Based on
NEP 2020

Explore Green World System

5

A Book of Environmental Studies

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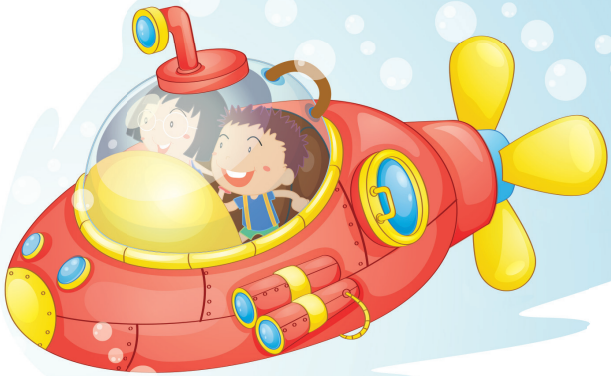
B. Com



Teacher Manual

BEST WAY PUBLICATIONS

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1. Sources of Food- Plants and Animals

ACADEMIC ASSESSMENT

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

B. 1. Food is one of our basic needs. It is eaten by us and animals to get nutritional support for the body. It contains various nutrients.

2. Spinach and lettuce are examples of leafy vegetables.

3. Potato, carrot and radish are example of root vegetables.

4. A healthy nutritious food must contain all the nutrients needed for the proper growth of our body such as carbohydrates, fats, proteins, vitamins and minerals etc.

5. We get our food mainly from two sources
   (i) Plants– They are excellent source of food. Various parts of plant such as seeds, roots, leaves and fruits are eaten by us. We get nutrition from maize (corn), wheat and rice.
   (ii) Animals– They give many key nutrients to our body. We eat animals food directly or indirectly. For example: meat, milk and milk products etc.

C. 1. plants, animals 2. Milk 3. Seeds 4. Meat 5. Nutrient

D. 1. F 2. F 3. T 4. F 5. T

E. 1. (d) 2. (f) 3. (a) 4. (b) 5. (c) 6. (e)

2. Cultivation of Crops

ACADEMIC ASSESSMENT

A. 1. (a) 2. (b) 3. (a) 4. (c) 5. (c)

B. 1. No. It is because the crops are grown according to climate, nature of soil and availability of water.

2. Agriculture is vital fours as in its absence, there will be no crops, no food. Hence, we will not be able to survive. So, agriculture is a must for all of us.

3. Here, the soil is loosened and turned. It is done with an iron/wooden plough. Earlier, animals were used to pull the ploughs in small fields. Today, it is done by tractors.

4. Now a days, farmers frequently spray pesticides and insecticides in their fields to kill pests and other insects to protect their crops. Besides, farmers also put up scarecrows in the fields to scare away birds.

5. The term irrigation refers to providing proper amount of water to the crops by the farmers. It is very essential in our country as there is less rain in our country. For want of water, the crops will not get ripened. Hence, the irrigation is done by the farmers.

6. FCI or Food Corporation of India is a government-owned agency. It keeps the crops safe in its godowns spread across India. It gives a great support to the farmers.

C. 1. field 2. ploughing 3. Levelling 4. fertilisers 5. weeding

D. 1. F 2. T 3. F 4. T 5. F

E. 1. (b) 2. (c) 3. (d) 4. (a) 5. (e)

3. Our Needs and Wants

ACADEMIC ASSESSMENT

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

B. 1. The things needed for our survival in nature and society are known as our needs.

2. The poor people do not get adequate food. So, they remain malnourished.

3. We need clothes to keep us safe from heat, cold, rain, germs, dust and dirt. They give us civilised look.

4. Advanced means of transport and communication play a crucial role for us in the time of our need.

5. To refresh ourselves, we take help of means of recreation and entertainment. Besides, we also play games, go for a picnic, and spend time in nature or watch a movie on television.

6. Education is a key for our growth and development. It expands our knowledge and broadens our outlook. It also enables us to stand with the other people of the world.

7. The healthcare agencies refer to the hospitals, healthcare centres and dispensaries which treat the sick people prevent them from diseases. They have various medical facilities which also include vaccination.

8. • A glass of water is a need to quench our thirst but a glass of juice is a want.
• A house is a need but a bungalow is a want.
• A simple car is a need to visit our friend but a luxury car is a want.

C. 1. water 2. food 3. house 4. transport 5. want

D. 1. F 2. T 3. T 4. F 5. T

4. Skeletal and Muscular System

ACADEMIC ASSESSMENT

A. 1. (b) 2. (c) 3. (c) 4. (c) 5. (a)

B. 1. Our body has more than 650 individual muscles. They are attached to the skeleton, giving pulling power to the body to move around. It primarily gives movement to the body.

2. The human skeletal system is the structure of bones. It gives support to body It keeps the internal organs safe and provides power and shape to out body.

3. The muscles in which we can control the movement by ourselves are called voluntary muscles and the one we cannot control are called involuntary muscles.

4. Hinge joint– It is found in the elbows, knees and the joints of fingers and toes. Movement is only in one direction. Gliding joint– It is found between the various bones of the wrist and ankle. It allows the movement to short distances. Saddle joint– It is a kind of biaxial and movable joint. Movement is allowed in two directions.

5. Bone Marrow– It makes the components to blood, i.e., RBC's and WBC's in the blood that is essential for us.
Cardiac Marrow– It is responsible for the contractility of the heart, and therefore the pumping action
Joints– They allow us to move our body.

6. When a muscle contracts it gets shorter and so pulls on the bone. As one muscle contracts and gets shorter, another relaxes and comes back to normals length. They make our body movement possible. They keep our heart continuously. They also produce heat which keeps our body warm.

C. 1. group 2. root 3. 22 4. joint 5. spine 6. 650

D. 1. (b) 2. (a) 3. (e) 4. (c) 5. (d)

E. 1. T 2. F 3. F 4. T 5. T

5. Deficiency Diseases

ACADEMIC ASSESSMENT

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

B. 1. The nutrient deficiency diseases refer to those ones which are caused by deficiency of some nutrients in our diet. They are non-communicable.

2. Deficiency of vitamin A causes night blindness.

3. Vitamin A, B, C, D, E and K.

4. When the haemoglobin in the blood is not sufficient, it leads to anaemia. It is due to lack of iron. To avoid it, the patients must be given spinach, apple, cabbage, guava, meat and pulses in their diet.

5. Sodium helps the nerves to transmit messages, and the muscles to control over the movements of the body parts. So we should take it in our diet.

6. We can prevent goitre by taking iodine in our diet in plenty. We must use sea salt or iodised salt. Iodine is also obtained from seafood like prawns, crabs, fish, etc.

7. Calcium is very important minerals for the bones and teeth. Its deficiency makes bones and teeth weak. The bones become brittle and teeth lose their shine.

C. 1. T 2. F 3. T 4. F 5. T 6. F

D. 1. (d) 2. (a) 3. (f) 4. (b) 5. (c) 6. (e)

E. 1. Carrot, Milk 2. Orange, Amla 3. Vegetable Oil, Sprouted pulses
4. Spinach, Cabbage 5. Butter, Fish 6. Iodised Salt, Sea food

6. Communicable Diseases

ACADEMIC ASSESSMENT

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

B. 1. Bacteria, virus, fungi and protozoa are the microbes that spread infection among the people. So, they are called the infectious diseases.

2. Diseases spread from a sick person to a healthy person through air, contaminated food and water, direct contact with the sick person and wearing his/her clothes etc.

3. Bacteria, virus, fungi and protozoa are the microorganisms that spread communicable diseases.

4. Measles, itch, chicken pox, ringworm, common cold, whopping cough, etc. spread through the direct contact with the sick person.

5. We should keep the sick person in complete isolation and disinfect his/her belongings properly for the safety of the other members of the family.
• We should kill the germs that remain in the room after the recovery of the patient by spraying disinfectants.
• We should use covered dustbins to collect garbage waste materials etc. and dispose them off regularly.

6. Dengue and Malaria diseases are caused by the female Aedes mosquito and female Anopheles mosquito respectively.

C. 1. bacterial 2. viral 3. tuberculosis 4. bacteria 5. vaccination

D. 1. (d) 2. (c) 3. (a) 4. (b)

E. 1. influenza, chickenpox 2. measles, itch 3. diarrhoea, cholera
4. malaria, dengue

7. Plant Reproduction

ACADEMIC ASSESSMENT

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

B. 1. The plants reproduce in the following ways: From seeds, from spores, from roots, from leaves and from stems etc.

2. A ginger has buds on it from where new shoots will grow on planting it in soil. The food is stored in it. In short, new ginger plant will grow from underground stem.

3. Rose, hibiscus, cotton, money plant, sugarcane and bougainvillea are the plants that can be grown from the stem cutting.

4. There are some new plants that grow from the parts of the mother plants. They grow from roots, stems and leaves. Such type of reproduction is called vegetative propagation.

5. The process by which a seed grows into a seedling is known as the germination. A seedling grows into a plants when it receives proper amount of water, air and sunlight.

6. Plants are unable to move from their places. So, they scatter their seeds through various methods. This scattering away of seeds from the mother plant is called dispersal of seeds. Wind, water birds, insects and animals are known as the agents of dispersal of seeds.

C. 1. spores 2. stems 3. Bryophyllum 4. Cotyledons 5. water

D. 1. (b) 2. (d) 3. (a) 4. (f) 5. (c) 6. (e)

E. 1. F 2. T 3. T 4. T 5. T

8. Sense Organs in Animals

ACADEMIC ASSESSMENT

A. 1. (a) 2. (a) 3. (c) 4. (b) 5. (c)

B. 1. The key sense organ in ants is the pair of antennae. Ants use them to touch, smell and communicate with the other members of the group.

2. Dogs have very sharp sense of smell. In the nose of a dog, small smell detectors cover a membrane about 50 times greater than our nose.

3. Bats produce a high pitched sound. When these sound waves meet an object, they create an echo which bounces back. They hear these echoes and pinpoint their target. It is called echolocation.

4. Cockroaches and spiders use their sense of touch to locate their prey and enemies. They use the hair on their legs to detect sound of their enemies.

5. The are some animals that sleep all winter. This very long and deep sleep is known as hibernation. Snakes, frogs, lizards, black bears and squirrels etc. hibernate in winters.

6. Whiskers of a cat help it to locate its prey.

C. 1. smell 2. nocturnal 3. touch 4. whiskers 5. taste

D. 1. (2) 2. (3) 3. (5) 4. (1) 5. (4)

E. 1. T 2. F 3. F 4. T 5. T

9. Aquatic Plants and Animals

ACADEMIC ASSESSMENT

A. 1. (a) 2. (a) 3. (a) 4. (a) 5. (c)

B. 1. The plants that are found in water are called aquatic plants. For example: lotus, hydrilla.

2. Free-floating Plants– They float freely on the surface of water in pounds and lakes. E. g.— Duckweed.
Rooted floating Plants– These plants' roots are fixed to the soil. E. g.– Lotus and waterlily.
Submerged Plants– They are fixed to the soil and are fully submerged in water. E. g.– Vallisneria and hydrilla.

3. Fish breathe through their gills in water. Gills can take the oxygen dissolved in water.

4. The free-floating plants are small in size. Their stems are spongy with a lot of air spaces which enable them to float on the surface of water. In fact, they are not attached to the soil.

5. Water pollution is a big danger to marine life. It is caused due to:
- Disposal of harmful wastes from industries into rivers.
- Disposal of sewage from the big cities into rivers.
- Accidental oil spills into the sea water.

6. There are many water birds who are having special webbed feet which enable them to swim in water. Ducks, pelicans, geese and swans, water birds have webbed feet.

C. 1. (b) 2. (a) 3. (d) 4. (e) 5. (f) 6. (c)

D. 1. Submerged 2. Salamander 3. webbed 4. streamlined 5. crustaceans

E. 1. Hydrilla 2. Seahorse 3. Whale 4. Electric Ray

10. Matter and Its Properties

ACADEMIC ASSESSMENT

A. 1. (b) 2. (b) 3. (c) 4. (a) 5. (c)

B. 1. Anything which occupies space and has some mass is called matter. It is made of molecules.

2. Solids– They have definite shape and size. E. g.– Pen, book, ball, jug etc.
Liquids– They do not have a fixed shape but have a fixed volume. E. g.– Water, oil, milk, etc.
Gases– They do not have fixed shape and volume. They do not occupy a fixed shape.

3. The molecules in a solid are closely packed, therefore, they (solids) have a definite shape. They take up space and have volume. Every solid has some weight too.

4. Gases do not have fixed shape and volume. They do not take up a fixed space. They can expand to fill up whole space. The molecules of gases are very loosely packed and can move freely in all directions.

5. Various materials have various solubilities. Take some sugar, salt, oil and sand in various containers. Now, pour water in each container. Stir the substances in water and try to dissolve them. We see that sand and oil do not dissolve in water while sugar and salt dissolve in water easily. This is known as solubility.

6. Sugar and salt are the soluble substances.

C. 1. Molecules 2. gases 3. densities 4. soluble 5. matter

D. 1. F 2. F 3. T 4. T 5. F 6. T

E. 1. Sugar, Salt 2. Wood, Sand

Model Test Paper – 1 Based on Chapters 1 to 10

A. 1. (c) 2. (b) 3. (c) 4. (a) 5. (b)

B. 1. protein 2. mosquito 3. roots 4. whiskers 5. aquatic 6. Clean water

C. 1. T 2. F 3. T 4. F 5. F 6. T

D. 1. (v) 2. (iv) 3. (i) 4. (ii) 5. (iii)

E.

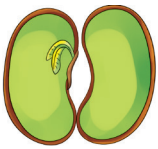
Dandelion muscles

Water hyacinth

Goitre

Cardiac

Wheat thresher



Cotyledons

F. 1. Plant like rose, hibiscus sugarcane, etc. can be grown through stem cutting.

2. The Plant that live in water are called aquatic plants. For example: Lotus, water, lily, tapegrass, water, hyacinth, etc.

3. The three states of matter are:

(i) Solids– Solids are the materials which have a definite shape and size. For examples: Pen, ball, book, etc.

(ii) Liquids– Liquids are the materials which do not have a fixed shape but have a fixed volume. For examples: Oil, water, milk, etc.

(iii) Gases– Gases do not have fixed shape and volume. They can expand to fill up whole space. For examples: Oxygen, carbon dioxide, nitrogen, etc.

4. The process of separating grains from the harvested crop is called threshing.

5. (i) We are feeling thirsty, so, we are in need of a glass of water is a need, but a glass of juice is a want.

(ii) We need a car to visit our friends. We can go there is any car, but we demand a luxury car. Here, a car is need, but a luxury car is a want.

6. Sense of smell (nose organ) is very sharp in dogs.

7. Plants like cotton, money plant, bougainvillea, etc. can be grown through stem cutting.

11. Force and Energy

ACADEMIC ASSESSMENT

A. 1. (c) 2. (a) 3. (c) 4. (b) 5 (a)

B. 1. Energy refers to the ability to do work.

2. Various types of forces are as under:
   • Gravitational force, Frictional force, Elastic force, Mechanical force and Buoyant force.

3. Renewable sources of energy– solar energy, wind energy, geothermal energy and the energy of the tides etc. Non-renewable sources of energy– fossil furls (coal, oil, natural gas) energy, nuclear etc.

4. The key source of hydro energy is water. To create such energy, water falls down from a height on a turbine which in turn moves and generates electricity (hydro energy). Such type of electricity is called hydropower.

5. A pulley refers to a small wheel having a groove around its circumference. It enables us to lift heavy objects, when used with a rope. A pulley has two kinds - fixed pulley and movable pulley.

6. There are many kinds of energy. Wind energy is one of them. It is environment friendly as it does not create any kind of pollution. Such energy is very useful where it is very windy. It is a renewable source of energy.

C. 1. pulley 2. Inclined plane 3. food 4. gravitational force 5. Sun 6. forms

D. 1. F 2. F 3. F 4. T 5. T

E. 1. (d) 2. (e) 3. (a) 4. (c) 5. (b)

12. Natural Disasters

ACADEMIC ASSESSMENT

A. 1. (b) 2. (c) 3. (c) 4. (b) 5. (c)

B. 1. The huge damage or loss of life caused by forces of nature are called the natural disasters.

2. The natural disasters affect the human lives in a big way. They cause irreparable loss of human lives, livestock, property, and financial loss too.

3. A flood takes place when a river bursts of its bank and water pours into the adjacent plains and as a result they get submerged in the rive water. It is called a disaster as it causes huge loss to life and property worth crores.

4. An earthquake is called a disaster as a high intensity earthquake can have the power to destroy/demolish an entire city within a few seconds. I 2015, a severe and devastating earthquake occurred in Nepal, killing 10,000 people and destroyed many cities there.

5. The intensity of the earthquake is measured on the Richter Scale device called Seismograph.

6. • We can help the victims to contact their relatives and friends.
   • We can encourage our relatives and friends to come forward and rebuild the victim s' lives.
   • We can collect food items, clothings, shoes, medicines, life saving drugs, bedsheets, towels, blankets and quilts for the victims.
   • We can also collect money and provide financial help to the victims.
   • We can make temporary shelters for the victims.

C. 1. flood 2. drought 3. Afforestation 4. Seismograph 5. earthquake

D. 1. F 2. F 3. T 4. T 5. F

E. 1. (b) 2. (d) 3. (a) 4. (c)

13. Fuels for Vehicles

ACADEMIC ASSESSMENT

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

B. 1. The fuel that is formed from the remains of dead plants and animals that get buried under the earth millions of years ago is called fossil fuel.

2. We need fuels for running vehicles, for cooking food, for heating, etc.

3. Fossil fuels are called non-renewable sources of energy as they are available in a limited quantity to us. We cannot create them, if they are used up once completely.

4. The key oil producing centres in India are : Mumbai High, Digboi, Cambay, Sibsagar and Ankaleshwar etc.

5. Natural gas like C.N.G is used as a fuel in running vehicles. L.P.G. and P.N.G. are used as fuels in our household for cooking food, C.N.G. is cheaper than petrol and diesel.

6. Some alternate sources of fuels that can be used in place of petrol are as under:
   • Liquefied hydrogen is used as fuel in spacecrafts.
   • Alcohol which is get by fermenting sugarcane, is widely used to run cars in Brazil.
   • Bio-diesel, which is made from vegetable oils and animal fat, is used to run vehicles in various European countries.

C. 1. fuel 2. fossil fuel 3. Bio-diesel 4. natural gas 5. Coal 6. hydrogen

D. 1. T 2. F 3. F 4. F 5. T

E. 1. (d) 2. (b) 3. (e) 4. (a) 5. (c)

14. Interdependence in Environment

ACADEMIC ASSESSMENT

A. 1. (a) 2. (b) 3. (c) 4. (a) 5. (a)

B. 1. Our Earth is surrounded by a layer of air known as the atmosphere.

2. Biotic components– The living beings found on the earth are called biotic components of the environment. E. g.– plants, animals, human beings, etc. Abiotic components– All the non-living things found on the earth are called abiotic components of the environment. E. g.– Air, water, sunlight, etc.

3. Animals are dependent on plants for food and shelter. Squirrels make dreys in the tree trunks. Birds make their nests. Monkeys live on tree branches. Zebras, giraffes and elephants etc. live under the tree shade.

4. Plants are consumed by herbivores. Therefore, they are known as the primary consumers. For example: a grasshopper eat the plants. Similarly, cows and deers also eat the plants.

5. • The cutting of tees should be banned completely. We should encourage people to grow more trees.

• There should be a heavy penalty on the factories and vehicles which release smoke and ashes.

C. 1. interdependent 2. abiotic 3. food 4. flesh 5. plants,
6. producers 7. Decomposers

D. 1. F 2. F 3. T 4. T 5. T

E. 1. (c) 2. (a) 3. (d) 4. (b)

15. Changes in Our Environment

ACADEMIC ASSESSMENT

A. 1. (b) 2. (c) 3. (a) 4. (b) 5. (a)

B. 1. A rise in the temperature of earth is called the Greenhouse effect. Our earth's atmosphere is a thick blanket of gases. They trap the energy and radiation from the sun and don't let the energy escape back into space. It leads to rise in the temperature of the earth, thereby causing Greenhouse effect.

2 Carbon dioxide, methane, water vapour, ozone and CFC are Greenhouse gases as they increase earth's temperature.

3. Van Mahotsava is celebrated every year in India to save environment by planting more trees as keep the air clean. It is celebrated in the month of July every year.

4. Global Warming means the after-effect of greenhouse effect. The radiation trapped by the greenhouse gases gives rise to heat and temperature on the earth's surface.

5. Pollution means the contamination of the atmosphere particularly air , water and land with harmful or poisonous substances.

- We should not burn leaves in the open. We should not use vehicles for covering short distances.
- We should not throw waste in water bodies. We should not bathe our animals in water bodies.

6. • Waste material can be utilised by melting, reshaping and converting things like cans, bottle caps, metal sheets, pipes and gets into useful products.
- Craftsmen buy metal scrap to make frames, statues, etc.
- Plastic can be used to make plastic bag and food packing plastic. Plastic containers can be reused as yoghurt pots to grow seedlings.

C. 1. C.N.G. 2. ice free 3. Earlier 4. components 5. scrap 6. 36-70%

D. 1. F 2. T 3. T 4. F 5. F 6. T

E. 1. (d) 2. (a) 3. (e) 4. (b) 5. (c)

16. Beyond the Earth

ACADEMIC ASSESSMENT

A. 1. (b) 2. (c) 3. (a) 4. (b) 5. (c)

B. 1. The area beyond the upper limit of the earth's atmosphere is called space.

2. They are: Mercury, Venus, Earth, Jupiter, Saturn, Uranus, Mass and Neptune.

3. Artificial satellites refer to the man-made satellites that have been launched into space. E. g– Sputnik-I was the first artificial satellite. The have following types: • Weather Satellites • Communication Satellites • Space Satellites.

4. The earth is called the 'Blue Planet' as it appears blue in colour when seen from space. It is due to the presence of water (71% of the earth's surface is covered with water) on the earth.

5. Kalpana Chawla was the first Indian woman who went into the space. Her first space mission started on 19 November, 1997 as part of the six-astronaut crew that flew in the space shuttle Columbia.

C. 1. orbit 2. planets 3. earth 4. Space 5. Communication 6. Yuri Gagarin

D. 1. Sun 2. Uranus 3. Edwin Aldrin 4. Natural satellite

E. 1. F 2. F 3. F 4. T 5. T

17. Our Atmosphere

ACADEMIC ASSESSMENT

A. 1. (c) 2. (c) 3. (b) 4. (a) 5. (b)

B. 1. Air is mainly composed of nitrogen and oxygen with few other gases. Dry and clean air contains approximately 78% of nitrogen, 21% of oxygen and 1% of other gases.

2. The amount of water vapour present in the air is known as humidity.

3. We know that water continuously evaporates from water bodies which gets collected in the air. Water vapour present in the air also make the weather to change. It can be condensed and causes clouds, Fog, rain and snow to take place.

4. All living beings need air to breathe. Plants use carbon dioxide from the air to make their food and release oxygen. It is also responsible for burning of any object (or fire). It helps in flying parachutes and gliders and in sailing boats etc.

5. The atmosphere has the following five layers that surround the surface of the earth in vertical direction:
• Troposphere • Stratosphere • Mesosphere • Thermosphere • Exosphere

6. Air is mainly composed of 78% nitrogen and 21% oxygen and 1% other gases. Composition of air does not change as we travel through the layers of the atmosphere. Oxygen– It is called a life-giver gas. Nitrogen– It is used by plants mainly. Carbon dioxide– It is also used by plants for making their food.
Hydrogen, Helium, Neon, Argon, Ozone, Krypton and Xenon are some other gases found in the air.

C. 1. air 2. Exosphere 3. mixture 4. quantity 5. Stratosphere 6. generates

D. 1. (d) 2. (f) 3. (e) 4. (a) 5. (b) 6. (c)

E. 1. F 2. T 3. T 4. F 5. T 6. F

18. Freedom Fighters of India

ACADEMIC ASSESSMENT

A. 1. (a) 2. (a) 3. (b) 4. (c) 5. (c)

B. 1. Gandhi ji launched the Non-Cooperation Movement in (1919), Civil Disobedience Movement in 1930 and Quit India Movement in 1942 to force the British to leave India.

2. Bal Gangadhar Tilak started many schools for Indians. He wrote fiery articles against the British Government and published them in his newspaper named Kesari. He encouraged people to actively take part in the struggle for India's freedom. He was a great patriot in true sense.

3. Subhash Chandra Bose was born on 23 January, 1897 in Cuttack, Odisha. He was popularly called 'Netaji'. He was one of the greatest freedom fighters. He wanted to give a new expression to the national movement. So, he formed the Indian National Army.

4. In 1943, Subhash Chandra Bose formed Indian National Army in Singapore and began struggle against the British with the help of Japan. During World war-II Japan collapsed, and the INA also met with the defeat. Netaji left India.

5. Bhagat Singh was born on 28 September, 1907 in Punjab. He joined the Non-cooperation Movement. He came into contact with another revolutionary Chadra Shekhar Azas his revolutionary feelings became much stronger. He threw a bomb in the Central Assembly oppoping the 'Public Safety Bill' on April 8 in 1929. He was caught and hanged on 23 March, 1931 along with Rajguru and Sukhdev. He is widely titled as Shaheed-e-Azam Bhagat Singh.

C. 1. 1947 2. Mahatma Gandhi 3. Jawaharlal Nehru
4. Bhagat Singh 5.Subhash Chandra Bose

D. 1. T 2. F 3. T 4. F 5. T

E. 1. (d) 2. (e) 3. (b) 4. (a) 5. (c)

19. Maps and Globes

ACADEMIC ASSESSMENT

A. 1. (b) 2. (a) 3. (b) 4. (a) 5. (a)

B. 1. A map refers to a drawing of the earth or any part of it. It gives us information about a place.

2. A map is easier to carry than a globe as it can be folded, rolled or put in a book.

3. Physical maps display physical features– Such as landforms, mountains, deserts, plains, plateaus, etc.
Political maps display political boundary, states, their capitals, key cities/ towns of a nation and capital of a country.

Thematic maps give us the every detail of any one theme relating that country.

4. Equator– O° latitude, Tropic of cancer– 23½° N, South pole– 90° S.

5. The Prime Meridian refers to the most key, line of longitude which passes through a place, known as Greenwich in England. It is the beginning point for the numbering of meridians. O° longitude is the Prime Meridian.

6. Continents of the world are as under: North America, South America, Africa, Europe, Asia, Australia and Antarctica.

Oceans of the world are under:
Pacific Ocean, Arctic, ocean, Atlantic ocean, Southern ocean Indian ocean

C. 1. political 2. North 3. three 4. globe 5. equator

D. 1. T 2. F 3. T 4. T 5. F

E. 1. (b) 2. (c) 3. (e) 4. (d) 5. (a) 6. (f)

20. Dignity of Labour

ACADEMIC ASSESSMENT

A. 1. (c) 2. (a) 3. (c) 4. (c) 5. (a)

B. 1. All of us need to work to earn our living.

2. The two types of work are manual or physical and labour intellectual labour. A mason, gardener or a rickshaw puller do manual labour while a teacher, engineer or a doctor do intellectual labour.

3. 'Dignity of labour states that all workers– doing manual labour or intellectual labour, should be treated equally and respectfully. No worker should be discriminated on the basis of her/his occupation.

4. Rabindranath Tagore and Swami Vivekananda taught us about dignity of labour. Tagore said that the God is there where a labourer is working on the road in scorching heat of the sun.

5. It is very essential to respect all kinds of works and worker. It is a fact that no nation can progress if its people are not hardworking. It is the labour which is the base of a nation. The economy of a nation largely depend on agriculture, industry and trade. So, we should respect all kinds of works and workers.

C. 1. manual 2. ashram 3. Social 4. laborious 5. occupation

D. 1. (c) 2. (d) 3. (e) 4. (a) 5. (b)

E. 1. T 2. F 3. F 4. F 5. T

Model Test Paper – 2 Based on Chapters 11 to 20

A. 1. (a) 2. (b) 3. (c) 4. (a) 5. (c)

B. 1. Pt. Jawaharlal Nehru 2. plains 3. stratosphere
4. Yuri Gagarin 5. methane 6. air

C. 1. (b) 2. (c) 3. (e) 4. (d) 5. (a) 6. (f)

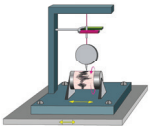
D. 1. F 2. T 3. F 4. F 5. T 6. F

E.


Globe


Bhagat Singh


Soil pollution


Seismograph


Windmill


Lever

F. 1. There are different types of forces.
(i) Gravitational force (ii) Frictional force
(iii) Elastic force (iv) mechanical force (v) Buoyant force

2. Some oil producing centers in India are: Digboi Cambay, Ankleshwar, Mumbai High, etc.

3. Plants are consumed by herbirores. So, they are called the primary consumers. For examples: Deer, goat, etc.

4. Artificial satellites are man-made satellites that have been launched in to space. They move around the earth,. There are different types of artificial satellites like weather satellites, communication satellites, space satellites, etc.

5. There are five layers of atmosphere. (i) Troposphere (ii) Stratosphere
(iii) Mesosphere (iv) Thermosphere (v) Exosphere

6. (i) Continents of the world— North America, South America, Africa, Europe, Asia, Australia and Antarctica.

(ii) Oceans of the world— Pacific ocean, Arctic ocean, Atlantic ocean, Indian ocean and Southern ocean.

7. Sources of renewable energy– Sunlight, water, wind, etc.
Sources of non-renewable energy– Coal, wood, petrol, gases, etc.