



# Science & Society

A Dual Approach to  
Science and Social Science

GRADE  
**4**



## Section I : Science

# 1. The Life of Plants

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### Exercise

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- A.** 1. (c)      2. (c)      3. (a)      4. (c)      5. (a)
- B.** 1. desert    2. marshy    3. floating
- C.** 1. (b)      2. (f)      3. (e)      4. (c)      5. (d)  
6. (a)
- D.** 1. Duckweed              2. Lotus              3. Pondweed  
    Water lettuce              Water Lily              Tape grass
- E.** 1. Wheat, rice, jowar, bajra and sugarcane are the plants of the grass family that provide food to us.  
2. Chairs, brooms, baskets, curtains and mats.  
3. Venus flytrap, Pitcher plant and Sundew.  
4. Cactus plants have spines instead of leaves.  
5. Grass family plants provide us cereals.
- F.** 1. Plants in marshy areas fail to absorb oxygen from the soil and hence have breathing roots that grow out of the soil and water to help them breathe.  
2. Lotus plant grow in water and adapt itself to live in water by its hollow and light stem and has broad and floating leave.  
3. Uses of the plants of the grass family :  
    ♦ Grass family plants provide food for humans and animals.  
    ♦ Some plants of the grass family are used to prepare medicines.  
    ♦ Various kind of grasses are now used to make different types of paper.  
4. In Venus flytrap, the leaf is folded into two halves. When an insect sits on the leaf, the two halves close and the insect is trapped.
- G.** Do it yourself.
- H.** Do it yourself.
- I.** Do it yourself.
- J.** Do it yourself.
- K.** 1. Kashmir              2. Assam              3. Rajasthan  
4. Andaman and Nicobar Island
- L.** Do it yourself.
- M.** Do it yourself.



## 2.


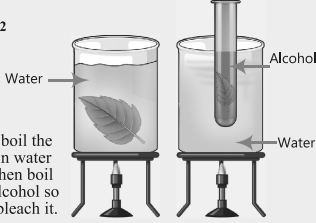
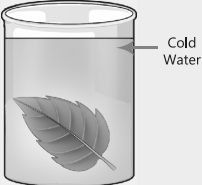
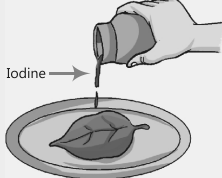
## Plant's Food

### Exercise

- A. 1. (b)      2. (b)      3. (b)      4. (b)      5. (c)
- B. 1. leaf      2. vein      3. sugar
- C. 1. chlorophyll      2. photosynthesis      3. Stomata  
4. mushrooms      5. oxygen
- D. 1. Photosynthesis is the process of preparation of food in the green leaves of plants.  
2. Sunlight provides energy for preparing food.  
3. Extra food stored in plants in the form of starch.  
4. Stems of the cactus plant prepares food for the plant.  
5. Yes.
- E. 1. We could demonstrate that a green leaf has starch in it by the following experiment :

### Experiment

Testing the green leaf for the presence of starch.

<p><b>STEP 1</b></p>  <p>Take a green leaf of a healthy plant.</p>	<p><b>STEP 2</b></p>  <p>Water</p> <p>Alcohol</p> <p>Water</p> <p>First boil the leaf in water and then boil it in alcohol so as to bleach it.</p>
<p><b>STEP 3</b></p>  <p>Cold Water</p> <p>Wash it in cold water.</p>	<p><b>STEP 4</b></p>  <p>Iodine</p> <p>Add a few drops of iodine.</p>

**Conclusion :** When you add iodine to the bleached leaf, it turns blue-black. This shows that starch is present in a green leaf.

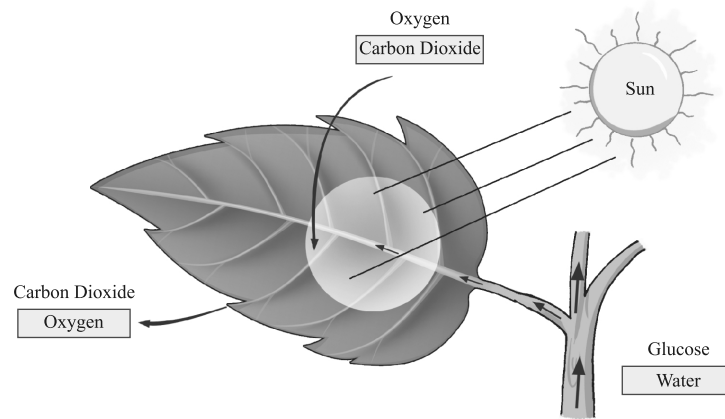
2. During photosynthesis, the leaf takes in carbon dioxide and gives out oxygen and water vapour through the stomata only.
3. The plants use their food in a number of ways such as :
- ◆ It is used to get energy.
  - ◆ Some of it is used for growth.
  - ◆ Extra food is stored in the form of starch in leaves, stems and roots.

4. The sun's energy during photosynthesis to prepare food. This energy passes on to humans and animals when they eat the plant parts. This is how energy flows from the sun to plants and then to animals and human beings.
5. Plants that do not have chlorophyll cannot make their own food, they get their food from dead and decaying plants and animals.
6. A balance between plant and animal life needs to be maintained for life on earth to go on.

F. Do it yourself.

G. Do it yourself.

H.



I. Do it yourself.

J. Do it yourself.

K. Do it yourself.

L. Do it yourself.

M. Do it yourself.

N. Do it yourself.



## 3. Animal's Life

### Exercise

- A. 1. (c)      2. (b)      3. (a)      4. (b)      5. (c)
- B. 1. Mammals      2. embryo      3. yolk
- C. lizard      snake      fish      turtle
- D. 1. Mammals      2. nests      3. caterpillar      4. turtles
- E. 1. Birds lay eggs to reproduce.  
2. The nymph is the baby insect which comes out of the egg.  
3. Following are the four stages of lifecycle of a butterfly egg, caterpillar, pupa, adult.



<b>D.</b>	<b>Terrestrial</b>	<b>Aquatic</b>	<b>Amphibian</b>	<b>Aerial</b>	<b>Arboreal</b>
Movement	legs to move on land	fins or limbs	limbs	wings to fly	legs
Breathing Organs	lungs	gills	moist skin (to breathe in water) lungs (to breathe on land)	lungs	lungs
Examples	horses and elephants	fishes and crabs	frogs and toads	kite and goose	squirrels and monkeys

- E.**
1. In the natural world, a plant or an animal adapts or changes itself to suit its surroundings. It happens over hundreds and thousands of years. This process of changing to suit the surroundings is called adaptation.
  2. Animals that live in cold regions, have fur on their bodies to keep them warm.
  3. Animals that spend most of their time on trees are called arboreal animals.
  4. Herbivores animals have long and strong legs to travel long distances in search of food.
- F.**
1. Frogs have adapted themselves to live both on land and in water by their moist skin and lungs. Their moist skin helps them to breathe in water and their lungs to breathe on land.
  2. Aerial animals have a light body because of light bones and feathers.
  3. Merging with the surroundings, large size and fast movement are three common ways by which animals protect themselves from their enemies.
  4. Fish protect themselves by moving fast enough to escape from their enemies.  
Elephants protect themselves with the help of their very big size.  
Leaf insect protect themselves by camouflage.
- G.** Do it yourself.                      **H.** Do it yourself.  
**I.** Do it yourself.                      **J.** Do it yourself.



## 5. Food and Its Digestion

### Exercise

- A.** 1. (c)      2. (a)      3. (a)      4. (b)      5. (b)  
**B.** 1. energy-giving      2. fibre      3. small intestine

- C. 1. (d)      2. (c)      3. (e)      4. (a)      5. (f)  
6. (b)
- D. 1. All living things need food to stay alive and to grow.  
2. Rice, wheat and potato.  
3. Fresh vegetables, fruits, meat.  
4. A balanced diet has the correct amounts of all the nutrients, i.e., carbohydrates, fats, proteins, vitamins and minerals.  
5. From the stomach, the food passes into the small intestine, a long coiled tube.
- E. 1. When we eat, our teeth tear, cut and grind food in preparation for swallowing.  
2. The function of the small intestine is to break down food, absorb nutrients needed for the body, and get rid of the unnecessary components.  
3. Food is churned in the stomach. The digestive juices present here break down the proteins into simple forms.  
4. The process of treating food to preserve its value for a long time is called preservation.  
5. Cooked and uncooked food can be preserved in different ways as follows : Boiling, canning, refrigeration, pickling, jellying, drying.
- F. Do it yourself.                      G. Do it yourself.  
H. Do it yourself.                      I. Do it yourself.  
J. Do it yourself.                      K. Do it yourself.



## 6. States of Matter

### Exercise

- A. 1. (b)      2. (a)      3. (c)      4. (b)
- B. 1. Solids    2. Liquids    3. no shape    4. heating    5. Steam
- C. 1. F      2. F      3. F      4. T      5. F
- D. 1. All the matter in the world is made up of molecules.  
2. Molecules are the smallest substances in matter that can exist independently.  
3. Ice.  
4. Water is necessary for human survival.  
5. Oxygen is used for breathing.
- E. 1. When air is filled into a balloon, it takes up all the space inside the balloon. We can pump more and more air into a football. It means more

air can be filled into the same space. The smell of a perfume spreads quickly and fills the whole room.

This is so because the molecules in gases are very loosely packed and so, gases can flow easily.

Thus, gases

- (i) have no fixed shape;
  - (ii) have no fixed volume;
  - (iii) fill the space of the container; and
  - (iv) flow more easily than liquids.
2. Sugar is soluble in water but sand is not soluble in water.
  3. When sugar dissolves in water, the sugar molecules take up space between the water molecules. Thus, they do not occupy any extra space. Hence volume of solution does not change.

F. Do it yourself.

G. Do it yourself.

H. Do it yourself.

I. Do it yourself.



## 7. Force, Work and Energy

### Exercise

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- A. 1. (d)    2. (c)    3. (b)    4. (a)    5. (a)
- B. 1. Elastic    2. Pulley    3. pedal    4. A screw
- C. 1. Solar Energy, Atomic Energy, Geothermal Energy, Wind Energy, Hydro Energy.  
2. Muscular Force is exerted by the muscles of our body.  
3. The force by which the earth pulls an object towards it is called gravitational force.  
4. In our daily life, we use some tools to do various works. Such tools are called simple machines.  
5. Lever, Pulley, Wheel and Axle, Screw, Wedge.
- D. 1. Solar energy can be changed into heat energy, light energy and electrical energy.  
2. An atom is the smallest particle of matter. Atomic energy comes from the splitting of an atom. Atomic energy is used for producing electricity but weapons like atom bombs, which can kill lakhs of people, have also been made and used. Atomic energy should be used for the welfare of mankind only.  
3. The earth's hot interior is another important source of energy. It is called geothermal energy.



4. Simple machines helps us to :
- (i) do our work faster and with less effort,
  - (ii) do work with less force, and
  - (iii) change the direction of force used.
5. (i) **Mixed grinder** : Electrical energy is changed to mechanical energy.
- (ii) **Induction stove** : Electrical energy is changed to heat energy.
- E. Do it yourself.
- F. Do it yourself. □

## 8. Heavenly Bodies

### Exercise

- A. 1. (d)      2. (b)      3. (d)      4. (d)      5. (b)  
6. (c)
- B. 1. star      2. planets      3. crust      4. revolution
- C. 1. (b)      2. (f)      3. (d)      4. (e)      5. (c)  
6. (a)
- D. 1. Baisakhi, Pongal, Onam, Lohri and Bihu are linked to the seasons.  
2. Equator.  
3. The movement of the earth on its axis is called rotation.
- E. 1. **Difference between Stars and Planets**
- |    | Stars                                       | Planets  |
|----|---|--|
| 1. | Stars have their own heat and light.        | Planets do not have their own heat and light.  |
| 2. | Stars are huge in size compared to planets. | Planets are smaller in size compared to stars. |
2. The sun and its family of eight planets, along with their satellites, revolving around it make up the solar system.
3. Satellites are small heavenly bodies that revolve around planets. The moon is a natural satellite of the earth.
4. Seasons are caused due to the earth's tilted axis and its revolution around the sun.
- F. Do it yourself.
- G. Do it yourself.
- H. Do it yourself.
- I. Do it yourself. □

## 9. Changes in Weather

### Exercise

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- A. 1. (d)      2. (a)      3. (b)      4. (b)      5. (c)
- B. 1. sea breeze      2. land breeze      3. Fog
- C. 1. summer      2. cool      3. weather  
4. snow      5. upwards      6. rotation  
7. lighter
- D. 1. Weather is the condition of the atmosphere at a particular time, in terms of temperature, atmospheric pressure, wind and moisture. It can be hot, cold, windy, dry or humid.  
2. Condensation is the process when water vapour cools down to change into drops of water.  
Evaporation is the process of changing of water into water vapour due to heating.  
3. Insoluble impurities and soluble impurities are the two types of impurities in water.  
4. Chemicals like chlorine are used to kill germs at the waterworks in a city. This process of adding chlorine to water is called chlorination.  
5. The level of underground water in an area is called the water table.
- E. 1. Land breeze is the breeze that blows from land to sea. At night, the land cools down faster while the sea cools down slower. So the sea is warmer than the land. The hot air above the sea rises and the cooler air from the land blows over to the sea to take its place.  
2. **Hail** : When raindrops pass through a very cold region of the atmosphere, they freeze to form hail.  
**Snow** : When water vapour is suddenly cooled, it freezes into tiny white snowflakes.  
3. The water purification methods are :  
    ♦ **Filtration** : In this process, water is made free from impurities using a filter.  
    ♦ **Boiling** : Boiling kills the germs present in the water and makes it safe for drinking.  
    ♦ **Sedimentation** : To separate insoluble impurities, let the water stand for some time. Impurities heavier than water will settle at the bottom of the water leaving it clear. This is called sedimentation.
- F. Do it yourself.      G. Do it yourself.  
H. Do it yourself.      I. Do it yourself.  
J. Do it yourself.



# 10. Pollution and Its Prevention

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## Exercise

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- A.** 1. (c)      2. (c)      3. (b)      4. (c)      5. (c)
- B.** 1. harmful      2. smoke      3. flu
- C.** 1. Air, water, land      2. smoke      3. Plastic  
4. Wet, dry      5. pesticides, insecticides
- D.** 1. Land for building more houses and factories is made available by cutting down a large number of trees.  
2. Agricultural waste includes not only parts of plants but also weedicides and pesticides that are used to destroy weeds and pests.  
3. Typhoid and diarrhoea.  
4. Paper and rigid plastic products.
- E.** 1. People who live near ponds, lakes and rivers throw all kinds of waste into the water. They also wash clothes and utensils in river and pollute it.  
2. Typhoid and diarrhoea are the two ill-effects of water pollution.  
3. Some wastes like fruit and vegetable peels, things made of paper and wood, generally decompose or rot. Finally, they get mixed up with the soil. Such waste is called biodegradable waste.  
4. To check air pollution, we must get our vehicles fitted with CNG or LPG kits. CNG and LPG are non-polluting fuels. Regular pollution checks of vehicles help prevent air pollution.  
Tall chimneys with filters must be fitted in factories to release smoke and gases very high away from the populated places.  
5. An area of land where large amounts of waste material are buried is called landfill.
- F.** Do it yourself.      **G.** Do it yourself.  
**H.** Do it yourself.      **I.** Do it yourself.  
**J.** Do it yourself.



## Section II : Social Science

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# 11. Rich Indian Culture

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## Exercise

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- A.** 1. (c)      2. (b)      3. (b)      4. (a)      5. (b)  
6. (a)      7. (b)

- B.** 1. (e)      2. (d)      3. (a)      4. (c)      5. (b)
- C.** 1. Hindi    2. Men      3. folk      4. two      5. Ashoka
- D.** 1. Akshardham Temple      Statue of Unity  
 2. Baisakhi                      Bihu  
 3. Lavani                         Bihugeet  
 4. Pandit Birju Maharaj      Mallika Sarabhai  
 5. Terracota horses            Puppets
- E.** 1. The difference is that Hindi is written from left to right whereas Kashmiri is written from right to left.  
 2. In India, women wear sarees, salwar-kameez, skirts, shirts, jeans and gowns whereas men wear jeans, trousers, shirts, T-shirts, Kurta-pyjama and kurta-dhoti.  
 3. Folk dances are performed on birth of child, marriage, change of seasons, festivals and sowing and harvesting of crops.  
 4. Three monuments built by the Rajputs are Amber Fort, Chittorgarh Fort and Hawa Mahal.  
 5. Early humans painted on the walls of caves which are called cave paintings. The paintings at Ajanta caves show scenes from the life of Lord Buddha.  
 6. Handicraft is the activity of making decorative item by hand.
- F.** Do yourself.
- G.** 1. Hombill festival.  
 2. Hombill festival is celebrated in Nagaland to encourage inter-tribal interaction and to preserve, protect and revive the uniqueness and richness of the Naga heritage.
- H.** Do yourself.
- I.** Do yourself.



## 12. The Era of Exploration

### Exercise

- A.** 1. (b)      2. (c)      3. (d)      4. (d)      5. (a)
- B.** 1. (d)      2. (c)      3. (a)      4. (b)
- C.** 1. F      2. F      3. F      4. T      5. T
- D.** 1. European want to find a sea route to the east because the land trade route was controlled by the Arab traders who did not like the presence of the Europeans.  
 2. Bartholomew Diaz turn back from the cape of storms because sea was very rough there.

3. Vasco da Gama began his voyage from Lisbon in Portugal. He took the same route as Bartholomew Diaz, reached the Cape of Good Hope and sailed further northwards. In 1498, he reached Calicut and met Zamorin, the ruler of Calicut. He was the first European to reach India by sea. He loaded his ships with spices and went back to Europe where he sold them at a huge profit. Later, he made two more trips to India.
  4. Adjustable sails helped the sailors in adjusting the sails to the direction of the wind, so that the sailors could move their ships faster.
  5. The instruments used by sailors at sea are compass, quadrant and astrolabe.
- E. Sailors could not drink seawater because it is very salty.
- F. 1. cloves                      2. turmeric
- G. Do yourself.                      H. Do yourself.                      □

## 13.                      Our Country

### Exercise

- A. 1. (c)                      2. (c)                      3. (b)                      4. (c)
- B. 1. India                      2. Southern most                      3. 8  
4. Shillong                      5. Telangana
- C. 1. Asia                      2. Himalayas                      3. Chandigarh                      4. Rajasthan  
5. Hyderabad
- D. 1. Bharat is surrounded by the Arabian Sea in west, the Bay of Bengal in the east and the Indian Ocean in the south.  
2. Bharat's five neighbouring countries are Afghanistan, Pakistan, Nepal, Bhutan and Bangladesh.  
3. Jammu & Kashmir got two capitals.  
4. Seven Sisters are located in the north-eastern Bharat. Their names are Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland and Tripura.  
5. Five physical divisions of Bharat are Northern mountains, Plains-Northern and Coastal, Indian or western desert, Peninsular or southern plateaus and Islands.
- E. Do yourself.
- F. **Across (→)**  
4. RANCHI                      5. RAIPUR                      6. PORTBLAIR  
**Down (↓)**  
1. AGARTALA                      2. BENGALURU                      3. DISPUR
- G. Do yourself.                      H. Do yourself.
- I. Do yourself                      □

## 14. Northern Mountains

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### Exercise

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- A.** 1. (e)      2. (c)      3. (a)      4. (b)      5. (d)
- B.** 1. Mount Everest      2. Shiwalik      3. phiran  
4. Uttarakhand      5. Pelling
- C.** 1. Ganga      Yamuna  
2. Woollen Shawls      Scarves  
3. Arunachal Pradesh      Nagaland  
4. Lychee      Papaya  
5. Shillong      Cherrapunji
- D.** 1. The three parallel ranges of Himalayas are Greater Himalaya, Middle Himalaya and Outer Himalaya.  
2. Terrace Farming is popular in the mountains because there is no plain land in mountaneous regions, farmers have cut terraces along the slopes, where crops can be easily grown.  
3. Negaland is famous for its wood carving and pottery work.  
4. The main occupations of the people of Arunachal Pradesh are farming, wood carving, carpet weaving and making bamboo and cane products.  
5. Sikkim is famous for oranges, cardamom and orchids.
- E.** Do yourself
- F.** Do yourself.
- G.**      **NAME OF THE DRESS**      **STATE WHERE IT IS WORN**  
1. SARONG      KERALA  
2. PUAN      MIZORAM  
3. JAINSEM      MEGHALAYA  
4. RIKUTU      TRIPURA  
5. VATCHI      NAGALAND
- H.** Do yourself.
- I.** Do yourself.



## 15. Northern and Coastal Plains

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### Exercise

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- A.** 1. F      2. T      3. T      4. T      5. F
- B.** 1. plain      2. Beas      3. Tsangpo      4. Golden      5. Chhath

- C. 1. Alluvium                      2. Padma      3. Bihar      4. Arabian Sea  
5. Onam
- D. 1. Rivers bring silt and deposit it in the northern plains. This silt makes the northern plains fertile.  
2. The names of the four monuments in Delhi are Red Fort, Qutub Minar, India Gate and Lotus Temple.  
3. The western coastal plains is divided into three parts.  
4. The main occupations of the people living in coastal areas are farming and fishing.  
5. Rubber, coconut, rice, tea, coffee and spices are the crops grown in Kerala.
- E. Salt is made from sea water so it can be possible only in coastal areas.

F.	State	Festival	Dance	Main Language	City
	Punjab	Lohri	Bhangra	Punjabi	Amritsar
	Tamil Nadu	Pongal	Bharatnatyam	Tamil	Chennai
	Kerala	Onam	Kathakali	Malayalam	Thiruvananthapuram
	Gujarat	Navaratri	Ras-Garba	Gujarati	Ahmedabad
	West Bengal	Durga Puja	Kirtan dance	Bangla	Darjeeling
	Assam	Bihu	Bihu	Assamese	Digboi

- G. 1. No                      2. No                      3. No                      4. No
- H. Do yourself.



## 16. Great Indian Desert

### Exercise

- A. 1. (c)      2. (a)      3. (a)      4. (b)      5. (b)
- B. 1. F                      2. T                      3. T                      4. F
- C. 1. sand dunes      2. oasis                      3. taankas                      4. Ghoomar  
5. Jaipur
- D. 1. The Thar Desert remains hot and dry throughout the year as it receives very little or no rainfall. In summer, days are very hot and nights are cool. In winter, days are warm and nights are very cold.  
2. The land around on oasis is fertile where people grow crops. Thus, most villages are located around on oasis.

3. Indira Gandhi Canal is important for the region as it provides water for domestic use and irrigation.
  4. People who travel from one place to another in search of food for their animals are called banjaras.
  5. The walls of houses in Rajasthan are thick because thick walls keep the heat away which keeps the house cool.
- E. Rice is not grown in this region because of the low availability of water to irrigate the crop.
- F. Do yourself.
- G. Do yourself.
- H. Do yourself.
- I. Do yourself.



## 17. Southern Plateaus and Islands

### Exercise

- A. 1. Karnataka                      2. Nilgiri      3. Madhya Pradesh  
4. Ganesh Chaturthi      5. Port Blair
- B. 1. T              2. T              3. T              4. F              5. F
- C. 1. Narmada                      2. Godavari      3. Panna      4. Telangana
- D. 1. The Central Highlands are surrounded by the Aravalli Hills in the north-west the Vindhya Range in the south, the Chhota Nagpur Plateau in the east and the Rajmahal Hills in the north-east.
2. Coal, iron ore, copper, manganese and tin are found in the southern plateaus.
3. Mining is an important activity in Chhattisgarh as it has rich reserves of minerals.
4. Mumbai high has great importance because it has large deposits of petroleum.
5. Andaman and Nicobar Island and Lakshadweep Island.
- E. Do yourself.
- F. 1. Madhya Pradesh                      4. Mumbai  
2. Chhattisgarh                      5. Karnataka  
3. Telangana                      6. Jharkhand
- G. Do yourself.
- H. Do yourself.
- I. Do yourself.





# 18. The Agriculture

## Exercise

- A.** 1. (e)      2. (a)      3. (d)      4. (b)      5. (c)
- B.** 1. agriculture      2. farmers      3. food      4. sugarcane  
5. Uttar Pradesh
- C.** 1. Buffalo      Cow  
2. Jowar      Bajra  
3. Flowers      Fruits  
4. Moong      Masoor  
5. Jute      Cotton
- D.** 1. A variety of crops are grown in India because it has a favourable climate, fertile soil and good irrigation facilities.  
2. Food Crops : Food crops are the crops which are grown to be used as food. Some such examples are rice, wheat, millets and pulses.  
Cash Crops : Cash crops are the crops which are grown to be used in industries or for sale in the market. The main cash crops are sugarcane, cotton, jute, tea and coffee  
3. Indian Agricultural production increased after independence due to the following factors :  
    ♦ Use of better quality seeds.  
    ♦ Better irrigation facilities and more area being brought under irrigation.  
    ♦ Use of fertilizers and pesticides.  
    ♦ Use of modern agricultural machinery like tractors, cultivators and harvesters.  
4. Cows and buffaloes are very useful for us as they give us milk while their waste is used as manure. Bullocks are useful to us because they are used to plough fields, draw water from wells and pull carts.  
5. Andhra Pradesh, Chhattisgarh and West Bengal.
- E.** Do yourself.
- F. Across (→)**  
3. MAWSYGRAM      4. BRICK  
7. LARGE      9. TEA  
10. EARTHWORM
- Down (↓)**  
1. HORTICULTURE      2. FAX  
5. SUMMER      6. METRO  
8. COTTON

- G. Do yourself.  
 H. 5            7            3            6            1            4            2  
 I. Do yourself.  
 J. Do yourself.



## 19. The Natural Resources

### Exercise

- A. 1. (c)            2. (b)            3. (c)            4. (b)
- B. 1. air, water, soil, minerals  
 2. Buildings, roads, electricity, machine  
 3. Iron, Copper, Coal, Petroleum
- C. 1. T            2. F            3. T            4. T            5. F
- D. 1. Two types of resources are natural resources and human-made resources :  
     Natural Resources            →            Copper and Coal  
     Human made Resources        →            Building and Roads
2. Resources which cannot be created once they are exhausted are called exhaustible resources. Metals, coal and petroleum are examples.  
 Resources which do not get exhausted are called inexhaustible resources. Solar energy, air, water, plants and animals are examples.
3. Different uses of coal are :  
     ◆ to cook food  
     ◆ generate electricity  
     ◆ to run steam engines  
     ◆ to run factories
4. Air and water.
5. Some ways to conserve natural resources are as follows :  
     ◆ We must not pollute air, water and soil.  
     ◆ We must plant more trees.  
     ◆ We must not kill wild animals.  
     ◆ We must save electricity.  
     ◆ We must develop alternate sources of energy.
- E. Do yourself.  
 F. Do yourself.  
 G. Do yourself.
- H. 1. 1. I            2. E            3. I            4. I  
     5. E            6. I

2. 1. SOLAR R      2. PETROLEUM N      3. WATER R  
 4. COAL N      5. WIND R      6. WOOD N

I. Do yourself. □

## 20. The Mineral Resources

### Exercise

- A. 1. Mines                      2. Metallic minerals      3. Coal  
 4. Oilfield                      5. Mineral Oil              6. Mumbai high
- B. 1. Limestone              2. Iron ore                      3. Bauxite  
 4. Iron ore, Copper      5. Manganese
- C. 1. All rocks are made up of natural substances called minerals while a rock that contains a large amount of a particular minerals is called its ore.  
 2. Mineral are divided into two groups : Metallic minerals and Non-metallic minerals. Iron and copper are metallic minerals and Limestone and coal are non-metallic minerals.  
 3. Coal and petroleum are used as fuels, they are also called mineral fuels.  
 4. An area or region with a number of oil wells is called an oilfield while the place where petrol, kerosene oil, diesel and cooking gas is obtained by refining mineral oil is called refinery.  
 5. The Earth's mineral reserves are limited and cannot last forever. Once they are used, they get exhausted. So we must use the available mineral reserves very carefully.
- D. Do yourself.
- E. 1. GOLD                              3. BAUXITE  
 2. COAL                                4. LIMESTONE
- F. Do yourself.
- G. Do yourself. □

## 21. Local Self-government in Urban Areas

### Exercise

- A. 1. gram panchayat                      2. mayor                      3. hospital  
 4. taxes                              5. 18

- B.** 1. T                    2. T                    3. F                    4. F
- C.** 1. ward                2. local                3. state                4. mahanagar
- D.** 1. The local self-government is the government elected by the people at the local level provides civic amenities to the people.
2. The local government which works in small city is called a municipal committee while the local government works in big city, where the population is more than 10 lakh, is called municipal corporation.
3. The members of a municipal committee or corporation are elected by the people living in that particular city.
4. Five functions performed by local self-governing bodies are keep the city clean, build and repair roads, install and repair street lights, set up and maintain public toilets open and run dispensaries.
5. Local bodies collect money through taxes and they also get money from the state government.
- E.** People aged 18 years and above can vote in municipal elections.
- F.** Do yourself.
- G.** Do yourself.
- H.** Do yourself.



## 22.                    Fundamental Rights and Duties

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### Exercise

- A.** 1. (d)                    2. (c)                    3. (d)                    4. (b)
- B.** 1. T                    2. F                    3. T                    4. T
- C.** 1. Republic            2. six                    3. freedom            4. 14
5. minorities
- D.** 1. The constitution is a set of rules according to which the government governs the country.
2. Our constitution gives some basic rights to every citizen called Fundamental Rights.
- There are six Fundamental Rights :
1. Right to Equality
  2. Right to Freedom
  3. Right against Exploitation
  4. Right to Freedom of Religion
  5. Culture and Educational Rights
  6. Right to constitutional Remedies

3. Three fundamental duties are :
- To abide by constitution
  - To take care of the environment
  - To take care of public property
4. Our Constitution provides some guidelines, called Directive Principles, for the government to ensure the welfare of the people. The Constitution asks the government to make sure that :
- ◆ People have proper living conditions.
  - ◆ Every child goes to school.

- |                           |                           |
|---------------------------|---------------------------|
| <b>E.</b> Do it yourself. | <b>F.</b> Do it yourself. |
| <b>G.</b> Do it yourself. | <b>H.</b> Do it yourself. |
| <b>I.</b> Do it yourself. | <b>J.</b> Do it yourself. |

