, while the Meridians do the same east or west of the Prime Meridian.

The point of intersection of these lines gives the precise location of a place. For example, Haridwar in Uttarakhand lies at the point of intersection of 30°N and 78°E (longitude and latitude respectively).

- d. As the local time differs by 4 minutes at every longitude, it would create a lot of confusion regarding time for any country as a whole which may stretch across several longitudes. Therefore, each country selects a central meridian and the local time of this meridian as the standard time of that country.

In India, there is a difference of about 30 degrees between the westernmost and easternmost longitudes. To avoid confusion, the local time of $82\frac{1}{2}^{\circ}\text{E}$ longitude is selected as the standard time for the entire country. Thus

$82\frac{1}{2}^{\circ}\text{E}$ is accepted as the Standard Meridian for India. It shows time ($82\frac{1}{2}^{\circ} \times 4 \text{ minutes} = 330 \text{ minutes}$ or $5\frac{1}{2} \text{ hours}$). Thus, when it is noon at Greenwich in England, it would be 5.30 p.m. in India. As the Earth rotates from west to east, places in the east see the Sun first while places in the west see the Sun later.

- e. For the purpose of calculation, all measurements are done taking the Earth as a circle. The circle measures 360° in circumference. If we go from the Equator to the North Pole or the South Pole we would go through a quarter ($\frac{1}{4}$ th) of a whole circle or 90° . Thus, from the Equator to the pole we mark 90° divisions each forming one degree. The direction north or south of the Equator is indicated by suffixing letter 'N' or 'S' as the case may be. For determining exact location of a place north or south of the equator, degrees are further subdivided into minutes and seconds. Each degree is divided into 60 minutes written as ($'$). Each minute is further sub-divided into 60 seconds written as ($''$).

Section-II

Ans. Do it yourself.



Motions of the Earth

Section-I

- 1. Tick (3) the right answer :**

Ans. a. i. b. ii. c. ii. d. i. e. iii. f. iv.

- 2. Oral Questions :**

Ans. a. All the meridians meet at the North and the South Pole.
b. All the Poles, days and nights last for 6 months.
c. When Christmas is being celebrated in Delhi. Canberra in Australia will have summer reason.

- 3. Answer in the one sentence :**

Ans. a. June
b. December
c. The distance between the Sun and the Earth in June
d. The distance between the Sun and the Earth in June
e. Rotation and Revolution
f. Spring Equinox
g. Rotation
h. Leap year

- 4. Fill in the blanks :**

Ans. a. The Earth spinning around its axis is called **rotation**.

- b. 23rd September is known as **Autumnal Equinox**.
- c. The direction of Earth is from **East to West**.
- d. There are **24** hours in a day.
- e. Leap day is added in the month of **February**.

5. Match the following :

- Ans.**
- | | | |
|-------------------|---|---------------------|
| a. March 21st | — | i. Winter Solstice |
| b. 23rd September | — | ii. Spring Equinox |
| c. June 21 | — | iii. 24 hours |
| d. 22nd December | — | iv. Summer Solstice |
| e. Day and Night | — | v. Autumnal Equinox |

6. State whether the following statements are True or False :

- Ans.** a. True b. False c. True d. False e. True f. False g. True.

Section-II

1. Define the following :

- Ans.**
- a. **Rotation :** The movement of the Earth on its axis is called it's rotation.
 - b. **Revolution :** The movement of the Earth around the Sun is called it revolution.
 - c. **Aphelion :** The distance between the Earth and the Sun to a minimum of roughly 152 million km in early June called the aphelion.
 - d. **Leap year :** To account for the quarter day more than a year that the Earth takes to go around the Sun, an extra day is added to February once in every four years. The resulting year with 366 days is called a leap year.

2. Distinguish between the following :

- Ans.**
- a. The axis of the Earth, which is an imaginary line joining the North and South poles, is not vertical. It is tilted and makes an angle of $66\frac{1}{2}^\circ$ with the plane of the Earth's orbit. This is known as the inclination of the Earth's axis. The inclination remains always in the same directions.
 - b. The Earth takes $365\frac{1}{4}$ days to complete one revolution around the Sun. For our convenience, we take only 365 days as a calendar year. The 6 hours ($\frac{1}{4}$ day) that is left is added as one more day ($6 \times 4 = 24$ hours) to February every fourth year. Such a year has 366 days and it is called a leap year. Thus every leap year has an extra day, and all leap years are divisible by four. Centenary years are leap years only if they are divisible by 400. Thus the year 1900 was not a leap year, though it is divisible by 4.
 - c. When the time of day and night varies, it is called Solstice and when the time of day and night is equal, it is called equinox.

3. Answer the following questions in short :

- Ans.**
- a. Rotation of the Earth causes a distinct day and night-12 hours day and 12 hours night. Since the shape of Earth is spherical, only half of it gets sunlight and the other half remains in darkness. Parts of the Earth facing the Sun experiences day and the other half in shadow experiences night. A

part of the Earth's surface that emerges from darkness Experiences sunrise. Later, when it is obscured from the rays of Sun it experiences sunset.

- b. The lengths of day and nights vary due to the revolution of the Earth and the inclination of the Earth's axis in a fixed direction.
- c. If the Earth fails to rotate, the part of it facing the Sun would always have day and cause excessive heat. The other half would experience night with freezing temperatures.
- d. A year is usually divided into four seasons spring, summer, autumn and winter. Seasons change when there is change in the position of the Earth with reference to the Sun. These changes are due to :
 1. the revolutions of the Earth, and
 2. the inclination of the Earth's axis in a fixed direction.
- e. **Spring Equinox** : Moving on its orbit the Earth reaches the position on 21st of March. On this day the Sun remains equidistant from the North Pole and the South Pole. Hence the Sun's rays fall vertically on the Equator. He days and nights become equal all over the world. This period in the Northern Hemisphere is Spring Equinox and in the Southern Hemisphere, Autumnal Equinox.
- f. The axis of the Earth, which is an imaginary line joining the North and South poles, is not vertical. It is tilted and makes an angle of $66\frac{1}{2}^\circ$ with the plane of the Earth's orbit. This is known as the inclination of the Earth's axis. The inclination remains always in the same directions.

4. Answer the following questions in detail :

- Ans.**
- a. **Summer Solstice** : On 21st of June the Sun's rays fall vertically on the Tropic of Cancer ($23\frac{1}{2}^\circ\text{N}$) as the North Pole remains inclined towards the Sun and South Pole remains inclined towards the Sun and South Pole is away from it. A larger portion of the Northern Hemisphere gets light (and heat) from the Sun. Thus, it is summer for places north of the Equator. The longest day and shortest night at these places occur on June 21. In the southern Hemisphere, all these conditions are reversed. It is winter season there. The nights are longer than the days.
At this time, at the North Pole and in the whole area of North of Arctic Circle, there is a complete 24 hours period of continuous daylight. In summer, this region is popularly known as the 'Land of Midnight Sun'. Thus during this period, daylight goes on increasing from 12 hours at the Equator to 24 hours at the North Pole. This time, when Sun reaches it maximum distance from the Equator (21st June), is known as Summer Solstice.
 - b. **Winter Solstice** : On 22 December, rays of the Sun fall directly on Tropic of Capricorn ($23\frac{1}{2}^\circ\text{S}$). As the South Pole is inclined towards the Sun, it has six months of day, and the North Pole has six months of night, as it remains away from the Sun. During winter solstice, days are longer in the

southern hemisphere, the longest day being on 22 December. Most part of the northern hemisphere has winter season and southern hemisphere has summer during this period.

- c. The different inclination of the Sun's rays cause different amount of heating. On 21st of June the Sun's rays fall vertically on the Tropic of Cancer as the North Pole remains inclined towards the Sun and South Pole in away from it. A larger portion of the Northern Hemisphere gets light from the Sun. Thus, it is summer for places north of the Equator. In the southern Hemisphere, there is winter reason.

Section-III

Ans. Do yourself.



Section-I

1. **Tick (3) the right answer :**

Ans. a. i. b. i. c. iii. d. i. e. ii.

2. **Oral Questions :**

Ans. a. Political Map.
b. Title Scale, Direction and Legend or key.

3. **Answer in one sentence :**

Ans. a. Ptolemy.
b. The maps can be carried out easily.
c. Atlas.
d. Title Scale, Direction and Legend or key.

4. **Fill in the blanks :**

Ans. a. A map is the **graphical** representation on a **flat** surface.
b. Maps are portable and easy to handle.
c. The **legend** or **key** of a map explains the symbols used in it.
d. **Topographic** map shows a small area of the Earth in great detail.

Section-II

1. **Define the following :**

Ans. a. **Atlas** : The book of maps is called atlas.
b. **Scale of a map** : Maps are drawn to scales. Scale is the ratio between the distance on the map and the actual distance on the ground.
c. **Sketch** : A map without a scale is known as a sketch.

2. Answer the following questions in short :

- Ans.**
- A map is a representation of the Earth's surface or part of it on a flat surface, drawn according to scale.
 - We need maps to know the location of a particular place.
 - Thematic maps show specific information. They deal with a single time like distribution of rainfall, population, industries, crops, temperature, vegetation, roadways, railways networks etc.
 - Title, distance, direction, legends and grid system are the essentials of a map.

3. Answer the following questions in detail :

- Ans.**
- A map Compared with a Globe :** A map has some advantage and some disadvantage as compared to a globe. Maps cannot be as accurate as globes. Globe is a small model of the Earth. A globe is round in shape, so it is quite easy to show the shapes and sizes of the continents and oceans on the globe quite accurately. But these things cannot be shown accurately on a map because it is drawn on a flat surface. As it is quite impossible to flatten a round shape completely, so the northern and southern portions of the Earth are stretched out of proportion on a map. But maps have special advantages of their own. They can be carried and handled easily. They can be collected together in a book form. When maps, drawn on a small scale, are put together in the form of a book, it is called an Atlas. Such features as landforms, roads, railways, towns and villages, etc. can be show better on maps as compared to a globe.

b. Advantages of the Maps

Maps are important and useful due to certain advantages :

- Maps can be drawn for smaller as well as larger areas.
- They are portable and easy to handle which serve many purposes.
- Maps provide us a lot of information. A variety of information can be represented on the following maps :
- Political and Physical Minerals
- Vegetation and Wildlife Climate
- Industries

c. Types of Maps

- Maps are of many types.
- The most commonly used maps are :

1. Political Maps : These maps show boundaries of countries and of the states within the countries. They also show the locations of cities and towns.

2. Physical Maps : These maps show geographical features such as mountains, hills, plateaus, plains and water bodies such as rivers, lakes, seas. Climatic conditions can also be represented on such maps.

3. Thematic Maps : Thematic maps show specific information. They

deal with a single theme like distribution of rainfall, population, industries, crops, temperature, vegetation, roadways, railway networks, etc.

4. Topographic Maps or Survey Maps : Topographical maps show great details of the natural features of a small area including rivers, lakes, mountains, etc., along with man-made areas like parks, wells, cities and towns.

d. **Sketch :** A map without a scale is known as a sketch.

Plan : A plan is a large scale drawing showing a small part of the Earth's surface in greater detail.

Map : A map is a representation of the Earth's surface or a part of it on a flat surface according to a scale.

Section-III

Ans. Do yourself.



The Four Realms of the Earth

Section-I

1. **Tick (3) the right answer :**

Ans. a. iii. b. iii. c. ii. d. i.

2. **Oral Questions :**

Ans. a. 'Litho' in Greek means 'rock' and the world lithosphere refers to solid rock and soil. The solid outer crust of the Earth, composed of rocks and minerals, is called the lithosphere. It includes all types of land masses found on the surface of the Earth. It covers about 29 per cent of the Earth's total surface area.

b. A plateau is a large area of fairly level land rising much above the surrounding areas.

3. **Answer in one sentence :**

Ans. a. Australia
c. Antarctica

b. Rock
d. 11,022 metres

4. **Fill in the blanks :**

Ans. a. The Earth's zones include lithosphere **hydrosphere** atmosphere and **biosphere**.

b. The smallest continent is **Australia**.

c. **North America** is the third largest continent on the Earth.

d. The densest and closest layer of atmosphere to the Earth is **Troposphere**.

e. The atmosphere consists of 78% of **nitrogen**.

5. State whether the following statements are True or False :

Ans. a. False b. False c. False d. True e. True.

Section-II

1. Define the following :

- Ans. a. **Relief** : The surface of the Earth is neither uniform nor regular everywhere. At some place, it is elevated while at others it is levelled. This variation is called relief.
- b. **Ocean currents** : Ocean currents are the horizontal movements of sea water caused by many factors including wind and the Earth's movement.
- c. **Tides** : Tides are periodic rising and falling of the water, caused by the gravitational attraction of the Moon and Sun acting upon the rotating Earth.
- d. **Waves** : Waves are the rising and falling movements of surface sea water caused by the force of the winds.

2. Answer the following questions in short :

- Ans. a. The solid outer crust of the Earth, composed of rocks and minerals, is called the lithosphere.
- b. The three major realms of the Earth are the lithosphere, hydrosphere and atmosphere.
- c. Pressure and temperatures caused by the heat of the Sun cause air to move.
- d. Atmospheric air is a mixture of various gases and dust particles. It is mainly composed of gases 78% nitrogen, 21% oxygen and 1% consisting of argon, carbon dioxide and other gases.
- e. The Earth is called 'watery planet' because the Earth is only one planet which have water. About 71% of the Earth's surface is covered by water.

3. Answer the following questions in detail :

- Ans. a. **Landforms** : The surface of the Earth is neither uniform nor regular everywhere. At some places, it is revealed while at others it is levelled. This variation is called relief. The relief features on the Earth's surface are broadly grouped into mountains, plateaus and plains. These are called the major landforms.

1. Mountains : When the Earth was in its beginning stage, mountains were not there. A mountain is any natural elevation of the Earth's surface. Mountains are high hills, which rise to a height above 600 metres from the ground. Mountains are of different heights. They also vary in size, age and shape. Some are very old, some are very young.

All mountains are made by internal movements of the Earth. Our Earth is made up of various systems of plates. These plates float on the liquid mass of rock below. They sometimes collide or go past each other that may compress or break parts of two or more plates. This compression may cause uplift and folding of the rock. This goes on happening for over

millions of years. The mountains like the Himalayas in India, Alps in Europe and Rockies in North America have been grown up in this way. Different parallel chains called ranges also appear.

2. Plateaus : A plateau is a large area of fairly level land rising much above the surrounding areas. A plateau may have step slopes on one or more sides. A plateau may be higher than a mountain but its almost flat upper surface does not have a peak. Like mountains, some plateaus are old, while others are comparatively new. Old plateaus are lower, and stretch over greater areas. The Deccan plateau of India and the plateaus of Brazil, Australia and Africa are some of the major old plateaus of the world.

The plateaus of Tibet to the north of the Himalayas is the highest plateau in the world. Its height ranges between 40,00 and 6,000 metres above sea level.

3. Plains : A relatively flat and low-lying vast expanse of land is called a plain. They are also called lowlands. The general slope of the land is gradual, but never abrupt.

Some plains are gently sloping or may even be hilly. Most of them have been formed by rivers, like the Northern Plains of India. While flowing down the steep mountain slopes, rivers carry stones, sand and silt with them. When the rivers slow down, they deposit this material in the valleys. Plains with fertile soils are formed by these deposits. That is why they are very thickly populated. Of all the landforms, plains are most suitable for human habitation.

Some plains are near the sea coast, while others are in the interior of the continents.

- b. The hydrosphere is composed of water present on the Earth in all its forms. *Hudor* is a Greek word which means water. Our Earth looks blue from the space, so, it is also known as the blue planet.

About 71 per cent of the Earth's surface is covered by water which includes oceans, seas, rivers, lakes, gulfs and bays. The oceans are larger water bodies. The seven continents are separated by the oceans. The ocean floor is generally flat but at some parts of the ocean floor deep trenches are also found, the Mariana Trench in the Pacific Ocean is such an example. There are five major oceans according to their size. Those are the Pacific Ocean, the Atlantic Ocean, the Indian Ocean, the Arctic Ocean and the Southern Ocean. About 97 per cent of the total water on the surface of the Earth is in oceans and less than one per cent is fresh water.

Like lithosphere, the ocean floor also has various types of relief features, such as ridges, trenches, sea-plains, basins, canyons, peaks, etc.

The average depth of the ocean water is about 3,800 metres while the average height of the land is about 840 metres. The greatest depth in the oceans is at Mariana Trench on the eastern side of the Pacific Ocean. It is about 11,022 metres deep.

- c. **Importance of the Atmosphere :** The atmosphere surrounding the Earth helps us in many ways.

Oxygen is a life-giving gas. It helps in the process of burning. As mentioned earlier, atmosphere has water vapour (3% to 4%) which makes weather phenomenon like rain and snow possible. The atmosphere is a blanket of air which acts like a glasshouse and keeps the Earth warm. It allows the Sun's radiation to heat the Earth, but it does not allow all the incoming solar heat to return to space immediately. This phenomenon is called greenhouse effect.

The atmosphere protects us from the harmful solar radiation, especially ultraviolet rays, because it has ozone in the stratosphere. Unequal heating of the atmosphere on the Earth causes differences in temperatures and pressure. When air moves in a horizontal direction from an area of high pressure to an area of low pressure, it is called wind. This results in a flow of air from areas of high pressure to areas of low pressure.

- d. Atmospheric air is mixture of various gases and dust particles. It is mainly composed of gases 78% nitrogen, 21% oxygen and 1% consisting of argon, carbon dioxide and other gases.

The atmospheric gases are essential for life. Nitrogen is required in various forms to maintain the fertility is required in various forms to maintain the fertility of the soil. This helps plants, which provide us food, to grow. Oxygen is used for breathing. Carbon dioxide helps plants to manufacture food in the presence of sunlight. It also helps to keep the Earth warm. A very small quantity of another gas, called ozone, is found in the atmosphere. Ozone protects us from certain harmful rays present in sunlight.

Apart from these gases, there are many others which are found in even smaller quantities. But all of them are important. You know that without this there would be no rain or snowfall. Dust particles in the atmosphere are also important because they act as cores around which water vapour condenses.

Section-III

Ans. Do yourself.



Major Relief Features of the Earth

Section-I

1. **Tick (3) the correct answer :**

Ans. a. i. b. iii. c. iii. d. iv. e. iv.

2. Oral Questions :

- Ans.** a. The Earth's surface is rebuilt by laying down the rock materials of the process called deposition.
b. Chota Nagpur.

3. Answer in one sentence :

- Ans.** a. Fold mountains are formed on a result of collision between there plates leading to folding and the upliftment of large areas. The upfolds are called anticlines.
b. The Himalayas are young fold mountains.
c. The Alps, the Rockies and the Himalayas are the examples of young fold mountains.
d. The Aravalli range in India. Appalachian in North America and Urals in Europe.
e. Trenches are the deep gaps in the sea bed.
f. The steep slope that links the continental shelf to the sea floor is called the continental slope.

4. Fill in the blanks :

- Ans.** a. A block of land subsided between the faults, form a **Graben**.
b. Mt. Kilimanjaro in Africa is an example of **volcanic mountain**.
c. Mariana Trench is located near **Philippines**.
d. Most of the landforms in **Tibet** are plateaus or tablelands.
e. The **Mariana Trench** is the deepest trench.

5. State whether the following statements are True or False :

- Ans.** a. True b. True c. False d. False e. True.

6. Match the following :

- Ans.** a. Mt. Kea ————— i. Europe
b. Roof of the world ————— ii. Hawaii
c. Urals Range ————— iii. India
d. Jog Falls ————— iv. Tibet
e. Ganga Plains ————— v. Karnataka

Section-II

1. Define the following :

- Ans.** a. **Mountains :** A mountains is defined as a natural elevation of the Earth's surface with a peak or summit, which is small in proportion to its base.
b. **Trench :** There are vast plateaus and deep valleys between mountain ranges on the ocean floor. At places, there are very deep gaps called trenches in the sea bed.
c. **Ocean Trench :** Trenches are the deep gaps in the sea bed.
d. **Alluvial Plains :** The plains are formed by alluvium containing silt and land which is carried along by rivers and streams flowing down-stream from mountains and plateaus.

2. Give reasons for the following :

- Ans.**
- Plains are fertile because they are formed by alluvium containing silt and sand, carried along by rivers.
 - Continental shelf provides an excellent area for fishing because of the shallow depth of the water near it.
 - Aravalli mountains are called old fold mountains because Aravalli ranges have rounded tops with decreasing height due to erosion caused by the forces of nature such as wind and water.
 - Trenches are the deep gaps in the sea bed so they are also known as ocean deeps.
 - Mining is commonly practised in plateaus because plateaus are storehouses of minerals.

3. Answer the following questions in short :

- Ans.**
- Landforms change with time. Over the continents numerous landforms with varying heights are found.
 - Young fold mountains have steep slopes and sharp peaks while old fold mountains have rounded tops with decreasing height.
 - Plains are very fertile for vegetation. There is plenty of water in plains.
 - Mauna Loa, Mt. Vesuvius, Mt. Kilimanjaro and Mt. Fuji are volcanic mountains.
 - Alluvial plains are so fertile because these plains are formed by alluvium containing silt and sand carried by rivers.

4. Answer the following in detail :

- Ans.**
- On the basis of their origin mountains are generally classified into four types.

1. Fold Mountains : The Earth's crust is divided into a number of plates. These plates carry both mountains and oceans. Plates are not static but move in all directions over semi-liquid molten rocks called magma. This magma comes out during volcanic eruptions as lava.

Fold mountains are formed as a result of collision between these plates leading to folding and the upliftment of large areas. The upfolds are called anticlines and the downfolds are called synclines.

There are two types of fold mountains: Young fold mountains and old fold mountains. As the name suggests, young fold mountains are comparatively younger in terms of origin. These have steep slopes and sharp peaks. Most of these mountains have peaks covered with snow. Volcanic activities are very common with snow. Volcanic activities are very common in such mountains because the crust of the Earth here is still unstable. Most of the lofty mountain ranges of the world are young fold mountains. These are all rising mountains, with lofty peaks, parallel ranges and deep gorges.

Old fold mountain ranges have rounded tops with decreasing height due to erosion caused by the forces of nature such as wind and water. The Ural mountains and the Aravallis are the examples of the old fold mountains.

2. Block Mountains : These are formed by the horizontal forces of compression, i.e., faulting or cracking in the Earth followed by uplift or sinking along the faults. The uplifted block forms a horst or a block mountain. If a block of land subsides between the faults, it forms a Trench called a Rift Valley or Graben. Satpura and Vindhya in India are the Block mountains while the Narmada Valley and Tapi Valley are the Rift valleys. The Black Forest Mountains and the Vosages are best examples of block mountains. River Rhine flows in a rift valley between these two block mountains.

3. Volcanic Mountains : Sometimes, conical or dome-shaped structures are formed as a result of magma escaping to the surface of the Earth through surface of the Earth through an opening which is called a vent. These are called volcanic mountains or volcanoes. Magma that reaches the surface of the Earth is called lava.

The hot lava flows over the surface of the Earth, cools and then hardens to form lava sheets. Over thousand of years, several layers of such lava sheets are deposited on top of each other to form volcanic mountains. If the magma is thin and flows easily, gently sloping mountains are formed, such as Mauna Loa in Hawaii. However, if the lava is thick and viscous, the mountains formed are cone-shaped with steeply sloping sides, for example, Mt. Vesuvius in Italy, Mt. Kilimanjaro in Africa and Mt. Fuji in Japan.

4. Residual Mountains : Over millions of years, such high mountains got eroded by wind, rain, glaciers and running water. Eventually, they became old, worn out highlands like the Aravalli range in India, Appalachians in North America and Urals in Europe. Such old remains of mountains are called residual mountains.

Mountains are the storehouses of snow, ice and water. Many rivers flow here from glaciers. They have fertile terraces and valleys suited to the cultivation of crops and fruit trees. They are also rich in wildlife and forests. People use mountainous areas for tourism and adventure sports.

The world's two longest mountain ranges are the Andes (South America) and Rocky Mountains (North America). The lengths of these ranges are about 4500 km and 3000 km, respectively. The Himalayas with a length of about 2400 km are at third place in terms of length.

- b. **Sub-Marine Relief :** The ocean basins have the counterparts of almost all the major landforms such as mountains, ridges, Plateaus, plains, cratons etc. Some of the relief features of the oceans (sub-marine reliefs) are given below through the ocean profile :

Sea Mount : A single mountain on the ocean floor is called a sea mount. It may rise from the ocean floor above the level of sea water and become an island. In the island of Hawaii, Mt. Mauna Kea is actually the top part of a sub-marine mountain which is even higher than Mt. Everest on the

land.

Ocean Trench : There are vast plateaus and deep valleys between mountain ranges on the ocean floor. At places, there are very deep gaps called trenches in the sea bed. Ocean trenches are believed to be formed due to faulting on the ocean floor. These trenches are formed every deep on the ocean floor. The deepest trench is the Mariana Trench about 11022 metres deep in the Pacific Ocean. It is located near Philippines. Trenches are often known as ocean deeps.

- c. Young fold mountains are comparatively younger in terms of origin. They have steep slopes and sharp peaks. Most of these mountains have peaks covered with snow. Volcanic activities are very common in such mountains because the crust of the Earth here is still unstable. Most of the lofty mountain ranges of the world are young fold mountains.

- d. The landforms change with time. These relief features are the result of processes taking place inside and outside the Earth's surface. Thus, we classify these processes as :

a. Internal processes—They lead to rising and sinking of land surfaces. The processes include earthquakes, volcanic eruptions and earth movements.

b. External processes involve the continuous process of wearing down and rebuilding of The Earth's surface.

Wearing away of The Earth's surface is called erosion which lowers down the higher surfaces, e.g., by rivers, winds and moving ice.

The Earth's surface is rebuilt by laying down the rock materials by the process called deposition.

Section-III

Ans. Do yourself.



India-Location, Physical Features and Climate

Section-I

1. **Tick (3) the correct answer :**

Ans. a. ii b. ii c. iii. d. iii. e. ii.

2. **Oral Questions :**

- Ans. a. Monsoon is the life line of our country because in India agriculture depends on monsoon rain.
b. India is located in the Northern Hemisphere.
c. The Godavari, Mahanadi, Krishna and Kaveri are the important rivers of the Deccan Plateau.

3. Fill in the blanks :

- Ans.** a. Our country covers an area of **3.28 million** sq. km.
b. The southern part of our country is in the **tropical** zone and northern half is in the **sub-tropical** zone.
c. The height of Mt K2 is **8,811** m.
d. The **Ganga Basin** forms 1/4 of the total area of India.
e. The Southern part of the Coastal plants is called **Malabar**.

4. State whether the following statements are True or False :

- Ans.** a. False b. True c. Fales d. True e. True.

5. Answer in one sentence :

- Ans.** a. Cocomandel Coast.
b. The Himalayas.
c. Animalai.
d. The Andaman and Nicobar.
e. India is called a peninsula because south India is triangular in shape.

Section-II

1. Define the following :

- Ans.** a. **Delta** : Delta is the land lies between two rivers.
b. **Peninsula** : The land which is surrounded by the water by three sides.
c. **Glacier** : Glacier are the sliding molten ice blocks.

2. Distinguish between the following :

- Ans.** a. **Greater Himalayas** : It lies to the extreme north to India. They are snow covered for most of the year, being 6,000 m above sea level on a average.
Middle Himalayas : It lies to the south of the Himadri. They are covered with forests on their slopes. These mountains are about 4,000 to 5,000 m above sea level in height.
b. **Peninsular plateau** : To the south of the northern plains, lies the peninsular plateau.
Indian desert : Indian desert lies in the west of the Indian mainland. The weather is dry in the Indian desert.
c. **Indo-Ganga plain** : This plain is very fertile. The plain is made fertile by the rivers.
Coastal plain : The coastal plain is made by the sea waves.
d. **Andaman and Nicobar Islands** : Andaman and Nicobar Islands lie in the Bay of Bengal.
Lakshadweep Islands : Lakshadweep islands lie the Arabian sea.

3. Answer the following questions in short :

- Ans.** a. Pakistan, Sri Lanka, China, Bhutan, Nepal, Bangladesh and Mayanmar.
b. The three parallel ranges of the Himalayas :
(i) Himadri (ii) Himachal (iii) Shvalik.
c. Ganga basin is very fertile for growing crops.

- d. Our climate is called a monsoon climate because the Himalayan wall in the North and prevailing monsoons exert strong influence to bring about a sort of uniformity in the Indian climate.
- e. The Bay of Bengal and the Arabian sea make India a Peninsula.

4. Answer the following questions in detail :

- Ans.** a. **The Indian Island :** The Indian territory extends of the mainland into the Arabian Sea and Bay of Bengal forming two island groups, the Lakshadweep and the Andaman and Nicobar Islands.

The Andaman and Nicobar Islands located in the Bay of Bengal are scattered islands of volcanic origin. There are about 550 islands. India's only active volcano is situated on the Barren Islands. The Ten Degree Channel separates the Andaman Islands from the Nicobar Islands. The Andaman and Nicobar Islands are larger than the Lakshadweep Islands. These islands have a rich forest cover.

The Lakshadweep Islands are situated in the Arabian Sea. The Laccadive, Mincoy and Amindive Islands were renamed as the Lakshadweep group of islands in 1979. These islands are of coral origin. These islands are mostly inhabited by the tribal people.

- b. **The Great Mountains of the North :** This consists of the Karakoram and Himalayas ranges. The Karakoram range enters India in Kashmir and moves eastward into Tibet where it is known as the Kailash range. It includes the plateau of Aksaichin. It has lofty mountains including Mt. K2 (8,811 metres) which is the second highest peak in the world after Mt. Everest. The Siachen and Baltoro are important glaciers here. The Ladakh and Zaskar ranges lie to the south of Karakoram, on either side of river Indus as it flows from the northeast to the northwest.

The Himalayas : The Himalayas extend from the river Indus in the west to the Brahmaputra in the east. They cover a distance of about 2,500 km in the shape of an arc. They vary in width from 400 km in the west to 100 km in the east. They are higher in the east where some of the world's very high peaks are located. Mt. Everest in Nepal is the highest peak in the world while Kanchenjunga is the highest peak in India.

Some important low-lying gaps or passes in the Himalayas serve as important land routes into China and Tibet. Some of the important passes are Shipkila in the Satluj valley in Himachal Bomdila in Arunachal Pradesh and Nathula in Sikkim. (The world 'La' means 'pass' in the Chinese language).

From north to south, the Himalayas consists of three parallel ranges, namely, the Himadri, Himachal and Shivalik.

- a. Himadri or Greater Himalayas lie to the extreme north of India. They are snow-covered for most of the year, being 6,000 m above sea level on an average. Melting snow from the peaks provides water for the great rivers of the Northern plains all the year round.

- b. Himachal or the Lesser Himalayas, lie to the south of the Himadri. They are covered with forests on their slopes. These mountains are about 4,000 to 5,000 m above sea level in height. Many important hill-stations such as Shimla, Nainital, Mussoorie, Dalhousie and Darjeeling are located in the Himachal range. Some important valleys in the Lesser Himalayas are Kullu, Kashmir, Kangra and Dehra Dun. They are known for their scenic beauty and cool climate. The Lesser Himalayas are also well known for their forest reserves.
- c. Shivalik or the Outer Himalayas is the southern-most Himalayan range. On an average, it is 900 to 1,100 m above sea level. Being made up of mud, silt and stones, it is prone to earthquakes and landslides. The region at the base of Shivaliks is known as the terai. Recently, the forests in the terai region have been cleared for cultivation. This region of the Himalayas is famous for the presence of longitudinal valleys or duns. In fact, Dehra Dun is one such dun, located in this range.
The northern extension of the Himalayas is called 'Purvanchal'. They are not as high as the Himalayas and they run in a north-south direction through the states of Arunachal Pradesh, Nagaland and Mizoram. Another extension stretches along the Bangladesh-India border marked by the Garo, Khasi and Jaintia hills.

2. The Great Plains of the North : The Northern Plains lie to the south of the Himalayas. They are extensive, low and flat. They are formed by the deposition of alluvium brought down and deposited by the rivers from the Himalayas and the Tibetan Plateau. These plains are mainly developed by the Rivers Indus, the Ganga, the Brahmaputra and their tributaries. Three main rivers basin can be identified in the Northern Plains. They are the Indus Basin, the Ganga Basin and the Brahmaputra Basin.

- a. The Indus Basin is mainly located in the states of Jammu and Kashmir, Himachal Pradesh and Punjab. This basin is drained by the river Indus and its tributaries. Indus originates beyond the Himalayas and drains into the Arabian Sea. Its tributaries are the Jhelum, Chenab, Ravi, Beas and Satluj. The bulk part of this basin lies in Pakistan.
- b. The Ganga Basin form 1/4 of the total area of India. Many large streams contribute their waters to Ganga and Yamuna which join at Allahabad. The Ganga basin is very fertile, hence a variety of crops are cultivated here. The river water is utilised for navigation by boats. Water is also used for agriculture through a dense network of canals. Many old trading towns and big cities are located on the banks of rivers in the Ganga Basin. For instance, Kolkata is located on the banks of river Hooghly which is a distributary of Ganga. As the land in the Ganga Basin is flat, there is an excellent network of roads and railways in the Northern Plains. Agro-based and many other industries also flourish in the Ganga basin. For all these reasons, this river basin is densely populated.

- c. The Brahmaputra Basin is drained by the river Brahmaputra and its tributaries. The Brahmaputra originates in Lake Mansarovar in Tibet and flows through three countries China, India and Bangladesh. In India it drains the states of Arunachal Pradesh and Assam. This river is known as Tsanpgo in China. In Bangladesh it is joined by the Ganga (known here as Padma) and flows through Bangladesh as Meghna or Jamuna. Tista is an important tributary of Brahmaputra. As it rains heavily in this area, the river carries a very large volume of water. Due to the presence of a lot of fertile silt in the river valley, the area is very good for growing rice and jute.

The Ganga-Brahmaputra basin lies in India for the most part. The Ganga-Brahmaputra Delta is known as the 'Sundarbans'. This is the world's largest and fastest growing delta.

The fine and deep alluvium deposited by the rivers in the great northern plains make these plain one of the most Fertile Plains in the world.

- c. **The Coastal Plains :** The Deccan Plateau is bounded by a narrow coastal plain in the west along the Arabian sea and in the east along the Bay of Bengal. The western coastal plain extends from Gujarat to Kerala. The northern part of the this plain is called Konkan while its southern part is called Malabar. In the Malabar region along the Kerala coast, there are many lagoons, often called the backwaters.

The eastern coastal plains lies east of the Eastern Ghats along the Bay of Bengal. This is a Broad Plain. The rivers like Mahanadi, Godavari, Krishna and Kaveri pass through these plains and form deltas along the Bay of Bengal coast. The southern part of this plain is called Coromandel Coast.

- d. The Deccan Plateau South of the Vindhya and Satpura ranges lies the Deccan Plateau. The Narmada, running through a narrow valley between these two ranges, and the Tapi (Tapti), running through a valley south of the Satpuras, flow westward through rocky areas before entering the Arabian Sea.

The Deccan Plateau is bounded by hills on the west and east. The western hills are collectively called the Western Ghats or the Sahyadris. The hills which are part of the Western Ghats include the Satmala, Nilgiri, Anaimalai and Cardamom hills. The eastern hills are collectively called the Eastern Ghats.

There are many east-flowing rivers in the Deccan Plateau. The longest of these rivers is the Godavari. Known as the Ganga of the South, it makes a large delta before flowing into Bay of Bengal. The Mahanadi, Krishna and Kaveri are the other major rivers which flow into the Bay of Bengal.

- e. **Distribution of Rainfall :** The distribution of rainfall in India is highly uneven. The amount of rainfall varies not only from season to season, but also from place to place. Most of it comes within four months (June to

September) from the southwest monsoons. There are a few areas like the Western Coast and North-East India which receive heavy rainfall. Here the annual amount of rainfall is over 300 cm. West-North Rajasthan, parts of Punjab, Haryana and Gujarat, interior parts of the Deccan Plateau and the area around Leh receive a low amount of rainfall. Here the annual rainfall is less than 50 cm. All other parts of India receive a moderate amount of rainfall. The North-West Himalayan region receives some snowfall during winter.

Section-III

Ans. Do yourself



India-Natural Vegetation and Wildlife

Section-I

1. **Tick (3) the correct answer :**

Ans. a. ii. b. i. c. iii. d. iii.

2. **Oral Questions :**

- Ans.
- Mangrove forests are found along the coast and in deltas. These forests are covered by mangrove trees.
 - Monsoon forests are called deciduous forests because these forests are covered by deciduous trees.
 - Project Tiger is a project to save tigers.

3. **Fill in the blanks :**

- Ans.
- Thorny forests receive rainfall less than **5 cm**.
 - Gifts of nature are known as **natural resources**.
 - In a **zoo**, we can watch the different animals and birds very closely.
 - Tidal forests are found along the **coasts** and in **deltas**.
 - Wildlife is also called **fauna**.

4. **State whether the following statements are True or False :**

Ans. a. True b. False c. True d. False e. False.

5. **Answer in one sentence :**

- Ans.
- Monsoon forests.
 - More than 500 species.
 - National Park is a reserved area for preserving natural vegetation, natural beauty and wildlife.
 - Monsoon forests.
 - Peepal, neem, shisham teak, sal and sandal wood.

6. Match the following :

- Ans.**
- | | | |
|-------------------------------|---|----------------------------|
| a. Forest Research Institute | — | i. Mangrove forests |
| b. Tidal forests | — | ii. Dehradun and Coimbtore |
| c. Gir Forests | — | iii. Migratory birds |
| d. Pelican and Siberian Crane | — | iv. Gujarat |

Section-II

1. Define the following :

- Ans.**
- a. Natural Resource :** Nature has gifted our country with many valuable resources, such as natural vegetation, wildlife, soils, minerals and water. These gifts of nature are known as natural resources.
 - b. National Parks :** A national park is reserved area for preserving natural vegetation, natural beauty and wildlife.
 - c. Zoo :** A zoo is a place where wild animals and birds from different parts of the world are kept and brought up.
 - d. Migratory bird :** Many birds like flamingos, storks and pelicans fly a very long distance from cold countries to reach India during mid-November and stay till the summer begins here in March. They are known as migratory birds.

2. Give reasons for the following :

- Ans.**
- a. Himalayan vegetation has varied belts ranging from Tropical Deciduous to Alpine forests within a height of 4000 metres because the Himalayan forests are distributed according to the altitude. In the mountains the temperature decreases with the increase in altitude.
 - b. The Indian Government has set up various projects for tigers and the one-horned rhinoceros because these animals are endangered species of wildlife in India.
 - c. Wild life reserves have been set up in different parts of India for conserving wildlife in India.

3. Answer the following questions in short :

- Ans.**
- a. **Natural Vegetation :** The climate conditions and the landforms play a major role in determining the vegetation of any particular area. This is the reason why the plains and the trees of mountain regions are so different from that of the plant cover of the plains. Natural vegetation is the plant cover which grows naturally without any care taken by human beings. As the plant cover of any area adapts to the climate of that area, we get large variety of forests in India according to the varied geographical conditions. There are more than 5,000 species of trees in India. However, the green cover of India is receding very fast due to deforestation and acquisition.
 - b. **The Thorny Forests :** The thorny forests are found in the western parts of Rajasthan, parts of Gujarat, Punjab, Haryana and the Deccan Plateau.

These areas are very dry with temperature and scanty rainfall often less than 5 cm per annum. The plants are thorny, very short shrubs. Trees have deep roots, thick barks and thorny leaves. Wood of these trees is normally used as fuel. Some important trees are acacia, babul, date palm, khair and cactus.

The Tidal Forests : These forests are found along the coasts and in deltas. These forests can survive in both fresh and salt water. They occur in the deltas of the Ganga, Mahanadi, Godavari and Krishna rivers and along the eastern coast. These forests are covered by mangrove trees. Mangrove trees occur mainly in deltas of tropical regions near river mouths. Sundari is one of the species of mangrove. The Ganga-Brahmaputra delta is known as Subdarbans.

- c. The government has put up certain controls on exports of forest products and made sandalwood oil a restricted item of export. Social forestry programmes like 'Van Mahotsav' which involve planting thousands of trees along roads, railway, lines and hill slopes are increasing India's total forested areas.
- d. Forests are useful to us in many ways :
 - Trees inhale carbon dioxide and exhale oxygen, the much needed life-giving gas.
 - Trees hold the soil firmly together and prevent soil erosion.
 - Trees moderate the temperature of a place.
 - Trees enable percolation of water into the ground.
- e. Evergreen trees remain green throughout out the year wild deciduous trees shed their leaves at different times according to their definite leaf shedding period spread over six to eight weeks each year.

4. Answer the following questions :

- Ans.**
- a. **Tropical Rainforests :** Evergreen forests are found in region with rainfall above 300 cm. The climate is highly moist and humid. The temperature of equatorial type. They are commonly found in the western Ghats and hills of Assam. Important trees of evergreen forests are oak, chestnut, deodar, cedar, chir and pine etc. The trees are often very high (about 100 metres). They have hard wood and broad leaves, and remain green all the year around that is why they are also known as evergreen trees and the forests are known as Evergreen forests.
 - b. **Vegetation of the Himalayan Region :** The Himalayan forests are distributed according to the altitude. In the mountains the temperature decreases with the increase in altitude. The vegetation varies from tropical to alpine types. There are tropical deciduous forests at the foothills. Coniferous forests are found at the heights between 1,500 and 3,300 metres. Blue pines, cedars, silver firs and deodar are the common trees here. Thereafter at 3500 metres and above the alpine variety of

plants such as shrubs, scrubs and grass are commonly found. Beyond the Alpine belt (height about 6,000 metres) is the area of permanent snow and no vegetation grows there.

- c. Wildlife refers to all those animals that have not been tamed or domesticated by humans. Wildlife is also called fauna. India has a rich and varied fauna. There are more than 89,000 species of animals and 1200 species of birds in our forests. Elephants are found in large numbers in the forests of Assam, Nilgiri and in southern hilly areas of Karnataka and Kerala. Camels have adjusted themselves to the hot and dry regions of Rajasthan and Gujarat. The one horned rhinoceros is found in the marshy lands of Assam and West Bengal. Lion is found in India and Africa only. Gir forest of Gujarat is its natural habitat, the home of lions. Tiger is our national animal. Sundarbans delta having the tidal forests is the Bengal tiger's natural habitat. Himalayas have a wide range of animals and birds. They include wild goats, snow leopards, bears, etc. India is equally rich in bird life. Peacock is a very common and beautiful bird of India. It is our national bird. Some species of animals and birds have nearly become extinct because people hunt them for their pleasure.
- d. **Wildlife Conversation :** In order to save wildlife our government has taken several steps. The government has set up 86 National Parks. In these parks wildlife, natural vegetation and natural beauty are preserved. Tigers are preserved in the Corbett Park. There is a park for rhinoceroses in Assam. There are also wildlife and bird sanctuaries where both rare birds and animals live and roam about without any fear of being hunted. There is a large bird sanctuary at Bharatpur. Many Zoological Parks have also been set up by the government in different parts of India to preserve wildlife.

Tigers and rhinoceroses are some endangered species of wildlife in India, so for them special projects have been prepared. Project Tiger has proved very successful. About 16 tiger reserves have been set up in different parts of India where special care is being taken for the all round protection and betterment of tigers. Likewise, Project Rhino is also being implemented at Kaziranga Wildlife Sanctuary of Assam.

Besides the government, it is our duty also to preserve the wildlife. We should avoid reckless hunting of wild animals and birds. Indiscriminate felling of trees and clearing of forests should be checked. We must protect our wildlife which is our national wealth. We must refuse to buy products made from animal body parts—fur, bones, skin, teeth, etc.

Section-III

Ans. Do yourself.



Section-I

1. Tick (3) the correct answer :

Ans. a. ii. b. iv. c. ii.

2. Oral Questions :

- Ans. a. Thousands of coins have been found. They are made of gold, silver, copper and nickel. The coins bear many figures and marks. They also bear names and portraits of the rulers who issued them. Samudragupta's coins show the emperor playing the Veena, a musical instrument. His warrior character is also shown by the coins which picture the battle axe and the tiger. The coins have become the most important source of the history of ancient India.
- b. The French scholar Jean-Francois Champollion deciphered the Hieroglyphic script, by successfully reading the inscription of the Rosetta Stone. It was a piece of rock that had been inscribed with tiny writings. When scholars examined it, they found that it contained the same passage in three ancient scripts. Ancient Egyptian Greek, a simple Egyptian script and Ancient. Since scholars could read the Greek and Egyptian writings, they were finally able to decode the Hieroglyphics.

3. Fill in the blanks :

- Ans. a. **History** refers to the period about which written documents are available.
- b. Man appeared on the Earth round **2.5 million** years ago.
- c. BC denotes the years before the birth of **Jesus Christ**.
- d. Archaeological sources are usually found during **excavations**.
- e. The Harappan script is a kind of **pictographic** writing.
- f. The period for which we do not have written records is known as **prehistory**.

4. Match the following :

- | | | |
|----------------------|-------|--------------------------|
| Ans. a. Archaeology | _____ | i. Pictographic script |
| b. Meghaduta | _____ | ii. A musical instrument |
| c. Organic evolution | _____ | iii. Digging |
| d. Veena | _____ | iv. Kalidasa |
| e. Sumerians | _____ | v. Origin of man |

5. Answer in one sentence :

- Ans. a. It was around 2.5 million years ago that man appeared on the Earth.
- b. BC and AD are that terms which are used to express dates in history.

- c. Passes are the ways or routes in hilly areas or mountains. The passes in these mountains acted as routes of contact through which ideas, traditions and culture were exchanged.
- d. Some land documents were recorded on copper plates and referred to as tamrapatras.

6. Who/What am I?

- Ans.**
- a. Inscriptions
 - b. Manuscripts
 - c. Megasthenes
 - d. Archeologist
 - e. Prashastis

Section-II

1. Answer the following questions in short :

- Ans.**
- a. In simple words; we can say that history is the life story of man from the earliest period to the present day. To understand the present, we need to study and understand the past.
However, it is virtually impossible to get written records of all the past events. There was a period in the past when man had no knowledge of reading and writing. So, we do not have written records of that period. This period is known as prehistory.
 - b. We should read history to know our past. History provides us information about our past.
 - c. The literary sources provide us valuable information regarding the reconstruction of ancient Indian history. They are in the form of handwritten documents known as manuscripts. The word 'manuscript' is derived from the Latin word 'manu' which means 'hand'. Thus, manuscripts are ancient books written by hand either on dried palm leaves or the thick bark of the birch tree or on paper.
 - d. Several literary sources from the ancient period are written in scripts that are no longer used and are therefore, unknown or 'decoded' to understand what they say. For example, the Harappans used a pictographic script which historians have not yet been able to decipher. Another difficulty is that the Harappan script is Boustrophedon in which one line is written left to right and the next, right to left.
 - e. Inscriptions are the words inscribed on stone, metal, etc. Thousands of inscriptions on rocks, pillars and metal-plates have been discovered in India. The earliest of inscriptions are found on the seals of Harappa. Ashoka's rock inscriptions throw light on Ashoka's religious beliefs and his administration. The Allahabad Pillar Inscription presents a description of the character and conquests of Samudragupta.
 - f. The experts which deals and study the archeological sources are known as archaeologists.

2. Answer the following questions in detail :

Ans. a. Sources of History : In history, the evidences are called source material. They may be divided into two categories—literary and archaeological.

Literary Sources : The literary sources provide us valuable information regarding the reconstruction of ancient Indian history. They are in the form of handwritten documents known as manuscripts. The word 'manuscript' is derived from the Latin word 'manu' which means 'hand'. Thus, manuscripts are ancient books written by hand either on dried palm leaves or the thick bark of the birch tree or on paper. They throw ample light on almost all the subjects such as, religious beliefs and practices, the lives of kings, medicines and sciences etc.

With the passage of time, more durable materials began to be used for important documents or instructions from the kings. Scribes carved the writings onto stone surfaces using chisels and hammers. These were called inscriptions. They usually get details of battles won (Prashastis), or instructions from the ruler to the common people (Rajyadesh). Some land documents were recorded on copper plates and referred to as tamrapatras.

Literary sources can be classified into indigenous and foreign works. Indigenous literature includes works of Indian writers. On the other hand, foreign literary works were those written by visitors from abroad. These include works such as the Indika by the Greek author Megasthenes, the writings of Fa Hien and other travellers who visited India during different periods.

Literary sources can be further divided into secular (non-religious) and sacred (religious). The Arthashastra by Kautilya and Meghadoota and Kumarasambhavam by Kalidasa are the examples of secular literature, while the Vedas are considered sacred.

Several literary sources from the ancient period are written in scripts that are no longer used and are therefore, unknown or 'decoded' to understand what they say. For example, the Harappans used a pictographic script which historians have not yet been able to decipher. Another difficulty is that the Harappan script is Boustrophedon in which one line is written left to right and the next, right to left.

Archaeological Sources : We can know the history and civilization of ancient people by examining the remains of their buildings, their tools and some other objects. The study of these objects is called Archaeology. Excavations have brought to light many interesting objects.

1. Monuments : Ruins of the buildings, caves, stupas and temples are of great historical importance. Stupas at Barhut and Sanchi and the caves at Ellora and Ajanta tell us a lot about the religion and art of ancient India.

The temples at Mahabalipuram and at Thajnavur were not only places of worship. They were centres of social and culture life also.

2. Inscriptions : Inscriptions the words inscribed on stone, metal etc. Thousands of inscriptions on rocks, pillars and meal-plates have been discovered in India. The earliest of inscriptions are found on the seals of Harappa. Ashoka's rock inscriptions throw light on Ashoka's religious beliefs and his administration. The Allahabad Pillar Inscription presents a description of the character and conquests of Samudragupta. The inscriptions at Udaygiri provide information about the conquests of king Kharvela of Kalinga (Odisha).

3. Coins : Thousands of coins have been found. They are made of gold, silver, copper and nickel. The coins bear many figures and marks. They also bear names and portraits of the rulers who issued them. Samudragupta's coins show the emperor playing the Veena, a musical instrument. His warrior character is also shown by the coins which picture the battle axe and the tiger. The coins have become the most important source of the history of ancient India.

4. Other Archaeological Sources : Other archaeological sources include cave paintings, bones of persons and animals and the stone and metal tools. Paintings on the walls of the caves tell us about the artistic skills of the early man.

- b. Several literary sources from the ancient period are written in scripts that are no longer used and are therefore, unknown or 'decoded' to understand what they say. For example, the Harappans used a pictographic script which historians have not yet been able to decipher. Another difficulty is that the Harappan script is Boustrophedon in which one line is written left to right and the next, right to left.
- c. Literary and archaeological sources both provide information required to write history. Historians study the information to reconstruct the events of the past, using clues provided by the various sources. History is thus the sequence of events ascertained in the light of their study by the historians. To accurately interpret history, historians must consider all sources available and must not impose their own thoughts or ideas on the information they provide. They should use both types of sources to confirm their interpretation and ensure an impartial treatment.

Section-III

Ans. Do yourself.

2

Early Humans-Hunters and Gatherers

Section-I

1. Tick (3) the correct answer :

Ans. a. i. b. iii. c. i.

2. Oral Questions :

- Ans. a. Paleolithic men were nomads. The people of this age were wanderers, moving from place to place in search of shelter, animals and food. Hunting and gathering was their way of life. This type of life was called nomadic life.
- b. The early humans started collecting nuts, fruits, roots or plants for subsistence.

3. Fill in the blanks :

- Ans. a. The early humans were basically **hunters and gatherers**.
- b. The Mesolithic Age is also known as **Microlithic Age**.
- c. **Neolithic** Man used harder stones for tools.

4. State whether the following sentences as True or False :

Ans. a. False b. False c. True d. False.

5. Match the following :

- Ans. a. Neolithic man — i. Food gatherer
- b. Chalcolithic Age — ii. Middle stone age
- c. Palaeolithic Age — iii. Discovery of copper
- d. Mesolithic Age — iv. Food-producer

Section-II

1. Answer the following questions in short :

- Ans. a. During Mesolithic age, the technique of tool-making too underwent a significant change. Since a wider use of microliths (tiny or small stones) was made during this age, it is also known as Microlithic age. The microliths were struck on the handles of bone or wood to make tools like spears, saws, sickles and arrows.
- b. The period of human history from around 500,000 BC to 4,000 BC, when humans used mainly stone tools, is known as the Stone Age.
- c. The divisions of the stone age and their duration are as follows :
- (i) The old stone age, or the Palaeolithic Age (5,00,000 BC-10,000 BC).
 - (ii) Mesolithic Age (10,000 BC-8,000 BC).
 - (iii) Meolithic Age (8,000 BC-5,000 BC).
 - (iv) Chalcolithic Age (5,000 BC-3,000 BC).

- d. The tools of Paleolithic Age can be classified into these categories :

Hand tools : These were pear-shaped tools used for cutting or smashing things. They usually had sharp edges on all sides.

Core tools : These were made by chipping and shaping large stones. They had sharp edges and were used to cut trees and dig the Earth. Example of these tools include hand-axes and hammers.

Flint tools : These were made from smaller stone pieces, sometimes those that chipped off larger stones while making core tools. They were sharpened and used as choppers and knives, and were used to chop meat and cut through animal skin. Examples include cleavers and scrapers.

2. Answer the following questions in detail :

Ans. a. Skills and Knowledge of Palaeolithic Man

1. Early man, who was a hunter and gatherer, started living in caves.
 2. To ensure protection from extreme weather he covered himself with coarse animal skin and large leaves.
 3. He started moving from one place to another (nomadic life) and also started collecting nuts, fruits, roots or plants.
 4. The Early man used to move in groups to scare away wild animals.
 5. Though Early men moved in large groups they were still afraid of lightning and thunder.
 6. The primary weapon was stone axe often used in hunting. Flake tools were used for cutting animal skin to be used as clothes or for cutting plants.
 7. They also practised painting. Painted rocks and caves in Bhimbetka, Madhya Pradesh shows hunters-gatherers chasing animals and birds. This clearly proved the existence of Paleolithic period.
- b. The word Mesolithic comes from the Greek word 'meso' meaning middle. The age extends from 10,000 BC to 8,000 BC.

The period intervening as a transitional phase between the Palaeolithic Age and the Neolithic Age is, known as the Mesolithic Age. It extends from about 12,000 years ago to about 10,000 years ago. This phase witnessed a number of environmental changes. The temperature rose gradually and the climate became warm and dry. The people moved closer to water sources like rivers and lakes. The technique of tool-making too underwent a significant change. Since a wider use of microliths (tiny or small stones) was made during this age, it is also known as Microlithic Age. Perhaps, the microliths were struck on the handles of bone or wood to make tools like spears, saws, sickles and arrows. Thus, man could now hunt swift-moving prey with bows and arrows. It should be kept in mind that the older varieties of tools also remained in use.

- c. The Hunsgi and Baichbal Valleys in Karnataka. Stone Age tools dating to around 1 million years ago have been found here. Hunsgi appears to have been a place where early humans manufactured tools.

The availability of a perennial water sources in the form of springs, the availability of raw material in the form of limestone for tool-making, the protected nature of the valley, and the availability of a wide variety of plant and animal food ensured continuous human occupation of this valley from the earliest times.

Section-III

Ans. Do yourself.



The First Farmers and Herders

Section-I

1. **Tick (3) the correct answer :**

Ans. a. iv. b. iv. c. ii. d. i.

2. **Oral Questions :**

Ans. a. Wheat and barley were the first crops grown by the Neolithic farmers.
b. Domestication is a process in which people grow plants and look after animals.

3. **Fill in the blanks :**

Ans. a. The period from **8000 to 4000 BC** is known as the Neolithic Age.
b. The process in which people grow plants and look after the animals is known as **domestication**.
c. The most important invention of the Neolithic Age was the **wheel**.
d. The first metal to be discovered by the man was **copper**.

4. **State whether the following statements are True or False :**

Ans. a. False b. True c. False d. True.

5. **Match the following :**

Ans. a. Stone tools — i. First metal used
b. Burial at Mehgarh — ii. Mother Earth
c. Provider of food — iii. Goat
d. Copper — iv. Sickle blades, grinding stones

Section-II

1. **Answer the following questions in short :**

Ans. a. Useful plants were domesticated by the man. People selected those plants that yield large size grain and had strong stock capable of bearing the

weight of the ripe grain. Some of the earliest plants to be domesticated were wheat and barley.

- b. The dog, the goat and the sheep were the earliest domesticated animals. Very soon the Neolithic man started domesticating cow, bull, donkey, hen, pig, etc. The animals were used for carrying heavy things and ploughing fields etc.
- c. Sickles and reaping knives and grinding stones were used by humans in the Neolithic Age.

2. Answer the following questions in detail :

- Ans.**
- a. Around 8000 BC, the ice which had covered large parts of the Earth during the Paleolithic and Mesolithic Ages started to melt. The warmer climate encouraged the spread of plants and animals to previously cold regions. People learnt to grow crops of grains, and vegetables. This resulted in the development of agriculture. People also started taming more and more animals as they realised how useful they were.
During the Neolithic Age, man started using polished stone tools, cultivated plants, domesticated animals and settled in villages. As a learn suggesting a stage of cultural development. Neolithic Age varies with geographic location. In south-west Asia, Neolithic cultures appeared soon after 10,000 BC.
 - b. As early humans moved away from the dense forests, and settled near the water bodies, they required shelters which would provide them comfort and security, so they started building huts. They realized that many people living in close proximity would be advantageous for them in every way. For this, they formed small settlement which gradually took the shape of a proper village. Traces of early villagers have been discovered in Indian in the Malabar region.
People used crude methods to build their huts. In order to demarcate the area of their own hut, they used mud walls or prickly bushes. Mostly, each hut had one room and the roof was thatched. The huts were used to close constructed each other for security reasons. The fields to be cultivated lay outside the fenced area.
Settlements of this kind, later on developed into villages. Thereafter, the need for a leader in the village was felt. The oldest man, often became the leader or headman. At other times, the tallest and the strongest man became the leader.
 - c. Man during the Neolithic and Chalcolithic Ages was scared of natural phenomena, such as lightning, thunderstorms and forest fires. He did not understand how they occurred and had no control over them. So, he worshipped the forces of nature like the Sun, rain, thunder and fire. The Earth was revered as mother (Mother Earth) as it provided food. The cow and bull were considered holy.

- d. Mehgarh is one of the earliest villages that we know about. It is located in a fertile plain, near the Bolan Pass, one of the most important routes into Iran. Earliest evidences of agricultural life have been found here. It was perhaps one of the places where people for the first time learnt to grow barley and wheat and domesticate sheep and goat.

Archaeologists have found a number of evidences during excavation. Finds of cattle bones and the earliest food grains suggest that they were domesticated locally. Various kinds of animal bones including the bones of wild animals like deer and pig, have been found from the earliest levels. Bones of sheep and goat have been found in later levels. Cattle bones are most common in still later levels. It suggests that cattle were generally domesticated by the people.

Section-III

Ans. Do yourself.



Section-I

1. **Tick (3) the correct answer :**

Ans. a. iii. b. iv. c. i.

2. **Oral Questions :**

Ans. a. Harappan civilisation is the other name of the Indus Valley Civilisation.
b. Wheat, barley, peas, rice, sesame, linseed etc. were the main crops cultivated by the Harappan people.

3. **Fill in the blanks :**

Ans. a. By the end of the **Neolithic** period, man started getting familiar with metals.
b. The rise of cities in the **Neolithic** age marked the beginning of **urbanisation**.
c. **Faience** is not a naturally found material.
d. Dholavira is locally known as **Kotada**.

4. **State whether the following statements are True or False :**

Ans. a. True b. False c. False d. True.

5. **Match the following :**

Ans. a. Gold ————— i. Afghanistan
b. Copper ————— ii. Lothal
c. Dockyard ————— iii. Karnataka
d. Tin ————— iv. Rajasthan

6. Read the following paragraph and answer the following questions :

Ans. Do yourself.

Section-II

1. Answer the following questions in short :

- Ans.**
- a. In India, cities first developed in Harappa and its surroundings in the valley of the river Indus. Hence, it is called the Harappan civilisation or Indus Valley civilisation. It developed around 4700 years ago.
 - b. More than 2000 seals have been discovered from the various sites. The seals, rectangular in shape were made of terracotta soapstone. The most interesting seal is that of Pashupati. A person appearing like Lord Shiva is seated in a yogic posture. The deity is surrounded by animals. Some seals bear the figures of animals like the buffalo, bull, tiger and elephant.
 - i. The seals throw light on religious beliefs of the people.
 - ii. From the figures on the seals we come to know the features, dress and ornaments of the people.

The seals were probably used to stamp the bags which contained goods being sent from one place to another.
 - c. Faience is not a naturally found material. It is produced artificially. Sand or powdered quartz was shaped into an object with the help of gum. The object was then glazed usually in blue or sea-green colours. Its resulted in a shiny and glassy surface. Generally, beads, bangles, earrings and tiny vessels were made of faience.
 - d. The Harappans were gifted with high talent regarding crafts and industries. Most of the things excavated from the Harappan sites are made of stone, shell and metal, including copper, bronze, gold and silver.

2. Answer the following questions in detail :

- Ans.**
- a. The cities of the Harappan civilisation were very well-planned. The cities were built according to a well laid out scientific plan. There was an excellent uniformity in the planning and construction of the cities. Most of the cities were divided into two parts a high citadel in the west and a lower town in the east.
 - b. The Harappan people had an excellent and well-planned drainage system. The bathrooms had slopping floors and house drains were connected to the main drain. The main drains which ran along the sides of the streets were covered with bricks. There were manholes at regular intervals which were cleaned regularly. The drainage system exhibits the high architectural skills of the Harappan people as well as the importance they attached to hygiene and sanitation.
 - c. Historians are not sure about the exact cause for its decline, they consider several possibilities. But it is sure that the civilisation did not meet a sudden end. It declined gradually. Around 3900 years ago, people stopped living in many of the cities. Writings, seals and weights were no

longer in use. Raw materials brought from far-off places became rare. The archaeological remains discovered from Mohenjodaro reveal that garbage piled up on the streets, the drainage system broke down, and new less impressive houses came to be built even over the streets.

Thus, the factors responsible for the decline of the Harappan civilisation can be studied as under :

The area was heavily flooded frequently. It was ravaged by earthquakes as well. Thus, the cities may have been destroyed by floods and earthquakes.

The civilisation got its prosperity from trade. With a decline in trade, the cities also declined.

According to some scholars, the civilisation came to an end because its rulers lost their control. Sites in Sindh and west Punjab (now Pakistan) were abandoned whereas many people settled down into newer, smaller settlements to the east and the south. New cities came into emergence about 1400 years later.

Some scholars believe that barbarian invasions caused the downfall of the civilisation. The cities may have been attacked and the inhabitants could not defend themselves.

Thus, a number of factors caused the decline of the Harappan civilisation.

Section-III

Ans. Do yourself.



Different Ways of Living

Section-I

1. **Tick (3) the correct answer :**

Ans. a. i. b. iii. c. i. d. ii. e. iii.

2. **Oral Questions :**

Ans. a. Vedas are the main source of information of Indo-Aryans.

b. Two assemblies, the sabha and the samiti, advised the king on important matters such as wars. The sabha comprised some selected people of the village while the samiti comprised all the villagers. Here the people met to discuss matters of war and peace. They played a vital role in choosing the leaders. Usually, brave and skilful warriors were chosen as leaders (kings), and sabha and samiti assisted the king.

3. **State whether the following statements are True or False :**

Ans. a. False b. True c. True d. True e. True.

4. Match the following :

- Ans. a. Chariots — i. Stone boulder
b. Megalith — ii. Early Vedic Period
c. Inamgaon — iii. Superior
d. Aryan — iv. Used in battles
e. The Rig Veda — v. River Ghod

5. Complete the following sentences :

- Ans. a. The Upanishads deal with the Indian philosophy and evolved the theories of **Karma**.
b. Megaliths are found in **South India**.
c. The Chalcolithic period at Inamgaon is divided into **three periods**.
d. The word 'Veda' means knowledge and **wisdom**.
e. Inamgaon is a site on the river **Ghod**.
f. Slaves were treated as the **property**.
g. The Rigveda contains 1028 hymns in the praise of **Gods and Goddesses**.

Section-II

1. Answer the following questions in short :

- Ans. a. Some historians are of the opinion that the Aryans who possibly spoke Sanskrit, came from Central Asia (mainly the Kirghiz steppes of Russia) and the Eurasian region. They entered India through the north-western side. The other group, the Indo-Europeans, originated from the same region and migrated to Europe. Their mother language was the same; hence, we notice many similarities between Latin, German, Persian, Sanskrit and other languages. Another group of historians believe that the Aryans may have been the descendants of the Harappans.
- b. The Vedas are the main source of information about the political, social, economic, religious and cultural life of the people of the Vedic Age. The four Vedas Rig Veda, Sama Veda, Yajur Veda and Atharva Veda form the core of Vedic literature. The word Veda comes from 'vid', meaning knowledge. The source of the compositions is believed to be divine and eternal. The Vedas were first verbal compositions, handed down from one generation to another through recitation, hearing the Guru and memorizing. They were finally recorded in books.
- c. Rigveda describes two groups in terms of their work—the priests or brahmins, who performed various rituals, and the rajans. The rajans were not monarchs. They had no capital, palaces or armies, nor did they collect taxes. Further, sons, did not inherit their father's kingdom.
- d. Apart from the vedas, the Brahmanas, the Aranyakas, the Upanishads and the Puranas are other literary sources of the period. The Brahmanas are commentaries on the Vedic hymns in the simple prose. The Aranyakas were meant for the hermits who lived in forests.

- e. The word 'Megalith' literally means a big stone. The stone boulders were carefully arranged by people and were used to work burial sites. Large stones were placed all around the graves. Hence, they were known as Megaliths.

2. Long Answer Questions :

- Ans.** a. The Rig Veda is the oldest of the Vedas and contains 1028 hymns in praise of the gods and goddesses. The Sama Veda contains hymns to be sung by a special class of priests in Soma sacrifice. The Yajur Veda contains hymns that are to be followed in an ordinary sacrifice. The Atharva Veda is a collection of songs, spells, magical charms of evil spirits, etc. These Vedas form the most important sources of information about the political, social, economic and religious life of the Aryans.
- Apart from the vedas, the Brahmanas, the Aranyakas, the Upanishads and the Puranas are other literary sources of the period.
- The Brahmanas are commentaries on the Vedic hymns in the simple prose. The Aranyakas were meant for the hermits who lived in forests. The Upanishads deal with the Indian philosophy and evolved theories of Karma, Maya and Mukti.
- b. The culture which originated in South India after the Stone Age, is known as Megalithic culture. According to historians, South India witnessed a sudden transformation from Stone Age to Iron Age without any Chalcolithic or Bronze Age between them. The two significant characteristics of Megalithic culture are as under :
- (i) its being closely related to the Iron Age.
(ii) use of black and red pottery.
- c. Archaeologists assume that objects discovered with a skeleton, probably belonged to the dead person. Sometimes, more objects are found in one grave than in another. In Brahmagiri, a skeleton was buried with 33 gold beads, 2 stone beads, 4 copper bangles and one conch shell whereas the other skeleton only had a pot. This shows the difference in status amongst the people who were buried. Some were rich, while others were poor.
- d. Inamgaon is the name of a Chalcolithic site in Maharashtra, near the river Ghod. The site was excavated in the 1960s and 1970s. Archaeologists have found much information about the early farmers who lived at this site from 1,600 BC to 700 BC.
- Archaeologists have divided the Chalcolithic period at Inamgaon into three periods : Period I : about 1,600 BC to 1,400 BC, Period II : 1,400 BC to 1,000 BC and Period III : 1,000 BC to 700 BC.
- 134 mud houses have been excavated at Inamgaon. Mostly belonging to the first two phases, these houses were usually rectangular and quite spacious. One of the biggest houses had as many as five rooms. They were sometimes divided by a partition. Inside the house, there were oval-shaped pits where people cooked their food. Some other structures built during that period include wall round the settlement, landing platforms for boat, and an embankment and channels built to use the water of the

Ghod river to irrigate the fields for cutting plants and animal hide. Copper was known to the people, but was not used much.

Eating habits : People grew crops such as wheat, barley, lentils, peas, gram and beans and domesticated cattle, sheep, goats, dogs, horses and pigs. People ate plant food, meat and dairy products. Their meals included more meat and fish and locally-gathered plants.

Artefacts : Artefacts found in Inamgaon are terracotta figurines, such as the animal figurines and beads, made of terraotta, semi-products stones, ivory and even seashells. All these indicate trade relations with other settlements. The most frequent animal figure is the bull, which might have been worshipped.

Burial : Objects were placed inside burials. In one such burial, archeologists have found a clay bull and a headless female figurine. Below these, there was clay box with a female figurine in it. The curious thing was that there was a hole in the stomach of the headless female and in the back of the bull figurine.

Decline : The Period III of Inamgaon show signs of decline. There was a decline in farming variety. People started relying more on hunting and collecting wild plants. They also started keeping more sheep and goats instead of cattle. There were changes in the kinds of houses they lived in. Instead of the large, rectangular houses, we find small, round huts. It seems, people were becoming poorer and their old way of life had come to an end.

Section-III

Ans. Do yourself.



Rise of Early States

Section-I

1. Tick (3) the correct answer :

Ans. a. i. b. i. c. iv. d. i. e. ii.

2. Oral Questions :

- Ans. a. Since the mahajanapadas were huge in size, the king maintained a large and strong standing army for the purpose of security. The soldiers received regular salaries in the form of coins called Krshapana.
- b. The Vedic texts, mainly the ones composed during the Later Vedic period, like the Sama Veda, Yajur Veda and Atharva Veda, Brahmanas and Upanishads are the main sources about this period. We also come to know about the life of the people from the Buddhist texts like the Jataka Tales.

3. Answer the one sentence :

- Ans.**
- A republic could also be a confederacy, that is, a number of tribes under a single government. For instance, the Vajjis functioned as a confederacy.
 - Vidha, Vaishali, Vajji, Mithila etc. are the republics which flourished during the Buddha's time.
 - The rajans fought among themselves for control over land, as whoever controlled the largest territory was considered the most powerful. The powerful states that emerged after defeating the smaller states or janapadas came to be known as mahajanapadas.
 - Punch marked coins were used in trade in the Mahajanapadas.

4. Fill in the blanks :

- Ans.**
- There were altogether **15** mahajanapadas.
 - The **Digha Nikaya** a famous Buddhist text gives an account of the Vajjis.
 - The verna system was **hereditary**.
 - Generally **two** crops were grown in a year.

5. State whether the following statements are true or false :

- Ans.** a. False b. True c. False d. False e. True.

Section-II

1. Answer the following questions in short :

- Ans.**
- Concept of State :** Group of people (jana or tribe) setting together in one territory was called Janapada. For instance, if Kuru tribe settled, their territory was known as Kuru Janapada. When this territory became big with large boundaries it came to be known as Kuru Mahajanapada. These states were formed to defend their crops, land, trade, settlements, etc., from rival tribes. The states were governed by rulers or rajans having their own army and capital.
 - According to the Buddhist texts Anguttarra Nikaya, and Digha Nikaya, by around 600, BC there were 15 mahajanapadas. Of these, Magadha emerged the most powerful of all. The other powerful states were Avanti, Vatsa and Kosala.
 - The Vedic texts, mainly the ones composed during the Later Vedic period, like the Sama Veda, Yajur Veda and Atharva Veda, Brahmanas and Upanishads are the main sources about this period. We also come to know about the life of the people from the Buddhist texts like the Jataka Tales. The Digha Nikaya, a famous Buddhist text gives an account of the Vajjis. They refer to the small kingdoms as the Janapadas and the larger and more powerful ones as the Mahajanapadas. The Jain texts also provide a lot of information.
 - Magadha, Kosala, Vatsa, Avanti are the examples of monarchies while republics are found in the foothills of the Himalayas, Punjab and north-west of India.
 - For the first time people started using coins as payment for trade, instead

of bartering goods. We have evidence of the use of punch-marked coins in trade—silver and copper coins were punched with symbols of hills or trees.

- f. Tax collectors collected taxes from the people. Taxes could be paid in money or in kind (i.e., goods). Land tax fetched the maximum revenue. A share (bhaga) of one-sixth of the agricultural produce had to be given as tax. Craftsmen and merchants also had to pay regular taxes. Sometimes, taxes had to be paid in the form of unpaid labour.

The revenue collected was spent on paying salaries to the people in administration, on public works like construction of roads and canals, and on maintaining the standing army.

2. Answer the following questions in detail :

- Ans.** a. The Mahajanapadas were of two types—monarchies and republics of ganasanghas.

Monarchies : These kingdoms were ruled by the hereditary kings or monarchs. The king was very powerful and maintained a large army. He collected taxes from different sources. The example of this form of mahajanapadas are Magadha, Kosala, Vatsa, Avanti.

Republics : A kingdom of this type was ruled by a clan headed by a king who was elected by the common people. Buddha belonged to such a ganasangha ruled by the Shakya clan.

A republic could also be a confederacy, that is, a number of tribes under a single government. For instance, the Vajjis functioned as a confederacy.

The republics functioned in a democratic manner and they voted to make a decision. They were elected by the people, performed administrative duties. Though the ganasanghas worked in a democratic manner, women and karmakaras or labourers were not allowed to attend the assemblies. It was headed by the Raja or Senapati.

Such ganasanghas were found in the foothills of the Himalayas, Punjab and north-west India.

- b. The republic of Vajji (or Vajji), with its capital at Vaishali, was also located in modern-day Bihar. It was a confederation of 8-9 clans, of which the Lichhavis were the most powerful.

The confederacy was ruled by a tribal republic. It consisted of several sanghas. Each had one head or raja.

The main sanghas were Lichhavis, Mallas, etc. Eminent people were chosen from each of these as representatives (gana mukhyas) to the Vajji gana parishad (people's council of Vajji).

The chairman of the council was called Ganapramukh (head of the democracy), but often he was addressed as the king, though his post was not hereditary. The other executives were mahabalandhikrit (minister of internal security), binishchayamatya (chief justice), dandadhikrit (other justices), etc.

Another important sangha was Videha. Its capital was Mithila. It was an important trade centre.

The capital of Vajji was the prosperous city of Vaishali. The founder of Jainism, Lord Mahavira, was born here. The Buddha visited Vaishali to preach.

- c. Magadha had two very powerful rulers, Bimbisara and Ajatashatru. They tried to conquer other Janapadas. Mahapadma Nanda, a powerful ruler, extended his control up to the north-west part of the subcontinent. Rajagriha (present day Rajgir) in Bihar was the capital of Magadha for several years. Later, the capital was shifted to Pataliputra.

Magadha emerged as the most powerful mahajanapada in this period. This was due to many factors :

It was located in the Gangetic basin, where the soil was very fertile and yielded large harvests. Land revenue was high and it provided a substantial income for the kingdom which enabled the rulers to maintain a large army.

Timber and elephants, provided by the eastern forest to Magadha were used for constructing buildings and elephants also used in the army.

Magadha had large deposits of iron-ore, which was used to make agricultural implements and weapons.

Natural barriers like hills and rivers protected the capital from any attack.

- d. Trade increased and spread. It became a very important activity. Sources tell us how merchant carried textiles, pots and many other types of crafts to the markets for trade. Sometimes the traders crossed rivers in the search for new markets. For the first time people started using coins as payment for trade, instead of bartering goods. We have evidence of the use of punch-marked coins in trade-silver and copper coins were punched with symbols of hills or trees. Taxila (in Pakistan), Champa and Bharukaccha (Bharuch in Gujarat) emerged as important trading centres.

Section-III

Ans. Do yourself.



Rise of New Ideas

Section-I

1. Tick (3) the correct answer :

Ans. a. ii. b. ii. c. iv.

2. Oral Questions :

Ans. a. Gautam Buddha was the founder of Buddhism. His real name was Siddhartha. He was a kashatriya prince of the Shakya clan. Buddha was born in the sixth century BC at Lumbini.

- b. Both Buddhism and Jainism became popular among the masses because they were very easy to practise and they did not attach any importance to the caste system.

3. Fill in the blanks :

- Ans.** a. **Brihadaranyaka** is the biggest of all Upanishads.
 b. Buddha was born in **sixth century BC**.
 c. Buddha's main teachings are contained in the **Tripitakas** and the **Jataka Tales**.
 d. Mahavira was associated with **Jainism**.
 e. The Jains believe that there were **23** Tirthankaras before Mahavira.
 f. **Swetambara** and **Digambara** were the two sects of Jainism.

4. State whether the following statements are True or False :

- Ans.** a. True b. True c. False d. True e. False.

5. Match the columns :

- Ans.** a. He believed that a balanced life helps in attaining 'moksha' i. Tripitakas
 b. The Buddhist sacred texts are collectively known as ii. Ahimsa
 c. Buddha preached in iii. Buddha
 d. Avoiding violence of any kind iv. Upnishads
 e. These literally means, 'sitting down near' v. Pali

Section-II

1. Answer the following questions in short :

- Ans.** a. The Upanishads are part of the Hindu scriptures which discuss philosophy and meditation and gives interpretation on the Vedas. The term 'Upanishad' is derived from Upa-(near), ni (down) and shad (to sit), i.e., the "sitting down near" a spiritual teacher (Guru) in order to receive instruction in religion and philosophy. This was known as the Guru-Shishya parampara or tradition.
 b. Buddhas' teachings were based on ahimsa or non-violence and love and compassion for all living beings. It was a moral code of conduct prescribed for the ordinary person. Buddhism did not follow the strict rules of Jainism or the superstitions and rituals of Hinduism. Thus, it came to be known as the Middle Path. Buddha's teachings comprised the four noble truths and the eightfold path or ashatangika marga.
 c. One night, at the age of 29, Siddhartha took his horse Kantahaka and rode out of the palace. When he came out of the city, he took of all his jewellery and fine garments and put on ordinary clothes. He wandered as an ascetic for about 6 years. He first learnt the technique of meditation and the teachings of the Upanishads. But these did not lead to supreme knowledge (enlightenment). Ultimately, at the age of 35, he attained

enlightenment under a peepal tree at Bodh Gaya in Bihar. Since then he came to be known as the Buddha (the enlightened one) and Tathagat (one who has attained the truth). The tree under which he attained knowledge became the tree of wisdom or the bodhivrisksa.

- d. Jainism became popular from Odisha in the east to Gujarat in the west and also in the south, as far as Mysore. However, in later times, it became confined to mainly two regions Gujarat and Rajasthan, where the followers of the Svetambara sect lived; and Karnataka and Andhra Pradesh, where the followers of the Digambara sect were concentrated.
- e. Both Buddhism and Jainism became popular among the traders, craftsmen and peasants because both the religions were very easy to practise. The Vedic religion with its emphasis on sacrifices and rituals had become expensive and difficult to follow. Buddhism and Jainism gave importance to languages like Prakrit and Pali, unlike Sanskrit, which was not understood by the common people. These were the languages commonly used by the people and therefore they could easily understand the teachings of Buddha and Mahavira. Another reason for the popularity of these new religions was that they did not attach any importance to the caste system. The lower castes of the society found the idea of social equality preached by these religions very appealing.

2. Answer the following questions in orally :

- Ans.** a. The Four Noble Truths were the first teachings of Buddha which contain the essence of his philosophy. They are as follows :
- The world is full of suffering and mystery.
 - Suffering is caused by material desire.
 - Suffering ends when desire ends.
 - Desire can be overcome by following the eight fold path, which ultimately leads to nirvana (freedom from the cycle of birth and death).
 - The Eightfold path is represented by the Dharma-chakra and acts as a code of conduct for man. It is also called the Ashtangika Marga.

The codes are :

- Right belief
 - Right speech
 - Right means of livelihood
 - Right knowledge
 - Right thought
 - Right action
 - Right effort
 - Right meditation
- b. Traditionally there are said to be 108 Upanishads. Of these eleven are considered to be the principal Upanishads. Most of them were written between eighth and fourth century B.C. Their language is generally classical Sanskrit, although the oldest of them is said to have been written in Vedic Sanskrit. The main among the eleven Upanishads are : Brihadaranyaka Upanishad (it is the biggest of all Upanishads), Chhandogya Upanishad (it teaches truth through the medium of many

interesting stories), and Taittiriya Upanishad (more than any other Upanishad, this one is widely studied). The Upanishads explain the relationship between Jeeva (individual soul) and Brahma (Supreme Soul or God).

The early Upanishads are believed to have been written prior to the rise of Buddhism and Jainism. The older Upanishads are usually affixed to a particular Veda, through a Brahmana or Aranyaka. The more recent ones are not.

The Upanishads contain many divergent ideas joined together loosely. They set forth the prime Vedic doctrines such as self-realization, the ideal human conduct, meditation, karma, reincarnation of the soul and the nature of true knowledge. In the Upanishads the spiritual meaning of the Vedic texts is brought out and emphasized. The central theme of the Upanishads, however, is upasana (worship) and bhakti (devotion). Most Upanishads highlight the path to take in order to immerse the self with the Supreme Reality.

- c. Mahavira's teachings were simple. He believed that a person's position in life depends on Karma (actions) of the previous life. He believed that anyone even a low-born person could attain moksha. He preached ahimsa and forbade his followers to cause harm or injury to any living being. Mahavira called upon his disciples to lead good and pure lives. He instructed his followers not to lie, steal or kill. Mahavira encouraged his followers to lead austere lives. Jain man who gave up wordly life were not even allowed to wear clothes. Later on, some Jains took to wearing while robes. Like the Buddha, Mahavira did not discuss God. He rejected all rituals.

Section-III

Ans. Do yourself.



The First Empire-The Mauryas

Section-I

1. **Tick (3) the correct answer :**

Ans. a. iii. b. iv. c. iii.

2. **Oral Questions :**

- Ans. a. Literary source such as Arthashastra written by Chanakya, deals with politics, economy and military governance of Mauryas.
b. Kalinga war (261 BC) changed Ashoka's life.

3. Answer in one sentence :

- Ans.**
- a. Literary sources such as the Indika and the Arthashastra and the various rock and pillar edicts of Ashoka give us a detailed account of the Mauryan administration.
 - b. Megasthenes, a Greek ambassador, stayed at Chandragupta's court at Pataliputra for several years. His book Indika is a valuable source of information about life in the India during Mauryan times.
 - c. The Macedonian king, Alexander the Great, was one of the world's greatest conquerors. His empire stretched from Macedonia in Greece to the borders of the river Beas in Punjab. Alexander wanted to conquer India, tempted by the stories he had heard of India's wealth. His attempt at crossing the river Beas in 326 BC failed, with his battle-weary Greek soldiers refusing to move further. Alexander's invasion had an important impact on India.
 - d. Chandragupta Maurya ruled over Magadha between 325-297 BC.
 - e. Brihadratha was the last Mauryan ruler.
 - f. Succession of kings of the same family is called dynasty.

4. Fill in the blanks :

- Ans.**
- a. **Magadha** was the strongest of all the mahajanapadas.
 - b. Indika was written by **Megasthenes**.
 - c. Amitraghata means immortal story.
 - d. The sufferings caused by **Kalinga War** changed the life of Ashoka.
 - e. King Bindusara ruled for about **25** years.
 - f. Special officers called **dharmamahatras** were appointed to spread Buddhism.
 - g. The Chief of the guild was called **Jesthaka**.
 - h. Ashoka died in **232 BC**.

5. Match the following :

- Ans.**
- | | | |
|---------------|---|-------------------|
| a. Army | — | i. Kalinga war |
| b. Stupa | — | ii. Subordinates |
| c. Adhyakshas | — | iii. Superintends |
| d. Yuktas | — | iv. Cavalry |
| e. Ashoka | — | v. Sanchi |

Section-II

1. Answer the following questions in short :

- Ans.**
- a. By the end of Chandragupta's rule, the kingdom of Magadha had become an empire. The Mauryan Empire now stretched from the Hindu Kush in the west to Bengal in the east, and from the Himalayas in the north to the Narmada in Central India.
 - b. The life history of Chandragupta, his empire and other interesting information are found in the book Indika written by Megasthenes, the ambassador of Seleucus to the court of Chandragupta.

Another source is Arthashastra, by Chanakya which deals with politics, economy and military governance of Mauryas.

- c. Kalinga, a great maritime power, was under the control of Magadha during Nanda rule but gained independence with the beginning of Maurya rule. Control over Kalinga implied the control of trade with the south-east Asian countries. So, Ashoka attacked Kalinga in 261 BC.
- d. The Mauryas built many stupas, viharas and pillars. The Stupa was the most important element in the architecture. It was derived from the ancient funeral mounds made of the Earth and brick that preserved the remains of monks and other important persons.
- e. The main reason for the decline of the great Mauryan empire was the disorder which emerged after the death of Ashoka in 232 BCE.

2. Long Answer Questions :

- Ans.** a. Kalinga, a great maritime power, was under the control of Magadha during Nanda rule but gained independence with the beginning of Maurya rule. Control over Kalinga implied the control of trade with the south-east Asian countries. So, Ashoka attacked Kalinga in 261 BC. Though he won the war, the resultant devastation and killing changed his life completely. He decided to give up violence and spread the message of love. His policy of digvijaya or the conquest of land changed to dhammavijaya or conquest through dharma.

Deeply influenced by the teachings of Gautama Buddha which laid emphasis on peace and non-violence, Ashoka became a Buddhist. He made it his state religion and devoted his life to the welfare of his people and to never wage a war again. It is said that, previously he was called Chandashoka, for his foul temper and cruel nature, but later he came to be known as Dhammashoka.

Ashoka's Dhamma : Dhamma is the Prakrit form of the Sanskrit word 'Dhamma', which means religious duty. Ashoka gave up the policy of conquest through war and replaced it with a policy of conquest through Dharma (Dhamma-Vijaya). This became Ashoka's goal for the rest of his life. The moral principles included are : non violence, charity, mercy, truth, tolerance, and purity.

- b. **Source Materials :** The life history of Chandragupta, his empire and other interesting information are found in the book Indika written by Megasthenes, the ambassador of Seleucus to the court of Chandragupta.

Another source is Arthashastra, by Chanakya which deals with politics, economy and military governance of Mauryas.

Buddhist edicts written on pillars and rocks by Ashoka found in various parts of India (Gujarat-Junagadh rock inscription, Karnataka-Maski, Chittaldurga etc.) provide a fair account of the Mauryan times.

Jain literary sources written by different scholars also mention the kingdoms and their life in that period.

Several coins and objects retrieved from sites also reveal about this period.

- c. The Mauryan Empire had an efficient administrative system. It functioned at four levels :

1. Central, 2. Provincial, 3. District, 4. Village

Central Administration : The king was the supreme authority. He took all the important decisions. He was assisted by a council of ministers. (Mantri Parishad). The Prime Minister, Purohita and Senapati were some of the important central ministers. The various branches of administration such as revenue, military etc., were under officers called Amatyas.

Provincial Administration : The empire was divided into provinces. Each province was placed under a member of the royal family, and was ruled from its own capital. Taxila, Dhauri Ujjain, for instance, were provincial capitals. Although the centre had some control over the provinces, local rules and customs were also probably followed. The provinces were further divided into districts and villages.

District Administration : Each province was divided into a number of districts. The pradeshta was the head of each district, and was assisted by junior officials, such as yuktas and rajkutas. Their functions included the survey and assessment of land, collection of revenue and maintenance of law and order.

Village Administration : Each district consisted of many villages. Villagers assisted the government officials in marking the boundaries of the village, maintaining land records and collecting taxes.

- d. The main reason for the decline of the great Mauryan empire was the disorder which emerged after the death of Ashoka in 232 BCE.

His successors were weak and could not handle the affairs of the state efficiently. The huge expenditure incurred on maintenance of the army became a burden on the royal industry. The invasions in the north-western border of India added to the unrest.

In 185 BC, the last Mauryan ruler, Brihadratha was assassinated by his commander-in-chief, Pushyamitra Sunga who later, laid the foundation of the Sunga dynasty.

Ashoka was one of the greatest emperors in the annals of history. He spend his life working for the welfare of his subjects. He was the first king to promote non-violence and tolerance.

Section-III

Ans. Do yourself.

Section-I

1. Tick (3) the correct answer :

Ans. a. i. b. ii. c. ii. d. ii.

2. Fill in the blanks :

Ans. a. The first urbanisation in India began during the **Harappan** period.
b. Trading entre resembled chamber of commerce.
c. The use of **new tools** enhanced agricultural production.
d. **Gramabhojaka** was the largest landowner of the village.

3. Answer the one sentence :

Ans. a. Second urbanisation starting from the 6th century BC.
b. The grazers were called 'Gopalakas'.
c. In South India, there were three categories of cultivators. The landowners were called vellalar, ordinary farmers uzhar and landless labourers adimai or kadasiyar. These terms have been mentioned in the Sangam Literature.

Section-II

1. Answer the following questions in short :

Ans. a. Urbanisation is the process by which people move from villages to towns; and larger rural settlements gradually grow into towns and then cities.
b. Bharuch, Sopara and Tamralipti were towns that developed primarily as trading centres. Trade was flourishing. Imports were gold, silver coins copper, tin, coral; white cotton silk, ivory and perfume were exported. There was trade link between North and South India and also with the Roman Empire.
c. Coins also help us greatly in finding out about early cities. The archeologists have discovered several thousand of coins belonging to the period under consideration. The earliest coins discovered from a number of sites, are known as punch-marked coins. They have been accorded this name because of the designs which were punched on to the metalsilver or copper. Generally, the legends or writings on the coins state the name or title of king who issued the coins. These coins remained in use for about 500 years.
d. Mathura has been a renowned settlement for more than 2500 years. It was the crossroads of major routes of travel and trade-from the north-west to the east and from north to south. Farmers and herders living in nearby

areas provided food for people of Mathura. Mathura also provided some extremely fine sculptures. About 2000 years ago, Mathura was the second capital of the Kushanas. Mathura was even a religious centre. It even had Buddhist monasteries, Jain shrines, and was a significant centre for the worship of Krishna. Several inscriptions on the surfaces of stone slabs and statues are found in Mathura.

- e. The imports into Barygaza were wine, copper, tin, lead, coral, topaz, cloth, gold and silver coins. White cotton, silk, ivory, perfume were exported.

2. Answer the following questions in detail :

- Ans.**
- a. Archaeological evidences for crafts have been found. It includes extremely fine pottery called the Northern Black Polished Ware. The name is traced to the northern part of the subcontinent. It is normally black in colour and has a fine sheen. However archaeological evidences for many crafts have not even survived. It is known from texts that the manufacture of cloth was important. Centres like Varanasi in the north, and Madurai in the south existed. Both men and women were employed in these centres. Most craftspersons and merchants formed associations called as shrenis. These shrenis of craftsperson gave training, procured raw materials and distributed the finished products. Further, shrenis of merchants organised the trade. Shrenis also served as banks where rich men and women deposited money.
 - b. The expansion of agriculture and trade, and the establishment of states, led once more to the growth of towns and cities. This phase, starting from the 6th century BC, is called the second urbanisation.
By 400 BC, several towns and cities had developed in the North, like Pataliputra, Mathura, Kasi, Kosala and Ujjain.
By 200 BC, several thriving urban centres had developed in the South too. In South India, the towns that developed include Thanjavur, Arikamedu, Madurai, Puhar and Mamallapuram.
Major Reasons for Second Urbanisation : Two areas that saw tremendous growth during this period were agriculture and trade. Both internal and overseas trade flourished, boosted by the use of money. There was a proliferation of arts and crafts as craftsmen organised themselves into guilds. All this resulted in the growth of towns. One major factor common to these developments was the use of iron.
 - c. The invention of new tools and implements, led to the expansion of land under cultivation leading to agricultural intensification. New varieties of corn and fruits began to be cultivated. Each family occupied a fixed portion of land in the village. All the members of that house, cultivated together as a group. People normally did the work themselves. Sometimes, the work was done by employing labourers and slaves. They paid the land rent from 1/6th to 1/12th of the total produce. The

management and control of the village was in the hands of the headman of the village called Gramabhojaka. He was also responsible for the collection of the land rent, as well as administrative affairs. A village Samiti (council) was there for his help. Pasturelands or grazing grounds of the village cattle also existed. The grazers were called 'Gopalakas'.

- d. Arikamedu in Pondicherry was a port town. Most of the imports and exports must have taken place from here. A brick structure has been found at the site, which may have been a warehouse or a granary.

Different types of pottery have been found, such as amphorae, tall double-handled jars to keep liquids. Red glazed pottery made by wet clay known as Arretine was (named after an Italian City) was also found. Another local pottery with Roman designs have also been found. Besides Roman gems, lamps and glassware have also been found. This indicates the Pandyan had trade links with Rome, in particular.

Section-III

Ans. Do yourself.



Contacts with Distant Lands

(Between 200 BC and AD 300)

Section-I

1. **Tick (3) the correct answer :**

Ans. a. i. b. iv. c. ii. d. iii. e. iv.

2. **Oral Questions :**

Ans. a. One of the most famous Indo-Greek ruler was Milinda or Menander. According to traditions, Milinda embraced Buddhism. The discussions of Milinda and the Buddhist sage Nagasena are recorded in the classical Pali Buddhist text, named, Milinda Panha (Questions of Milinda).

- b. This period was also characterised with the growth of Bhakti. The worship of certain deities like Shiva, Vishnu and goddesses like Durga came into prevalence which became a central feature of later Hinduism.

Shiva has a fierce side to his character. But he is also the patron deity of ascetics. Goddesses such as Parvati, Mahadevi and Gauri were worshipped.

Unlike the Gods of the Vedic Age, these new Gods were not tied to natural phenomena. Anyone irrespective of caste, creed or sex could worship them through Bhakti. It was believed that through Bhakti an individual could aspire for liberation from rebirth.

Most people preferred to worship this form of religion as it had a wider appeal. Keeping fasts and vows, travelling to places of pilgrimage and

worshipping a deity with a pure heart were the essentials of this form of Bhakti. Hymns and prayers in praise of God became common.

3. Fill in the blanks :

- Ans.** a. **Sunga** and **Kanva** were the two post mauryan dynasties of Northern India.
b. The teachings of **Gautam Buddha** had become had become very popular.
c. The **Chola** kingdom was also called Cholamandala.
d. Nedunjelium was a great Pandya king.
e. **Kanishka** was one of the greatest Kushana ruler.

4. Whether the following are True or False :

- Ans.** a. True b. False c. True d. False e. True.

5. Match the following :

- Ans.** a. Menander ————— i. was a great Saka ruler.
b. Rudradaman ————— ii. converted to Buddhism.
c. Karikela ————— iii. founder of Satavahana dynasty.
d. Simuka ————— iv. was a disciple of Kumarajiva.
e. Fa-Hein ————— v. earliest Chola ruler.

6. Answer in one sentence :

- Ans.** a. Fa-Hein. b. Gautamiputra Satakarni.
c. Hiuen Tsang. d. King Kharvela.
e. Kanishka.

Section-II

1. Answer the following questions in short :

- Ans.** a. The famous Silk Route was controlled by the Kushanas. During their rule, one branch of the Silk Route extended right up to the mouth of the River Indus from Central Asia. From here, silk was sent to Rome through ships.
- b. The Satavahanas ruled a powerful empire which withstood attacks from central Asia. One of their important rulers was Gautamiputra Satakarni. The Nasik Cave Inscription made by his mother Gautami Balasri informs us about his rule.
The capital of the Satavahanas was Prathisthanapura in Maharashtra. The rulers engaged in the trade with the Roman empire. In the Deccan, the Satavahanas rose to power under Simuka during the post-Mauryan period and established a huge kingdom including Amaravati (Andhra Pradesh), Junna (Pune) and Paithan (Maharashtra).
- c. He issued numerous gold coins, which can be found even as far as Mathura and Banaras.
- d. Fa-Hein travelling via Central Asia and Kashmir came to India during the reign of Chandragupta II popularly known as Chandragupta

Vikaramaditya. He left his country China in 399 A.D. reached India in 405 A.D. and stayed here for about 6 years, i.e., from 405 to 411 A.D. During his 6 years's stay in India, he spent 3 years at Pataliputra, the capital of the Gupta empire. From Pataliputra, he went to Tamralipti, a port city in Bengal. He returned home by sea route in 414 A.D. visiting Ceylon, Java and Sumatra. He has given a vivid description of his travel of India, in his text 'Fo-Ko-Ki'.

e. Fa-Hein authored the book 'Fo-Ko-Ki'.

2. Answer the following questions in detail :

Ans. a. The Cholas : The Chola kingdom was situated between the Pennar and the Velur rivers and was popularly known as Cholamandalam. Its chief centre of political power was Uraiyyur, a place famous for its cotton trade. In the 2nd century BC, a Chola ruler named Elara, conquered Sri Lanka and ruled there for about 50 years. Another important Chola ruler Karikala is said to have constructed 160 km of embankment, above the Kaveri river in about 100 AD, with the help of 12,000 slaves brought from Sri Lanka. He founded the new capital of the Cholas at Puhar, which is identical with Kaveripattanam. It was a great centre of trade and commerce. The Cholas maintained a very strong the Malaya Archipelago. Under Karikala's successors; the Chola power declined very rapidly and we know nothing of the Cholas from fourth to ninth century AD.

The Cheras : The Cheras, also known as Keralaputra, ruled over an area comprising north Travancore, Cochin and South Malabar. Udiyanjeral was the first important Chera ruler. Their capital was Vajji. The most famous Chera king was Nedunjeral Adan. The Cheras encouraged trade with Rome and Egypt.

b. In 185 BC, Pushyamitra Sunga founded the Sunga dynasty after defeating the last Mauryan ruler Brihadratha. The Sunga rulers fought the Bactrian invasions from the North-West for about 112 years and were succeeded by Kanva dynasty.

The Kanva dynasty ruled from 72 BC to 27 BC over only the region around Magadha. Many small kingdoms had declared independence during this time. One such kingdom which became prominent around 1 BC, was Kalinga, during the reign of king Kharavela, who gained the title of Chakravarti.

c. Kanishka was deeply influenced by Buddhism. During his reign, the fourth Buddhist council was held at Kashmir. This was presided over by a famous scholar Vasumitra. Other scholars who attended this council were Ashvaghosa (who wrote Buddhacharita), Nagarjuna, Taranath and Charaka.

Buddhism, by this time, had split into many sects. In the fourth Buddhist Council, Buddhism was formally divided into Mahayana and Hinayana.

Mahayana literally means 'greater vehicle'. It became prominent during the reign of Kanishka who ruled large parts of the Indian subcontinent in the late secondary century AD.

The worship of Bodhisattvas also became popular in Central Asia, China, Korea and Japan. They were people who had attained enlightenment. But they had chosen to remain among the people to work for their welfare.

In Hinayana Buddhism, the Hinayana Buddhists did not believe in idol worship, or in the worship of the Bodhisattvas.

Kanishka built many stupas and viharas. He built a monastery at Peshawar.

- d. India had trading and cultural relations with other countries since ancient times. The archaeological remains reveal that India had trading relations with contemporary countries right from the middle of about third millennium B.C. For example, the Northern Black Polished Ware particularly bowls and plates have been found from several archaeological sites throughout the subcontinent. Similarly, the Harappan remains found from various cities of Mesopotamia and the Mesopotamian remains from different sites of the Harappan civilisation reveal that there were sufficient trading exchanges between the two civilisations.

Craftsmen initially settled in areas near to the availability of raw materials. Trading developed as the craftsmen moved away from the source of their raw materials. Traders bought the required materials from villages where they were found, and took them to sell to the craftsmen in the towns. Example :

Iron came from mines throughout the country.

Copper was mined in Rajasthan, the Deccan and the foothills of the Himalayas.

South India provided spices, especially pepper, gold, precious stones, pearls, sandalwood and ebony.

The traders also bought finished goods of the artisans. Transportation of raw materials promoted trade.

Traders, kings and pilgrims contributed greatly in establishing contacts with distant lands. Thus, India since ancient times, had contacts with Rome, Egypt, East Africa, Greece, Iran, Arabia, Tibet, China, West Asian countries and the kingdoms of South-east Asia.

Section-III

Ans. Do yourself.

Section-I

1. Tick (3) the correct answer :

Ans. a. ii. b. i. c. iii. d. iii. e. ii.

2. Oral Questions :

- Ans. a. The word prashasti is a Sanskrit word which literally means 'praise'. It is a eulogya literary style of writing praises, Ashvaghosa's Buddhacharitatha famous biography of the Buddha, is also an example of a prashasti.
- b. In the middle of the 5th century AD, the Central Asian tribe Huns invaders from the North-West.
The successors of Skandagupta could not defend their kingdom as each repeated invasion of the Huns made them weaker. By AD 525, the mighty Gupta Empire had fragmented.
- c. Fa-Hien has highly praised the Gupta administration which was mild and liberal. The Gupta Age, is known as the Golden Age, because it had a well-organised administration. There was flourishing trade, religious tolerance, achievements in literature, science, etc.

3. Answer in one sentence :

- Ans. a. The foundation of the Gupta Empire was laid by Srigupta in 240 CE.
- b. Prayag Prashasti.
- c. We find information about him from two literary works. One is Harschacharita, a biography of Harsha, written by his court poet, Banabhatta. The other, is the account of a Chinese-Buddhist traveller, Hiuen Tsang, who was an honoured guest of Harsha. Both Banabhatta and Hiuen Tsang highly praised Harsha.
- d. Harsha ruled for 41 years.
- e. The most famous ruler of the Chalukya dynasty was Pulakeshin II (AD 609-642).

4. Fill in the blanks :

- Ans. a. Sri Gupta I was succeeded by his son **Ghatotkacha**.
- b. **Chandragupta I** was the first Gupta ruler to be referred as 'Maharajadhiraja'.
- c. Samudra Gupta was a great patron of **art and literature**.
- d. Harsha moved his capital from **Thanesar** to **Kannauj**.
- e. The fifth Buddhist council was organised at **Kannauj** in **AD 641**.

5. State whether the following statements are True or False :

- Ans. a. False b. False c. True d. False e. True.

Section-II

1. Answer the following questions in short :

- Ans.** a. Allahabad pillar inscription also known as Prayag Prashasti gives us a clear account of Samudragupta's conquest and his life as recorded by his court poet Harisena.
- b. Navaratna or the nine gems adorned the court of Chandragupta II. The famous poet Kalidasa and the astronomer Varahamihira were two of the nine gems. The dramatist Vishakhadatta wrote a play Mudrarakshasa which describes how Chandragupta Maurya came to the throne. Panini's Ashatadhyayi was also composed in this period. Pandit Vishnu Sharma compiled the Panchatantra, a collection of fables.
- c. Hinduism was revived under the Guptas. The concept of ten avatars or incarnations of Vishnu evolved during this period. The cult of Bhakti or selfless devotion to God also became popular. The Gupta empire brought a period of political stability in the country with a strong government which also contributed to economic prosperity of the kingdom.
- d. Harsha was a great patron of art. He wrote three plays in Sanskrit- Ratnavali, Priyadarshika and Nagananda.
- e. The Pallavas and Chalukyas, were the most outstanding ruling dynasties in south India during this period. The kingdom of the Pallavas was located at Kanchipuram, while that of the Chalukyas had been centered around the Raichur Doab, between the rivers Krishna and Tungabhadra. Aihole, the capital of the Chalukyas, was a renowned centre of trade and commerce. It emerged as a religious centre, with a number of temples. The Pallavas and Chalukyas quite often attacked each other's lands, especially the capital cities which were prosperous towns.

2. Answer the following questions in detail :

- Ans.** a. The sources for Gupta period are varied. By the time of the Guptas, we have enough historical sources to get a clear idea of their working and set up. Both archaeological and literary sources inform us about the Gupta period. The rock-cut temples of Ajanta, brick temples in Kanpur, Devgarh and Jhansi provide us much information about the Guptas. Allahabad pillar inscription also known as Prayag Prashasti gives us a clear account of Samudragupta's conquest and his life as recorded by his court poet Harisena.
- Coins :** Coins issued by the Gupta rulers also tell us about the life in the Gupta period. Coins of gold and silver of the Gupta Age have also been unearthed. A coin also depicts Samudragupta playing the veena.

Literary : The accounts of Fa-Hein, a Buddhist scholar from China, has given a vivid description of the period. Abhijnana Shakuntalam, Raghuvansham and Meghdootam by the famous poet Kalidasa, were written during this age. They also provide information about the Gupta Age.

b. Harsha's administration was decentralized and it was similar to that of the Guptas. Local officers could take decisions. The empire was divided into provinces. The provinces were divided into districts the districts into villages. Farmers, merchants and craftsmen had to pay taxes. The priests were given donations of land grants. Officers were also given land instead of cash salaries.

c. **Reasons of Decline :** Later Gupta rulers were weak, inefficient and this could not keep kingdom under their control.

Due to this, the Governors of provinces revolted and broke away.

The Gupta empire became vast and hence it became quite difficult to control it, especially when there were weak rulers on the throne.

The attacks by the Hunas, a nomadic tribe from Central Asia, made the empire weak leading to its decline.

d. Harsha's administration was decentralized and it was similar to that of the Guptas. Local officers could take decisions. The empire was divided into provinces. The provinces were divided into districts the districts into villages. Farmers, merchants and craftsmen had to pay taxes. The priests were given donations of land grants. Officers were also given land instead of cash salaries.

e. These southern kingdoms had allowed vast powers to their local units or assemblies. These assemblies were of different nature and represented different people. The 'Sabha' was an assembly of Brahmin landowners who functioned through various sub-committees which looked after local temples, saw agricultural and irrigational operations and took part in making and repairing roads.

Where the Brahmins were not the land-owners, the 'Ur' acted as the village, assembly. It worked more or less like the 'Sabha', as mentioned above. The 'Nagaram' was an assembly of the merchants. Many of these assemblies continued to operate for centuries.

Section-III

Ans. Do yourself.

Section-I

1. Tick (3) the correct answer :

Ans. a. iii. b. ii. c. ii. d. iii.

2. Oral Questions :

Ans. a. The biographies, prashastis, autobiographies and accounts of travellers form a part of the secular literature. The Sangam texts of the south also belong to this category. Most famous of these were the Arathashastra of Kautliya, Harshacharita by Banabhatta, the dramas of Kalidasa such as Abhijnana Shakuntalam and the Meghadootam. The Arathashastra describes the political system and the art of governance. It gives information on the political, social and administration of the Mauryas.

b. Vedas, Upanishads and the Puranas are the three works of vedic literature.

3. Fill in the blanks :

Ans. a. The Vedas are written in **Vedic Sanskrit**.

b. **Tripitakas** and **Jatakas** are Buddhist texts.

c. The Jain and Buddhist texts are written in **Pali** and **Prakrit**.

d. Tamil poet Thiruvalluvar wrote a poem called **Tirukkural**.

e. Meghdootam is a well-known work of **Kalidasa**.

4. State whether the following statements are True or False :

Ans. a. False b. True c. False d. True e. True.

Section-II

1. Answer the following questions in short :

Ans. a. The Mahabharata is believed to be the work of Ved Vyasa. Main story is about the conflict between the Pandavas and the Kauravas, who were cousins. Duryodhana, the eldest of Kauravas, felt jealous of the Pandavas and planned to destroy them. He refused to give Pandavas their share of the kingdom. This resulted in a fierce battle fought at Kurukshetra. In the battle that lasted for eighteen days, all the Kaurava brothers were killed. Yudhistira, the eldest of the Pandavas became the king of Hastinapur.

b. Kalidasa lived during the time of the Guptas. He has written many dramas in Sanskrit. His famous work include the Meghadutam, Raghuvansha, Ritusamhara, Kumara-sambhava and the famous play Abhijana-shakuntalam.

c. In the field of architecture the Great Bath of Mohenjodaro, Buddhist temples at Gaya, the Stupas at Sanchi and Bharhut, the Gupta temples at

Deogarh and Kanpur, the Lingaraja Temple at Bhubaneswar, the Mahadeva Temple at Khajuraho, Vishnu Temple at Badami and the Shiva Temple at Tanjore deserve special mention.

- d. 1. The epics are our main source of information about political and social conditions of the Epic Age.
2. The epics are also praised for their literary value.
3. The epics reveal the high ideals of life.
4. The Bhagavat Gita forms part of the Mahabharata. It is in the form of a dialogue between Lord Krishna and Arjuna. It lays emphasis on doing one's duty fearlessly without a desire for results. It also stressed the immortality of the soul.
- e. The quality of Sangam literature reflected the high intellectual standard of the Tamil composers. The poems were written in the assemblies or Sangams of poets under the Pandya rulers. These works bring to light, many facts of ancient times. During the Sangam age, the eminent epics of Silappadikaram by Ilango, Manimekalai by Sattanar and Tirukkural, a Tamil classic of couplets by Thiruvalluvar, were composed and occupied an important place in Tamil literature.
- f. India also made remarkable progress in astronomy. Aryabhatta calculated the position of the planets, discovered the cause of the lunar and solar eclipses, correctly calculated the circumference of the Earth and wrote a book on astronomy which is called Aryabhatiya.

2. Answer the following questions in detail :

- Ans.** a. **The Vedic Literature :** The earliest known works of the Aryans were the four Vedas. Most of the hymns are in praise of different Gods and Goddesses. The Vedas are in old or Vedic Sanskrit. They give valuable information about the social and religious life of the Aryans. The Vedas were followed by the Brahmanas. These are prose texts that explain the meaning of the hymns. The Upanishads contain the essence of Hindu philosophy. They deal with questions like the origin of the individual soul and God. There are 108 Upanishads.
- The Puranas :** The word 'Purana' means old. There are 18 Puranas. They contain stories about Hindu Gods and Goddesses. They also deal with religious beliefs and rituals and the Hindus. They were written in simple Sanskrit. Therefore, they continued to be read with great interest by all sections of Hindu society : the priests, the households and the Shudras.
- The Epics :** The Ramayana and the Mahabharata are the two great Epics of India.
- The Ramayana :** The Ramayana is believed to be the work of the Sage Valmiki. The central theme is the story of Rama and Sita who were the incarnations of Lord Vishnu and Goddess Lakshmi respectively. It is a long story depicting the attainments and virtues of Rama, Sita and other ideal characters, such as Lakshmana, Bharata and Hanuman. Rama

fought against Ravana, the ruler of Lanka. He killed Ravana and other demons, who had abducted his wife Sita.

- b. The biographies, prashastis, autobiographies and accounts of travellers form a part of the secular literature. The Sangam texts of the south also belong to this category. Most famous of these were the Arathashastra of Kautliya, Harshacharita by Banabhatta, the dramas of Kalidasa such as Abhijnana Shakuntalam and the Meghadootam. The Arathashastra describes the political system and the art of governance. It gives information on the political, social and administration of the Mauryas. Similarly, the India written by Megasthenes tells us about the political, social and economic conditions during the reign of the Mauryans.

Kalidasa lived during the time of the Guptas. He has written many dramas in Sanskrit. His famous work include the Meghadutam, Raghuvansha, Ritusamhara, Kumara-sambhava and the famous play Abhijana-shakuntalam.

Harsacharita written by Banabhatta is another valuable literary piece of ancient India which contains a description of the early life of king Harsha. Kalhan's Rajatarangini is another famous historical work which describes the history of Kashmir till the twelfth century AD.

- c. Medical science was fairly advanced. The Atharva Veda mentions the different methods used to diagnose diseases. It also prescribed medicines. Sushruta, an Ayurvedic scholar was an expert in performing operations. He gave importance to diet and cleanliness. Charaka wrote the Charak Samhita, which tell us about different diseases and their cure.
- d. The artisans of the ancient period excellent in making sculptures. The stoneworkers of the Mauryan period mastered the art of polishing stone. A sculpture of rare beauty is the statue of a chauri bearer (female attendant) found at Deedarganj near Patna. It bears the famous Mauryan polish.

The Gandhara and Mathura schools of art, which excelled in sculpture, flourished during the Kushana period. The Gandhara school combined Greek art styles with the Indian style. The Mathura school produced images in purely Indian style. The Sarnath school, which specialised in making statues of the Buddha seated in meditation, flourished during the Gupta period.

Painting : In India, painting on rocks and cave walls began during the Stone Age. The art of painting murals (paintings, usually large ones, done on walls) was perfected under the patronage of the Guptas and Chalukyas. Many of the beautiful murals in the Ajanta caves, depicting scenes from the life of the Buddha, were painted during this time. The colours were made from minerals and plants, and still retain their glow.

Section-III

Ans. Do yourself.



Section-I

1. **Tick (3) the correct answer :**

Ans. a. i. b. iii. c. i. d. i.

2. **Oral Questions :**

Ans. a. Diversity is a curse or boon, it depends upon conditions and circumstances. In a positive aspect is a boon otherwise it is a curse.
b. Hinduism, Islam, Jainism, Sikhism, Buddhism and Christianity are the few religions practised in India.

3. **Fill in the blanks :**

Ans. a. Indian is a land of **diversity**.
b. **Geographical** and **climatic** conditions determine the economic activities of a region.
c. The source of most languages of North is **Sanskrit**.
d. The Muslims pray in a **Mosque**.
e. All religions encourage a life requiring **goodness, kindness** and **harmony**.

4. **State whether the following statements are True or False :**

Ans. a. True b. True c. True d. True e. False.

5. **Match the following :**

Ans. a. The Sikhs ————— i. Temples
b. The Hindus ————— ii. The Guru Granth Sahib
c. The Muslim ————— iii. Church
d. The Christians ————— iv. The Koran

6. **Answer in one sentence :**

Ans. a. 22 languages.
b. Sanskrit.
c. The smallest social group is the family. The family that consists of parents and children is called nuclear family.
d. Culture is a set of features of society or a social group. It includes, in addition to art and literature, lifestyles, ways of living together, value systems, traditions and beliefs. Respecting and safeguarding culture is a matter of Human Rights.

Section-II

1. Define the following :

- Ans.**
- a. **Diversity** : Our country India consists of people who are extremely diverse in many respects. There are differences in the physical features, social life, economic condition, religion, language, dress, food habits, etc.
 - b. **Unity in Diversity** : Unity in diversity has been India's greatest strength. It is a slogan celebrating cooperation and oneness between different groups of people, despite their differences and diverse cultural background. India's struggle against British rule was a great unifying factor, when the entire nation stood against the tyranny of British rule together. People from different religious, cultural and regional backgrounds came together with the common agenda of ousting the Britishers from India.

2. Answer the following questions in short :

- Ans.**
- a. People in India speak different languages. This is also called linguistic diversity. The most ancient language of the country was that of the Indus Valley people. But unfortunately, their script is yet to be deciphered. Sanskrit is known as the 'Mother' of all languages in India. Today, in India, we have 22 official languages and many more local dialects, spoken by people from different geographical regions.
 - b. People have the freedom to follow any religion. The main religions today are Hinduism, Islam, Buddhism, Sikhism, Jainism, Christianity and Zoroastrianism.
 - c. The Hindus pray in a temple. They perform puja. They offer sweets and flowers. The main Holy Book of the Hindus is the Bhagwad Gita. The Muslims pray in a mosque. Their Holy Book is the Quran. They offer namaaz (prayers) five times a day. The Muslim women pray at home. The Sikhs pray in a gurudwara. The Holy Book of the Sikhs is the Guru Granth Sahib. The Sikhs sing hymns called gurubani. The Christians pray in a church. They pray to Jesus Christ and Mother Mary. The Bible is the Holy Book of the Christians.
 - d. A classroom can easily be compared to our country. A classroom comprises students who have different academic capabilities, food habits, family backgrounds, belong to different religions and castes and speak different languages. But, the common factor is that they all belong to the same class. The overall excellence of the class depends upon the all-round development of all the students and individual academic excellence of each student. Each student tries to attain this goal in his or her own way. Similarly, in our country through we live in different regions, speak different languages, wear different clothes, eat different kinds of food, and so on, we are all Indian citizens and share a common

past. Let us now look at these diversities or differences which enrich our lives in many ways and make our country to unique and special.

3. Answer the following questions in detail :

- Ans.** a. Our country India consists of people who are extremely diverse in many respects. There are differences in the physical features, social life, economic condition, religion, language, dress, food habits, etc. The thread which ties all these diverse beads together is the fact that we are all Indians.

A classroom can easily be compared to our country. A classroom comprises students who have different academic capabilities, food habits, family backgrounds, belong to different religions and castes and speak different languages. But, the common factor is that they all belong to the same class. The overall excellence of the class depends upon the all-round development of all the students and individual academic excellence of each student. Each student tries to attain this goal in his or her own way. Similarly, in our country through we live in different regions, speak different languages, wear different clothes, eat different kinds of food, and so on, we are all Indian citizens and share a common past. Let us now look at these diversities or differences which enrich our lives in many ways and make our country to unique and special.

- b. Culture is a set of features of society or a social group. It includes, in addition to art and literature, lifestyles, ways of living together, value systems, traditions and beliefs. Respecting and safeguarding culture is a matter of Human Rights.

Cultural Diversity presupposes respect of fundamental freedoms freedom of thought, conscience and religion, freedom of opinion and expression, and freedom to participate in the cultural life of one's choice.

India's culture is ever-changing, always adapting to changes caused by internal factors or contact with external cultures and adopting new elements from other countries. Today, in the age of aeroplanes and e-mails, in an age when travelling for work or leisure has become more common, faster and easier, there is a steady exchange of cultural traditions. We carry our traditions to new places and also adapt to the ways of the life of that place.

- c. Unity in diversity has been India's greatest strength. It is a slogan celebrating cooperation and oneness between different groups of people, despite their differences and diverse cultural background. India's struggle against British rule was a great unifying factor, when the entire nation stood against the tyranny of British rule together. People from different religious, cultural and regional backgrounds came together with the common agenda of ousting the Britishers from India. The British could not 'divide and rule' Indian beyond a point and had to leave in the wake of fierce and sustained resistance to their rule from every section and region

of India. The song 'Mile sur mera tumhara, to sur bane hamara' promoted by Doordarshan and developed by Lok Seva Sanchar Parishad celebrates India's national integration 'unity in diversity'.

Section-III

Ans. Do yourself.



Diversity : Prejudice, Inequality and Discrimination

Section-I

1. Tick (3) the correct answer :

Ans. a. i. b. ii. c. iv.

2. Oral Questions :

Ans. a. A stereotype is defined as a fixed idea of image which we may form about a group of people or things and which are often not true.
b. Dalits were called untouchables.

3. Fill in the blanks :

Ans. a. **Prejudice** is defined as unreasonable dislike for others.
b. Inequality means difference in **treatment**.
c. **Caste system** is the major cause of inequality.
d. The term **Apartheid** stands for separation on the basis of race.

4. State whether the following statements are True or False :

Ans. a. False b. True c. True d. True e. False.

5. Answer in one sentence :

Ans. a. Harijan.
b. A stereotype is defined as a fixed idea of image which we may form about a group of people or things and which are often not true.
c. The term Apartheid stands for separation on the basis of race. It was a system of racial segregation that was prevalent in South Africa.
d. Nelson Mandela.

Section-II

1. Define the following :

Ans. a. **Dalits** : The lower caste people which were kept away from the upper class people, called dalits.
b. **Prejudice** : Prejudice is defined as an unreasonable dislike for a person, a group or a custom. It is based on preconceived judgments towards a person or a group of persons in society resulting from their class, caste, gender, religion or other personal characteristics.

- c. **Stereotype** : A stereotype is defined as a fixed idea of image which we may form about a group of people or things and which are often not true.
- d. **Preamble** : The preamble, or the introduction, to the Constitution has declared India a sovereign, socialist, secular, democratic republic, and guarantees social, economical and political justice to all.

2. Answer the following questions in short :

- Ans.**
- a. For instance, in many Indian families, girls are considered less intelligent than boys, and therefore they are expected performing household work instead of receiving higher education. This notion is a stereotype which gives rise to the prejudice that a girl will not find a good match if she is highly qualified and thus in turn leads to gender bias and discrimination against women.
 - b. We must not judge people on the basis of our preconceived ideas. Our aim should be to develop tolerance towards people who are different from in order to build our strength and bring harmony in society. Prejudice is closely connected to stereotype. According to the famous American journalist. Walter Lippmann, 'a stereotype is a picture in our heads, whether right or wrong, about an individual or group, without taking into consideration the differences that might naturally exist.' At times, people belonging to a different religion, caste gender or economic background are presumed to possess particular characteristics like being stingy, careless, orthodox, etc. : in effect, they are being stereotyped.
 - c. Certain groups of people may be discriminated against because they are poor or because they belong to a particular caste or follow a different religion. Caste system is the major cause of inequality. People of particular caste are treated inequally. Poverty is another major cause of both inequality and discrimination. Poor people are too often treated differently in offices, schools, hospitals, etc., than their more well-off counterparts. Inequality is sometimes caused by racial differences as well. Sometimes the cause of inequality can be the result of gender disparity.
 - d. Secularism means not discriminating the people on the basis of their religion.
 - e. The lower cast people kept away from any social or religious activity. It was called untouchability. Dalits are affected by it.

3. Answer the following questions in detail :

- Ans.**
- a. The caste system, a traditional and unique feature of Indian society, developed due to discrimination based on the diversity of occupation. Under this system, people doing different kinds of work were placed in different castes. An individual born into a particular caste had to take up the profession of that caste, even if he had the skill and ability to do some other work. He also had to follow the rules and customs of his caste. The

members of different castes were not allowed to mix with each other, eat together to marry each other.

Castes were hierarchical. This means that there were high and low castes. The castes placed higher in the system discriminated against the lower castes. The lower castes were called untouchables. They were not allowed to draw water from public wells or to enter temples, schools, etc. Thus, the caste system gave rise to social inequalities.

The caste system divides society. It threatens the unity of our country. After independence, the practice of untouchability has been declared illegal. However, the caste system still exists, although it has become less rigid.

b. Consider the following statements :

- Boys are physically stronger.
- Boys should study science subjects while girls should study arts and social sciences.
- Girls should be soft spoken and well behaved.
- Girls are good at embroidery, dance and painting.
- Fair people are more beautiful compared to dark complexioned people.
- City dwellers are lethargic and seek luxury while inhabitants of villages are rustic and backward.

The above mentioned statements are example of some common stereotypes which we come across in our daily lives.

c. Year 1976 marked the beginning of anti-apartheid revolt. Nelson Mandela started anti-apartheid struggle through his party 'African National Congress' (ANC). All top leaders of ANC's were arrested in 1963. Mandela and few others were sentenced to life imprisonment. In February 1990, elected President FW de Klerk announced the unbanning of the liberation movements and the release of political prisoners, notably Nelson Mandela. South Africa held its first democratic election in 1994 and Nelson Mandela became the first (Black) President of South Africa. South Africa celebrates 27th April of every year as Freedom Day (Independence Day). In 1993, FW de Klerk and Mandela were jointly awarded the Nobel Prize for their work for the peaceful termination of the apartheid regime, and for laying the foundations of a new democratic South Africa.

d. **1. Education :** Both formal and informal means of education should inculcate the feelings of harmony.

2. Laws : Laws should be made to reduce discrimination and inequalities and should be strictly adhered.

3. Inter-Caste Marriages : Inter-caste marriages should be encouraged.

4. Media : Media should encourage harmony among different

communities.

5. Religion should not breed hatred

Ans. Meaning of religion should be propagated in a broader sense which should breed harmony, tolerance and respect for all.

Section-II

Ans. Do yourself.



Section-I

1. Tick (3) the correct answer :

Ans. a. i. b. i. c. i. d. i.

2. Oral Questions :

Ans. a. Simply, the term government refers to the political system by which a group of people is administered. Every country requires a government to rules , enforce them and ensure welfare of the people.
b. Judiciary is that organ of of the government which safeguards the rights of the people.

3. Fill in the blanks :

Ans. a. The **executive** executes the laws laid down by the constitution.
b. In monarchy, a **king** is the head of government.
c. In parliamentary form of government the president is the real head of government.
d. In a **democracy** the government is run by the representatives of the people?

4. State whether the following statements are True or False :

Ans. a. True b. True c. True d. False e. False.

5. Answer in one sentence :

Ans. a. Legislature.
b. India, America and Japan.
c. 28 States and 7 Union territories.
d. Parliamentary form of government.

Section-II

1. Answer the following questions in short :

Ans. a. In a democracy, government is run by the representatives of the people. Citizens have the right to vote and thereby choose their representatives. They also have the right to contest the elections. Moreover, the government is answerable to the people for its actions. If it does not fulfil

the expectations of the people, it can be voted out of power the next time elections are held.

- b. Laws are made by the legislature which is the law-making organ of the government.

The executive performs the function of enforcing the laws made by the legislature while the judiciary safeguards the rights of the people. It is independent of the legislature and executive.

- c. A monarchy is a system of government dominated by a single individual. The monarch has all the powers. He may have a group of advisors or ministers to advise him.

In a monarchy people have no real say in the decision-making process. Some monarchs believed that they had been chosen by God and so people could not challenge their authority.

2. Answer the following questions in detail :

Ans. a. Functions of Government :

- The government builds roads, hospitals, educational institutions, parks, museums, toilets, etc. for the people and makes arrangements for supplying electricity, cooking gas, water, etc. to the people.
 - The government takes decisions on how to deal with problems like poverty, unemployment, discrimination, etc. and how to give good health services and education to the people.
 - The government runs important services such as train and bus services, postal services, and so on.
 - The government provides safety to the people and maintains law and order within the country.
 - The government maintains armed forces to defend the boundaries of the nation. It also maintains peaceful relations with other countries.
 - The government organises rescue work during floods, storms, earthquakes etc. It also provides aid in the form of health services, food and shelter to the affected people.
 - To carry out all its functions properly, the government makes laws which all the people have to obey.
- b. Our country India is divided into 28 states and 7 union territories. Each state is further subdivided into districts for the purpose of administration. The government in India operates at three levels :
- The central or union government is located at New Delhi. It takes decisions for the entire country, looks after security issues and maintains diplomatic relations with other countries of the world.
- The state government, the next level of government, looks after the needs of people residing in the state.
- The needs of citizens residing in villages, towns and cities are taken care of by the system of local self-government. It puts democracy in place at

responsible to the legislature.

4. The President is not necessarily from the party that wins a majority in the parliament.

Example : United States of America.

Unitary and Federal : Governments can also be classified as unitary or federal. In a federal form of government, power is divided between the Centre and States. This division of power lies with the Constitution. In India, the Constitution has given the Centre more powers than the states. This is why we say that India is federal with a unitary bias. A unitary form of government is one in which all power is centralized under one Central government.

Section-III

Ans. Do yourself.



Panchayati Raj System

Section-I

1. **Tick (3) the correct answer :**

Ans. a. iii. b. ii. c. ii. d. iii.

2. **Oral Questions :**

- Ans. a. The Gram Panchayat requires funds for undertaking measures to improve the life of villagers. It derives its income mainly from three sources. One part comes from taxes on houses, shops, fairs and purchase or sale of cattle and property. The state government provides funding to the Panchayat. Also, a small part of the funds comes from donations given by villagers for community development projects.
- b. For the community development projects and to improve the life of the people, the government sanction some grants.

3. **Answer in one sentence :**

- Ans. a. Members of Gram Sabha. b. Sarpanch.
c. Gram Sabha. d. Sarpanch.

4. **Fill in the blanks :**

- Ans. a. Panchayati Raj refers to the system of self governance in **rural** areas.
b. In the Gram Panchayat, seats are reserved for **SC** and **ST**.
c. The **Panchayat Secretary** is appointed by the District Magistrate.
d. The **Indian Constitution** allows each state to have their own laws for the **Panchayats**.
e. The Panchayati Raj is a **three** tier system.

5. **State whether the following statements are True or False :**

- Ans. a. True b. False c. False d. False.

6. Match the following :

- Ans.**
- | | | |
|---------------------------------|---|-------------------|
| a. An assembly of villagers | — | i. Sarpanch |
| b. Panchayat President | — | ii. Block Samiti |
| c. Level of Panchayat | — | iii. Gram Sabha |
| d. A Block Level Panchayat | — | iv. Zila Parishad |
| e. The District Level Panchayat | — | v. Three |

Section-II

1. Define the following :

- Ans.**
- a. **Panchayati Raj :** Panchayati Raj refers to the system of self-governance in rural areas or at the grass roots level. The administrative activities in the villages are conducted through this system. The local problems of villages pertaining to roads, canals, schools, land disputes, healthcare, sanitation, etc. can be most effectively resolved only by the local people.
- b. **Gram Sabha :** The Gram Sabha consists of all the men and women in the village who are 18 years of age and above. They meet at least twice a year. The Gram Sabha elects their representatives to the Gram Panchayat. The Gram Sabha has the power to view the work done by the Gram Panchayat and examine its accounts of expenditure. If it is not satisfied with the performance of any member of the panchayat, it can remove the member by means of a vote of no-confidence.
- c. **Panch :** The members of a Gram Sabha elect a small committee of members from among themselves to constitute the Gram Panchayat. The number of these members may differ from state to state. The Gram Panchayat is a responsible body which looks after the various problems of the villagers and takes steps to improve the condition of the village. It is necessary that the Gram Panchayat should have a member belonging to the scheduled caste and a woman member as well. If these are not elected, the Government itself appoints two such members. The members of Gram Panchayat are called Panch.

2. Answer the following questions in detail :

- Ans.**
- a. Panchayati Raj refers to the system of self-governance in rural areas or at the grass roots level. The administrative activities in the villages are conducted through this system. The local problems of villages pertaining to roads, canals, schools, land disputes, healthcare, sanitation, etc. can be most effectively resolved only by the local people. The vastness of our country makes it impractical for the central government or state governments to look into the local problems of rural areas. So, the local people constitute a governing body which caters to their specific needs.
- b. The members of a Gram Sabha elect a small committee of members from among themselves to constitute the Gram Panchayat. The number of these members may differ from state to state. The Gram Panchayat is a responsible body which looks after the various problems of the villagers

and takes steps to improve the condition of the village. It is necessary that the Gram Panchayat should have a member belonging to the scheduled caste and a woman member as well. If these are not elected, the Government itself appoints two such members. The members of Gram Panchayat are called Panch.

- c. The Gram Panchayat requires funds for undertaking measures to improve the life of villagers. It derives its income mainly from three sources. One part comes from taxes on houses, shops, fairs and purchase or sale of cattle and property. The state government provides funding to the Panchayat. Also, a small part of the funds comes from donations given by villagers for community development projects.
- d. The Gram Sabha consists of all the men and women in the village who are 18 years of age and above. They meet at least twice a year. The Gram Sabha elects their representatives to the Gram Panchayat. The Gram Sabha has the power to view the work done by the Gram Panchayat and examine its accounts of expenditure. If it is not satisfied with the performance of any member of the panchayat, it can remove the member by means of a vote of no-confidence.

3. Answer the following questions in detail :

- Ans.**
- a. The Gram Panchayat meets at regular intervals and looks after the implementation of the development programmes and other issues. Its main duty is to improve the condition of the village and villagers by providing basic amenities like roads, water, schools and electricity. Therefore, it has to handle construction and maintenance of roads, provide clean drinking water and water for irrigation. It also has to maintain records of births and deaths in the village. In addition to that, it has to look after the welfare of the people by providing reading rooms or libraries, organising fairs, maintaining water sources as wells, ponds, etc. The Panchayat also has to execute schemes started by the state governments for generating employment in the villages. The Gram Panchayat is answerable to the Gram Sabha because its members have been elected by the Gram Sabha.
 - b. The Panchayati Raj is a three-tier system. It works at three levels—the Gram Panchayat at the village level, the Block Samiti (Panchayat Samiti) at the Block level and the Zila Parishad or Zila Panchayat at the district level. A few panchayats are combined to form a Block Samiti. A Block Samiti is the organisation formed to take care of the needs of the whole block.

However, there are certain things the Block Samiti also cannot handle by itself. The organization at the apex of the Panchayati Raj System called the Zila Parishad helps the Block Samitis. It consists of the representatives of the Block Samitis of the district and other members who work at the district level.

The Indian Constitution allows each state to have their own laws for the Panchayats. The Panchayati Raj system upholds the democratic principle of our country which means that it is run as a government by the people, for the people and of the people even at the lowest levels.

- c. The Gram Sabha consists of all the men and women in the village who are 18 years of age and above. They meet at least twice a year. The Gram Sabha elects their representatives to the Gram Panchayat. The Gram Sabha has the power to view the work done by the Gram Panchayat and examine its accounts of expenditure. If it is not satisfied with the performance of any member of the panchayat, it can remove the member by means of a vote of no-confidence.

Section-III

Ans. Do yourself.



Rural Administration

Section-I

1. **Tick (3) the correct answer :**

Ans. a. i. b. iv. c. i. d. i.

2. **Oral Questions :**

- Ans. a. The patwari plays a significant role in the village, especially with respect to maintenance of the land records.
b. The Hindu Succession Amendment Act (HSAA), 2005 came into force from 9th September, 2005.

3. **Fill in the blanks :**

- Ans. a. The states in India is divided into **districts**.
b. The **update** report of the Patwari, gives information regarding the ownership.
c. The District Magistrate supervises the work of the **patwari**.
d. A **Hindu** law came into force from 9th September, 2005.

4. **State whether the following statements are True or False :**

Ans. a. True b. True c. True d. False.

5. **Answer in one sentence :**

- Ans. a. Hindu Succession Amendment Act.
b. Tehsil.
c. Patwari or Tehsildar.
d. Patwari.

Section-II

1. Define the following :

Ans. a. **Tehsildar** : The states in India are divided into districts. These districts are further sub-divided. The sub-divisions are known by different names such as tehsil, taluka, etc.

The District Collector, also known as District Magistrate or Deputy Commissioner, is an important officer from the Indian Administrative Service. He heads the district administration and is in charge of revenue collection of the district on behalf of the Government. The District Magistrate, together with revenue officers (tehsildars), supervises the work of the patwaris. They ensure that records are maintained. Besides, they settle any disputes, generally at the tehsildar's office. In the tehsildar's office, land disputes are also heard.

- b. **HSSA** : The Hindu Succession Amendment Act (HSAA), 2005 came into force from 9th September, 2005. It is a significant step towards advancing women's rights. In its essence, the Act has been enforced to remove gender discriminatory provisions in the Hindu Succession Act (HSA), 1956. Under the HSA, the Hindu son was born with a right to ancestral property. With the coming into force of the amended act, the Hindu daughter would be borne with the same right to ancestral property. Thus, the HSAA has abolished the difference between sons and daughters in the right to ancestral property.
- c. **Patwari** : The maintenance of land records is an important function of the patwari. The patwari draws up a map of the village showing details of the various plots of landsize, ownership, area on which crops are grown, types of crops grown, etc.
- d. **SHO** : Police stations in rural India have to maintain law and order in the area under their control. The Station House Officer (SHO) is in charge of the police station. He is assisted in his work by a few constables and other officials.

2. Answer the following questions in short :

- Ans.** a. Police station has a great importance in rural areas. Police station in rural India have to maintain law and order in the area under their control.
- b. Tehsildar is a revenue officer. The District Magistrate together with tehsildar, supervises the work of the Patwari. They ensure that records are maintained.
- c. HSA means Hindu succession Act, 1956. Under the HSA, the Hindu son was born with a right to ancestral property.
- d. In some states, records are being computerised and kept at the Panchayat office so that they are updated faster and the farmer can obtain them easily.

- e. The Hindu Succession Amendment Act (HSAA), 2005 came into force from 9th September, 2005. It is a significant step towards advancing women's rights. In its essence, the Act has been enforced to remove gender discriminatory provisions in the Hindu Succession Act (HSA), 1956. Under the HSA, the Hindu son was born with a right to ancestral property. With the coming into force of the amended act, the Hindu daughter would be borne with the same right to ancestral property. Thus, the HSA has abolished the difference between sons and daughters in the right to ancestral property.

3. Answer the following questions in detail :

- Ans.**
- a. The patwari plays a significant role in the village, especially with respect to the maintenance of the land records. The maintenance of land records is an important function of the patwari. The patwari draws up a map of the village showing details of the various plots of land-size, ownership, area on which crops are grown, types of crops grown etc. The district Magistrate together with revenue officers (tehsildars), supervises the work of the patwari. They ensure that records are maintained.
- b. One day, Sukhiya decided to buy another rickshaw and sublet it to another puller in order to increase his income substantially. Since he required money to buy the rickshaw, he went back to his village to arrange for the sale of a part of his land. To his surprise, he found that two men were already cultivating his field. Upon inquiry, he learnt that Bhushan, a local rich farmer had taken possession of his land, and had appointed two persons as wage labourers to cultivate the land. Sukhiya met Bhushan and claimed his rights over the land. The two men had a huge argument after which Sukhiya came back to his house in the village. On his way, Sukhiya was also attacked by some men and badly hurt. Rameshwar, a school teacher and respected person of the area who knew the law of the land, came to his rescue. Under his guidance Sukhiya and his neighbours called the chowkidar, Shyamu. The case being of physical assault was of a serious nature, so Shyamu guided them to local thana where they met the Station House Officer (SHO). Thereafter, Sukhiya lodged a First Information Report (FIR) and his attackers were taken into custody. According to the law, physical assault is a criminal offence, so the police initiated a criminal case against his attackers. At the time they had been appointed by Bhushan, the rich farmer. The police immediately arrested Bhushan and initiated criminal case against him too.
- c. The maintenance of land records is an important function of the patwari. The patwari draws up a map of the village showing details of the various plots of land size, ownership, area on which crops are grown, types of crops grown, etc.
- d. The Hindu Succession Amendment Act (HSAA), 2005 came into force from 9th September, 2005. It is a significant step towards advancing

women's rights. In its essence, the Act has been enforced to remove gender discriminatory provisions in the Hindu Succession Act (HSA), 1956. Under the HSA, the Hindu son was born with a right to ancestral property. With the coming into force of the amended act, the Hindu daughter would be borne with the same right to ancestral property. Thus, the HSAA has abolished the difference between sons and daughters in the right to ancestral property.

Till recently, in many states of our country, Hindu women did not get a share in their father's or ancestor's land. However, with HSAA sons, daughters and their mother get an equal share in the agricultural land. The government has ensured that this law is enforced by all the states and union territories of our country.

For centuries, women, who have worked along with their husbands and brothers in the fields, helping them with the cultivation, harvesting and all other works associated with agriculture, have been divided the right to inherit a share in the father's property. Now, under the new law, finally women have got their due.

Section-III

Ans. Do yourself.



Section-I

1. Tick (3) the correct answer :

Ans. a. iii. b. ii.

2. Oral Questions :

- Ans. a. The elected representatives of the municipal corporation are known as councillors.
- b. Octroi duty on goods brought into the city or taken out of it, is the source of income for a municipal corporation.

3. Fill in the blanks :

- Ans. a. The urban local self government is **different** from the local self government in rural areas.
- b. The elected representatives of the municipal corporation are known as **councillors**.
- c. Municipal elections are held every **5** years.
- d. The work of the Corporation is done by various **departments**.

Section-II

1. Answer the following questions in short :

- Ans.**
- Generally, cities with a population of 10 lakhs or more are governed by municipal corporations. The cities are divided into a number of municipal wards. Members of parliament and members of the state legislature elected from the area are also members of the municipal corporations. Special seats are reserved for scheduled tribes and scheduled castes. One-third of the seats are reserved for women.
 - The mayor and the deputy mayor are prominent members of the corporation. The mayor is the presiding officer of the corporation. They are elected directly by the adult population of the city.
 - The chief executive officer of the municipal corporation is the commissioner, who implements the decisions taken by the councillors. The commissioner is appointed by the state government.

2. Answer the following questions in detail :

- Ans.**
- The work of the Corporation is done by various departments, who look after water, electricity, roads, sanitation, schools and so on. Many people are employed by the Corporation to look after the smooth and efficient functioning of the various departments.
The various functions of a Municipal Corporation can be grouped into four categories :
 - Civic amenities like supply of water, maintenance of roads etc.
 - Public education like running primary and secondary schools etc.
 - Public health like running hospitals and dispensaries, organising vaccination programmes, etc.
 - Public security like registration of births and deaths, maintaining fire-fighting services, etc.
 - Sources of Income
 1. Taxes on property such as house tax, tax on shops and lands.
 2. Tax on vehicles.
 3. Octroi duty on goods brought into the city or taken out of it.
 4. Income from water and electricity supply to houses and factories.
 5. Grants-in-aid and loans from the State Government.

Section-III

Ans. Do yourself.

7

Section-I

1. **Tick (3) the correct answer :**

Ans. a. iii. b. iv. c. iii.

2. **Oral Questions :**

Ans. a. Different types of people live in a village and they have different types of livelihoods. Agriculture is the chief occupation of the villagers. They are mostly farmers. There are, however, other people who follow different occupations. There are shopkeepers, blacksmiths, carpenters, weavers, potters, barbers, etc. All of them form the village community.

b. In urban areas (big cities and towns) different types of people reside and they practise different types of livelihoods.

Factory workers, businessman, shopkeepers, professionals (like teachers, doctors, lawyers, etc.) are the main people who follow different kinds of professions. They include vegetable vendors, domestic servants, garment workers, and bank employees etc.

3. **Fill in the blanks :**

Ans. a. Around 54% of the population is dependent on **agriculture**.

b. **Small** farmers own land less than 2 hectares.

c. **Factory** workers form a substantial part of the urban population.

d. A painter is engaged in **self** employment

e. The movement of the people to the urban areas in search of job is called **migration**.

4. **State whether the following statements are True or False :**

Ans. a. True b. False c. True d. False 3. True.

5. **Answer in one sentence :**

Ans. a. Livelihood refers to occupation, an employment, which is necessary to provide oneself with basic needs. In rural India, agriculture is the main source of livelihood.

b. Large farmers own large tracts of land (i.e., from 5 hectares to hundreds of hectares of land.

c. He makes different things of wood like doors, windows, chairs, tables etc.

d. Three divisions of urban occupations are :

(i) Primary occupation

(ii) Secondary occupation

(iii) Tertiary occupation

Section-II

1. Answer the following questions in short :

Ans. a. Large Farmers : Large farmers own large tracts of land (i.e., from 5 hectares to hundreds of hectares of land). They use modern technology like tractors, harvesters, threshing machines, high yielding seeds and fertilisers to increase their yield. Many of the large farmers do not work on their own fields. They employ other for that, especially the landless farmers of the village. Many large farmers grow cash crops like cotton and sugarcane, along with food crops like wheat and rice.

Small Farmers : They own land less than 2 hectares and can't make both ends meet. They do all the agricultural work themselves from preparing the land and sowing the seeds to harvest the crop.

- b. The carpenter is also an important member of the village community. He makes different things of wood like doors, windows, chairs, tables and stools, etc. He makes the wooden plough and the wooden cart.
- c. When natural resources provide goods and people utilise them, it is called primary occupations, e.g., agriculture, cattle breeding, dairy farming, poultry farming, mining, forestry, etc.
- d. **Secondary Occupations :** In this, people deal with the processing of raw materials like agricultural produce, fowl, fish, and other sea animals. This is done manually or through machines. Textile industry transforms cotton, wool or jute into clothes. Metal like iron which is extracted from an iron ore is transformed into tools, machines or furniture. Paper is made from the wood. Leather industry makes the leather products from the skin of dead animals. Bakeries make the eatable products from the agricultural produce like wheat, barley, maize etc.
- e. In cities and towns a major part of the people are self-employed or people who themselves run their own business and shops. They are independent to run their shops as they like. Their incomes depend on hard work and interaction. Shopkeepers and businessmen form a major section of the self-employed people.

2. Answer the following questions in detail :

Ans. a. In urban areas (big cities and towns) different types of people reside and they practise different types of livelihoods. Factory, workers, businessmen, shopkeepers, professionals (like teachers, doctors, lawyers, etc.) are the main people who reside in the cities and towns. There are, however, other people who follow different kinds of professions. They include vegetable vendors, domestic servants, garment workers, and bank employees, etc.

1. Factory workers form a substantial part of the urban population. They

are employed in different factories where they work day and night and produce various things of daily use such as cloth, hosiery articles, medicines, chemicals, etc.

2. Shopkeepers and businessman are busy in buying and selling different types of things from bread, butter, vegetables, fruits, food grains, sweets, groceries to books and stationery.

3. Professionals like teachers, doctors, lawyers, bank employees clerks, postman, policeman also form a major part of the urban population. They serve the society in their own way.

Teachers and professors educate the students and enlighten them. Doctors work in hospitals and dispensaries and cure the people of their illness. The bank employees look into various money transaction jobs.

The policemen help in maintaining law and order in the cities and towns.

Besides the above people there are some other people who reside with urban areas such as vegetable vendors, domestic servants, garment workers, etc. The vegetable vendors move from street to street and supply fruits and vegetables to citizen at their door-step. As the urban population leads a comfortable life they engage domestic servants who help them in their household duties like cooking, washing, and cleaning their rooms.

There are scores of other people also whom form a part of the urban population. It is not possible to mention all of them but all of them help each other in the best possible way.

- b. More and more people are moving from rural areas to urban areas in search of jobs. This movement is called migration. There are many more job opportunities available in the cities as compared to villages. This encourages people to migrate to the cities leaving their homes in the villages.

- What is the reason for this migration?
- lack of educational opportunities in rural areas
- lack of adequate health facilities in rural areas
- seasonal agriculture
- lack of employment in the rural sector

Having moved to the cities, the migrants generally settle in the poor areas of the city. These areas usually lack basic infrastructural facilities, they may not have electricity, water or drainage. In the course of time these areas develop into slums. The slums dwellers are the urban poor, that is, daily-waged workers, casual labourers, domestic servants, rickshaw pullers, hotel boys and so on.

- c. **Fisherman** : For people who live near the seashore on river, fishing is an important means of livelihood. People catch fish from ponds, lakes or rivers. In villages located near the sea, fishing is the main source of

income.

Shopkeepers : The shopkeepers also form an important part of the village folk. They sell different things of daily use, like food items, grocery, stationery, hoisery, etc., and cater to the needs of the villages.

The Blacksmith : Usually there is one family of a blacksmith in each village. He makes tools and implements of iron for the farming community. Members of his family help him in his work. The assistant keeps the fire burning by working on the bellows.

The Carpenter : The carpenter is also an important member of the village community. He makes different things of wood like doors, windows, chairs, tables and stools, etc. He makes the wooden plough and the wooden cart.

Other Rural Occupations : Many villages have schools and dispensaries. In such places the teachers, doctors, nurses also form an important part of the village community. The potters make different types of earthenwares for the villagers while weavers weave cloth, bedcovers, small carpets for the village community. The cobblers make and mend shoes. The barbers do the hair-cutting job while the washerman washes clothes. We should not forget the tailors who make shirts, pyjamas, coats, etc., for the people. The postman delivers the post while the chowkidar keeps a watch on village during the night.

Section-III

Ans. Do yourself.

Model Test Paper-I

- | | |
|---|----------|
| 1. Tick (3) the correct option : | 4 |
| Ans. a. iii. b. ii. c. i. d. iv. | |
| 2. Oral Questions : | 2 |
| Ans. a. The equator cuts the globe into two equal halves known as hemispheres. | |
| b. Paleolithic men were nomads. The people of this age were wanderers, moving from place to place in search of shelter, animals and food. Hunting and gathering was their way of life. This type of life was called nomadic life. | |
| 3. Fill in the blanks : | 4 |
| Ans. a. On 2006 , Pluto was declassified as dwarf planet. | |
| b. Literacy sources can be classified into indigenous and foreign works. | |
| c. The first metal to be discovered was copper . | |
| d. Prejudice is a set of features of society or a social group. | |
| 4. State whether the following statements are True or False : | 4 |
| Ans. a. True b. False c. True d. True. | |

- 5. Match the following :** 2
- Ans.** a. The nearest Star to our Sun — i. Neolithic Age
 b. Megasthenes — ii. Proxima Centauri
 c. Invention of the Wheel — iii. Unity in Diversity
 d. India's greatest strength — iv. Indika

- 6. Answer in one sentence :** 4
- Ans.** a. Mercury.
 b. BC and AD.
 c. It is located in a fertile plain, near the Bolan Pass.
 d. Prejudice is defined as an unreasonable dislike for a person, a group or a custom. It is based on preconceived judgments towards a person or a group of persons in society resulting from their class, caste, gender, religion or other personal characteristics.

Model Test Paper-II

- 1. Tick (3) the correct answer :** 4
- Ans.** a. ii. b. iii. c. iii. d. i.

- 2. Oral Questions :** 4
- Ans.** a. Topographical maps show great details of the natural features of a small area including rivers, lake, mountains etc. along with man-made areas, like parks, wells, cities etc.
 b. The meaning of word 'vid' is knowledge or wisdom.

- 3. Fill in the blanks :** 4
- Ans.** a. Internationally accepted signs and symbols are called **conventional symbols**.
 b. The Harappan procured tin from **Iran and Afghanistan**.
 c. The word Megalith literally means a **big stone**.
 d. The word 'Government' is derived from Greek word **Kupezvings**.

- 4. State whether the following statements are True or False :** 4
- Ans.** a. True b. True c. False d. False,

- 5. Match the following :** 4
- Ans.** a. Geographical features — i. Mohenjo-daro
 b. The Great Bath — ii. Physical maps
 c. Dasyus — iii. Rajasthan
 d. Apartheid — iv. Non-Aryans South Africa before 1994

- 1. Define the following :** **8**
Ans. Do yourself.
- 2. Differentiate between the following :** **4**
Ans. a. **Latitude :** Latitudes are the imaginary lines that run parallel to equator.
Longitudes : Longitudes are imaginary lines running between the North and South Poles.
 b. **Rotation :** The movement of the Earth on its axis is called it's rotation.
Revolution : The movement of the Earth around the Sun is called it revolution.
 c. Do yourself.
 d. Do yourself.
- 3. Correct the following statements :** **8**
Ans. Do yourself.
- 4. Answer the following questions in short :** **8**
Ans. a. There are millions of stars in the sky. Some of the stars are found in groups. A constellation is a group of stars forming a certain shape. One such constellation is a group of seven stars which is called the Saptarishi. The Saptarishi forms a part of the constellation of the Big Bear, also known as Ursa Major in Latin.
 b. Rotation of the Earth causes a distinct day and night-12 hours day and 12 hours night. Since the shape of the Earth is spherical, only half of it gets sunlight and the other half remains in darkness. Parts of the Earth facing the Sun experiences day and the other half in shadow experiences night. A part of the Earth's surface that emerges from darkness Experiences sunrise. Later, when it is obscured from the rays of Sun it experiences sunset.
 c. Title, distance, direction, legends and grid system are the essentials of a map.
 d. Dates in history are divided into BC and AD. BC is an abbreviation for Before Christ and denotes the years before the are counted backwards, for instance, 394 BC will come before 261 BC. AD stands for Anno Domini meaning 'In the year of the Lord'. While writing the dates in AD, AD precedes the number, that is, we write AD 320.
 e. Domestication is a process in which people grow plants and look after animals. Useful plants were domesticated by the man. People selected those plants that yield large size grain and had strong stock capable of bearing the weight of the ripe grain. Some of the earliest plants to be domesticated were wheat and barley.
 The dog, the goat, and the sheep were the earliest domesticated animals. Very soon the Neolithic man started domesticating cow bull, donkey,

hen, pig etc. The animals were used for carrying heavy things and ploughing fields etc.

- f. Several literary sources from the ancient period are written in scripts that are no longer used and are therefore, unknown to us now. These scripts have to be deciphered or 'decoded' to understand what they say. For example, the Harappan used a pictographic script which historians have not yet been able to decipher. Another difficulty is that the Harappan script is Boustrophedon in which one line is left to right and the next, right to left.
- g. Year 1976 marked the beginning of anti-apartheid revolt. Nelson Mandela started anti-apartheid struggle through his party 'African National Congress' (ANC). All top leaders of ANC's were arrested in 1963. Mandela and few others were sentenced to life imprisonment. In February 1990, elected President FW de Klerk announced the unbanning of the liberation movements and the release of political prisoners, notably Nelson Mandela. South Africa held its first democratic election in 1994 and Nelson Mandela became the first (Black) President of South Africa. South Africa celebrates 27th April of every year as Freedom Day (Independence Day). In 1993, FW de Klerk Mandela were jointly awarded the Nobel Prize for their work for the peaceful termination of the apartheid regime, and for laying the foundations of a new democratic South Africa.
- h. Do yourself.

5. Answer the following questions in detail :

12

Ans.

- a. The Earth is the fifth largest planet. It is a sphere which is slightly flattened at the poles. From a spacecraft, the land on Earth looks a mixture of green and brown. The oceans, which cover more area than the land, look blue. The Earth is therefore, called the Blue Planet.
- b. The different inclination of the Sun's rays cause different amount of heating. On 21st of June the Sun's rays fall vertically on the Tropic of Cancer as the North Pole remains inclined towards the Sun and South Pole in away from it. A larger portion of the Northern Hemisphere gets light from the Sun. Thus, it is summer for places north of the Equator. In the southern Hemisphere, there is winter reason.
- c. Do yourself.
- d. Magadha had two very powerful rulers, Bimbisara and Ajatashatru. They tried to conquer other Janapadas. Mahapadma Nanda, a powerful ruler, Janapadas. Mahapadma Nanda, a powerful ruler, extended his control up to the north-west part of the subcontinent. Rajagriha (present day Rajgir) in Bihar was the capital of Magadha for several years. Later, the capital was shifted to Pataliputra.
Magadha emerged as the most powerful mahajanapada in this period. This was due to many factors :

It was located in the Gangetic basin, where the soil was very fertile and yielded large harvests. Land revenue was high and it provided a substantial income for the kingdom which enabled the rulers to maintain a large army.

Timber and elephants, provided by the eastern forest to Magadha were used for constructing buildings and elephants also used in the army.

Magadha had large deposits of iron-ore, which was used to make agricultural implements and weapons.

Natural barriers like hills and rivers protected the capital from any attack.

- e. Unity in diversity has been India's greatest strength. It is a slogan celebrating cooperation and oneness between different groups of people, despite their differences and diverse cultural background. India's struggle against British rule was a great unifying factor, when the entire nation stood against the tyranny of British rule together. People from different religious, cultural and regional backgrounds came together with the common agenda of ousting the Britishers from India. The British could not 'divide and rule' Indian beyond a point and had to leave in the wake of fierce and sustained resistance to their rule from every section and region of India. The song 'Mile sur mera tumhara, to sur bane hamara' promoted by Doordarshan and developed by Lok Seva Sanchar Parishad celebrates India's national integration 'unity in diversity'.
- f. The Gram Panchayat meets are regular intervals and looks after the implementation of the development programmes and other issues. Its main duty is to improve the condition of the village and villagers by providing basic amenities like roads, water, schools and electricity. Therefore, it has to handle construction and maintenance of roads, provide clean drinking water and water for irrigation. It also has to maintain records of births and deaths in the village. In addition to that, it has to look after the welfare of the people by providing reading rooms or libraries, organising fairs, maintaining water sources as wells, ponds, etc. The Panchayat also has to execute schemes started by the state governments for generating employment in the villages. The Gram Panchayat is answerable to the Gram Sabha because its members have been elected by the Gram Sabha.

Model Test Paper-III

1. **Tick (3) the correct answer :** 4
Ans. a. iii. b. ii. c. ii. d. i.
2. **Oral Questions :** 4
Ans. a. Trenches are the deep gaps in the sea bed.
b. Alexander the Great invade India in 326 BC.

- 3. Answer in one sentence :** 4
- Ans.** a. Australia.
b. Megasthene.
c. Sanskrit.
d. Municipal Corporation.
- 4. Fill in the blanks :** 4
- Ans.** a. The Earth's zones include lithosphere **hydrosphere**, atmosphere and **biopsphere**.
b. The **Mariana Trench** is the deepest trench.
c. **Brihadaranyaka** is the biggest of all Upanishads.
d. The HSAA came into force on **2005**.
- 5. State whether the following statements are True or False :** 4
- Ans.** a. False b. True c. True d. False.

Model Test Paper-IV

- 1. Tick (3) the correct answer :** 4
- Ans.** a. i. b. i. c. iv. d. iii.
- 2. Oral Questions :** 4
- Ans.** a. Do yourself.
b. Do yourself.
c. Do yourself.
d. In urban areas (big cities and towns) different types of people reside and they practise different types of livelihoods.
Factory workers, businessman, shopkeepers, professionals (like teachers, doctors, lawyers, etc.) are the main people who follow different kinds of professions. They include vegetable vendors, domestic servants, garment workers, and bank employees etc.
- 3. Match the following :** 4
- Ans.** a. The Ganga Basin — i. Dehradun and Coimbtore
b. Forest Research Institutes — ii. 72 BC to 27 BC
c. The Kanva dynasty — iii. More than 5 hectares of land
d. Large farmers — iv. $\frac{1}{4}$ of the total area of India
- 4. State whether the following statements are True or False :** 4
- Ans.** a. True b. False c. False d. True.
- 5. Fill in the blanks :** 4
- Ans.** a. Our country covers an area of **3.28 million** sq. km.
b. Chandragupta Vikramaditya's second capital was at **Ujjain**.
c. The Bhagavadgita is a part of the epic **Mahabharata**.
d. Around 54% of the Indian population is dependent on **agriculture**.

- 1. Correct the following statements :** **6**
- Ans.**
- a. The Oceans account for 71 per cent of the Earth's crust.
 - b. The Thorny Forests are found in areas having less than 100 cm rainfall in a year.
 - c. Megasthenes was Chinese ambassador.
 - d. The biography of Harsha was known as Harshacharita.
 - e. Schedule Castes and Tribes are also a part of Panchayats.
 - f. There are many more work opportunities available in the cities as compared to villages.
- 2. Differentiate between the following :** **6**
- Ans.** Do yourself.
- 3. Define the following :** **8**
- Ans.** Do yourself.
- 4. Answer the following questions in short :** **8**
- Ans.**
- a. Atmospheric air is a mixture of various gases and dust particles. It is mainly composed of gases 78% nitrogen, 21% oxygen and 1% consisting of argon, carbon dioxide and other gases.
 - b. The three parallel ranges of the Himalayas :
(i) Himadri (ii) Himachal (iii) Shivalik.
 - c. **Natural Vegetation :** The climate conditions and the landforms play a major role in determining the vegetation of any particular area. This is the reason why the plains and the trees of mountain regions are so different from that of the plant cover of the plains. Natural vegetation is the plant cover which grows naturally without any care taken by human beings. As the plant cover of any area adapts to the climate of that area, we get large variety of forests in India according to the varied geographical conditions. There are more than 5,000 species of trees in India. However, the green cover of India is receding very fast due to deforestation and acquisition.
 - d. Buddha established many monasteries (viharas) where the Buddhist monks lived, prayed and preached Buddhism. These were also used as centres of education.
 - e. By the end of Chandragupta's rule, the kingdom of Magadha had become an empire. The Mauryan Empire now stretched from the Hindu Kush in the west to Bengal in the east, and from the Himalayas in the north to the Narmada in Central India.
 - f. Fa-Hein travelling via Central Asia and Kashmir came to India during the reign of Chandragupta II popularly known as Chandragupta Vikramaditya. He left his country China in 399 A.D. reached India in

405 A.D. and stayed here for about 6 years, i.e., from 405 to 411 A.D. During his 6 years's stay in India, he spent 3 years at Pataliputra, the capital of the Gupta empire. From Pataliputra, he went to Tamralipti, a port city in Bengal. He returned home by sea route in 414 A.D. visiting Ceylon, Java and Sumatra. He has given a vivid description of his travel of India, in his text 'Fo-Ko-Ki'.

- g. The patwari plays a significant role in the village, especially with respect to the maintenance of the land records. The maintenance of land records is an important function of the patwari. The patwari draws up a map of the village showing details of the various plots of land-size, ownership, area on which crops are grown, types of crops grown etc. The district Magistrate together with revenue officers (tehsildars), supervises the work of the patwari. They ensure that records are maintained.
- h. In cities and towns a major part of the people are self-employed or people who themselves run their own business and shops. They are independent to run their shops as they like. Their incomes depend on hard work and interaction. Shopkeepers and businessmen form a major section of the self-employed people.

5. Answer the following questions in detail :

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- Ans.**
- a. The word 'bios' is an ancient Greek word meaning 'life'. The part of the Earth in which all forms of life exist is called biosphere. The biosphere is found where the other three realms, namely, lithosphere, atmosphere and hydrosphere meet.
The biosphere consists of four main elements : human beings, animals, plants and micro-organisms. These four elements are inter-dependent. There is also a continuous interaction between these elements.
The biosphere is made up of distinct areas, each with its own climate, soil and living communities of plants and animals called 'ecosystem'.
Living things are interdependent in the biosphere. They are continuously interacting with their surroundings, e.g., animals including human beings need fresh air from the atmosphere and water from the hydrosphere. There are many other needs such as food and clothing that the fulfil from the lithosphere.
 - b. Young fold mountains are comparatively younger in terms of origin. They have steep slopes and sharp peaks. Most of these mountains have peaks covered with snow. Volcanic activities are very common in such mountains because the crust of the Earth here is still unstable. Most of the lofty mountain ranges of the world are young fold mountains.
 - c. Do yourself.
 - d. **Science :** Ancient India was very advanced in science. The Indians made remarkable progress in the field of Mathematics. The world is indebted to ancient Indians for contribution on three counts, namely, their numerals, decimal system and the discovery of 'zero'.

The science of Algebra owes its development both to the Greeks and the Indians. The Indians had devised the science of Geometry to draw the sacrificial altars for Yajnas. They also knew the acute, obtuse and right angles.

Astronomy : India also made remarkable progress in astronomy. Aryabhatta calculated the position of the planets, discovered the cause of the lunar and solar eclipses, correctly calculated the circumference of the Earth and wrote a book on astronomy which is called Aryabhatiya.

Technology : In the field of technology, these were the Indians who, for the first time, discovered the art of manufacturing steel. The craftsmanship of the Iron Pillar of Mehrauli, built during the Gupta period, is unmatched. In the field of Chemistry they were also praiseworthy. They invented lasting dyes and the blue colour.

They made different kinds of coins of gold and silver which led to the promotion of commerce and trade. They made some rare specimens of jewellery of gold, silver and other precious stones which were in great demand in foreign countries.

Medicine : Medical science was fairly advanced. The Atharva Veda mentions the different methods used to diagnose diseases. It also prescribed medicines. Suashruta, an Ayurvedic scholar was an expert in performing operations. He gave importance to diet and cleanliness. Charaka wrote the Charak Samhita, which tells us about different diseases and their cure.

- e. The work of the Corporation is done by various departments, who look after water, electricity, roads, sanitation, schools and so on. Many people are employed by the Corporation to look after the smooth and efficient functioning of the various departments.

The various functions of a Municipal Corporation can be grouped into four categories :

Civic amenities like supply of water, maintenance of roads etc.

Public education like running primary and secondary schools etc.

Public health like running hospitals and dispensaries, organising vaccination programmes, etc.

Public security like registration of births and deaths, maintaining fire-fighting services, etc.

- f. Do yourself.