

## CLASS VIII GENERAL SCIENCE QUESTION BANK

### CHAPTER 1 – CROP PRODUCTION AND MANAGEMENT

#### MCQ

1. Why the depth and distance at which seeds are planted is important?
  - a) If the seed is planted too deep then it will not get enough sunlight to germinate
  - b) If the seed is planted too shallow then it will not get enough soil to support germination
  - c) An appropriate distance between seeds avoids overcrowding of plants.
  - d) All of the above
2. What are the advantages of ploughing or tilling?
  - a) Ploughing loosens the soil and makes it aerated.
  - b) It helps in mixing organic matter with the soil uniformly.
  - c) It initiates the growth of natural agents and microorganisms and thus, keeps the soil fertile.
  - d) All the above.
3. What are the advantages of levelling?
  - a) Levelling helps to prevent soil erosion caused by wind or air.
  - b) It helps in sowing the seeds uniformly, and thus helps the plants to grow uniformly too.
  - c) It helps in proper irrigation by allowing the water to get distributed uniformly throughout the soil
  - d) All of the above.
4. What are the advantages of manure?
  - a) It enhances water-holding capacity of soil.
  - b) It improves soil quality and promotes the growth of soil friendly microbes
  - c) It is renewable, biodegradable and eco-friendly.
  - d) All the above.

5. The instrument 'combine' is used for.

- a) Sowing of seeds   b) Harvesting the crops   c) Threshing
- d) Both harvesting and threshing.

6. Which one of the following statements is True about the storage of produce?

- i. Harvested grains have less moisture.
  - ii. Farmers store grains in jute bags or metallic bins.
  - iii. Small scale storage of grains is done in silos and granaries.
  - iv. Specific chemical treatments are required to protect crops from pests and microorganisms.
- a) ii only
  - b). i, ii and iv
  - c) ii and iv
  - d) iii and iv

7. Which one of the following is NOT a source of water for irrigation.

- a) Tube wells   b) Dams   c) Lakes   d) Oceans

8. Pick the odd one out

- a) Urea   b) NPK   c) Super phosphate   d) Sodium chloride

9. Which of the following method is useful to increase soil fertility?

- a) adding manure   b) adding fertilisers   c) crop rotation
- d) All of the above

10. Why water is essential for plants?

- a) Germination of seeds does not take place under dry conditions
- b) Nutrient dissolved in water get transported to each part of the plant
- c) Water also protects the crop from both frost and hot air current.
- d) All of the above.

11) The process of loosening of the soil is called

- a) tilling      b) harvesting      c) spraying      d) weeding

12) Seed drill is used for

- a) harvesting      b) cleaning the seed      c) sowing      d) weeding

13) 2,4 – D is a

- a) Pesticides      b) Insecticides      c) Weedicides      d) Fungicides.

14) Transplantation of seedling is done in

- a) coffee      b) cocoa      c) rice      d) mango

15. Which of the following criteria is/are important to store grains for longer time

- a) Free from microorganism      b) fully dried      c) Free from insects      d) All of the above.

16. The method of irrigation in which emitters let out a trickle of water near the roots is called

- a) Drip irrigation      b) sprinkler irrigation      c) furrow irrigation      d) basin irrigation

17. which of the following is true for describing fertilisers

- a) used in large quantity      b) organic in nature  
c) do not cause pollution      d) produced in factories

18. Organic substances obtained from the decomposition of dead plants and animals wastes are called

- a) fertilizer      b) herbicide      c) manure      d) NPK

19. The unwanted plants that grow along with the crops are called

- a) fertilisers      b) manure      c) weeds      d) kharif crops

20. The practice of growing two or more dissimilar crops in the same field one after another is

- a) crop rotation    b) tilling    c) plantation    d) weeding

Answer the following in one word

1. Name two methods for control weed.
2. Name the chemical substances which are rich in a particular nutrient?
3. Name the bacterium present in the nodules of the roots of leguminous plants which fixes atmospheric nitrogen.
4. What do we call the undesirable plants which grow along with the main crop unnecessarily?
5. Name the process of supply of water to crops at different intervals?
6. where is large scale of food grain done?
7. Rearing of animals on a large scale is called ----- ?
8. Which vitamin is present cod liver oil?
9. Plants contain nearly -----% of water
10. Set of tasks or activities for cultivation of crops are referred as-----?

**ANSWER KEY**

|       |       |       |       |
|-------|-------|-------|-------|
| 1. D  | 2. D  | 3. D  | 4. D  |
| 5. D  | 6. A  | 7. D  | 8. D  |
| 9. D  | 10. D | 11. A | 12. C |
| 13. C | 14. C | 15. D | 16. A |
| 17. D | 18. C | 19. C | 20. A |

21. Weedicide, manual removal    22. Fertilisers    23. Rhizobium    24. Weed
25. Irrigation    26. Silos/granaries    27. Animal husbandry    28. Vitamin D
29. 90%    30. Agricultural industries.

## CHAPTER 2 – MICROORGANISMS

### MCQ

- 1) Measles is caused by
  - (a) Virus
  - (b) Fungi
  - (c) Bacteria
  - (d) Protozoa
- 2) What type of plants can fix nitrogen gas of air into compounds of nitrogen?
  - (a) Leguminous
  - (b) Both a & b
  - (c) Non leguminous
  - (d) Any type of plants
- 3) The scientist Louis Pasteur is related to
  - (a) Fermentation
  - (b) Typhoid
  - (c) Anthrax Bacterium
  - (d) Penicillin
- 4) Name commercial uses of yeast
  - a) Baking bread
  - b) Manufacture of alcoholic drinks
  - (c) both of the above
  - (d) None of the above
- 5) To which category of micro-organism do penicillium belong?
  - a) Protozoa
  - b) Algae
  - (c) Bacteria
  - (d) Fungi
- 6) Typhoid is caused by
  - (a) Virus
  - (b) Fungi
  - (c) Bacteria
  - (d) Protozoa
- 7) Which of the commonly known antibiotics are made from bacteria and fungi?
  - (a) Streptomycin
  - (b) Erythromycin
  - (c) Tetracycline
  - (d) All of these.
- 8) Which of the following cannot be used as a food preservative?
  - (a) Sodium metabisulphite
  - (b) Sodium benzoate
  - (c) Sodium hydroxide
  - (d) Citric acid
- 9) The scientist Robert Koch is related to
  - (a) Anthrax Bacterium
  - (b) Typhoid
  - (c) Penicillin
  - (d) Fermentation
- 10) When disease causing microbes enter our body, our defensive mechanism produces substances to fight disease causing microbes. These substances are called---
  - (a) Antibodies
  - (b) Both of the above
  - (c) Antibiotics
  - (d) None of these
- 11) Tuberculosis is cured by
  - (a) Streptomycin
  - (b) Lactobacillus
  - (c) Protozoa
  - (d) Bacteria
- 12) Name the process in which yeast converts sugar into alcohol
  - (a) Nitrogen fixation
  - (b) Fermentation
  - (c) Oxidation
  - (d) All of these
- 13) Mushroom & penicillium belongs to

- (a) Algae (c)Fungi  
(b) Virus (d)Bacteria
- 14) Micro-organisms are  
(a) Multicellular (c) Both of the above  
(b) Unicellular (d)None of the above
- 15) The carriers of disease-causing microbes are called  
(a) Scalars (c)Vectors  
(c) Both of the above (d)Magnitude
- 16) In the soil, which nutrient is enriched by blue-green algae or cynobacteria?  
(a) Nitrogen (c)Oxygen  
(b) Both of the above (d)Magnesium
- 17) Influenza is caused by  
(a) Bacteria (b) Fungi (c)Protozoa (d)Virus
- 18) Name two algae which help in nitrogen fixation  
(a) Streptomycin and tetracycline (c)Streptomycin and Anabaena  
(b) Anabaena and Nostoc (d)Tetracycline and Nostoc
- 19) To which category of micro-organism do Chlamydomonas belong?  
(a) Protozoa (c)Bacteria  
(b) Algae (d)Fungi
- 20) What is the mode of transmission of the following disease: rust of wheat?  
(a) Seeds (c)Air  
(b) Both a & c (d)Insect

### ONE WORD

- 1) As a result of nitrogen cycle, the percentage of nitrogen in the atmosphere remains more or less (constant/variable)
- 2) The mosquito P is a carrier of virus and spreads a disease Q. Another mosquito R is the carrier of protozoan S and spreads disease called T. Name disease Q (dengue/malaria)
- 3) Fungi are ----- which feed on dead things like remains of dead plants and animals
- 4) Name the causative micro- organism of the following plant disease: yellow vein mosaic of bhindi.
- 5)are animal like, just as algae are plant like.
- 6) Are antibiotics effective against cold or flu?
- 7) Name two food materials which are preserved by sun-drying method in our homes.
- 8)are large group of organism which do not have chlorophyll and do not show photosynthesis
- 9) Hepatitis A can be prevented by drinking boiled water and getting vaccinated against the disease. (yes /no)
- 10) Do viruses respire, feed, grow, excrete or move on their own?

**ANSWER KEY(MCQ)**

|              |              |              |              |              |
|--------------|--------------|--------------|--------------|--------------|
| <b>1. a</b>  | <b>2. a</b>  | <b>3. a</b>  | <b>4. c</b>  | <b>5. d</b>  |
| <b>6. c</b>  | <b>7. d</b>  | <b>8. c</b>  | <b>9. a</b>  | <b>10. a</b> |
| <b>11. a</b> | <b>12. b</b> | <b>13. c</b> | <b>14. c</b> | <b>15. c</b> |
| <b>16. a</b> | <b>17. d</b> | <b>18. b</b> | <b>19. b</b> | <b>20. b</b> |

**ONE WORD**

- 1) Constant (2) dengue (3) saprophytes (4) virus (5) protozoa (6) no (7) methi leaves & spinach (8) fungi (9) yes (10) no

## CHAPTER 3 – SYNTHETIC FIBRES AND PLASTICS

### MCQ

1. What type of waste is paper, what is the approximate time taken to degenerate and what is the nature of material?  
(a) 40 to 50 days non-biodegradable (c) 1 to 2 week biodegradable  
(b) 10 to 30 days biodegradable (d) 100 to 500 years non-biodegradable
2. The non-stick coating on frying pans is that of a plastic called  
(a) Polyvinyl chloride (b) melamine (c) bakelite (d) Teflon
3. Write some of the uses of plastics in healthcare industry.  
(a) packaging tablets (c) making intravenous blood bags  
(b) making threads used for stitching wounds (d) all of these
4. Fill in the following blanks with suitable words: the use of plastics can be reduced by using bags made of \_\_\_\_\_ or \_\_\_\_\_ instead of polythene bags  
(a) cotton, jute (b) plastic bags, jute (c) cotton, plastic bags (d) plastic bags, polybags
5. Cotton fibre is made of a natural polymer called  
(a) starch (b) galactose (c) cellulose (d) fructose
6. Acrylic fiber is made from a chemical called \_\_\_\_\_ by the process of polymerization  
(a) acetylcholine (b) acrylonitrile (c) cyanide (d) none.
7. Rayon is mixed with wool to make-----  
(a) bedsheet (b) carpet (c) pillow covers (d) wearables
8. Which materials are polyesters?  
(a) PVC (b) PET (c) cotton (d) wool
9. Synthetic fibre dries up quickly, are durable, less expensive, readily available and easy to maintain. This makes them popular for making-----  
(a) dress (b) cooking (c) shoes (d) gloves
10. Ropes that are preferred for rock climbing are-----  
(a) cotton ropes (b) jute ropes (c) wool ropes (d) nylon ropes
11. Which of these fibres made from a raw material obtained from plants?  
(a) Rayon (b) Nylon (c) Polyester (d) Terylene

12. The word “polymer” comes from Greek word: poly meaning\_\_\_\_\_and mer meaning-----  
(a) many, part/unit (b) some, part/unit (c) both a & b(d)none
13. Polyester composed of -----  
(a) cellulose (b) ether (c) Amino acids (d)Ester
14. The synthetic fibres are also called-----  
(a) Petrochemicals (b)manmade fibre (c) both a&b (d) polymers
15. Terylene is a popular -----fibre  
(a) natural (b)Rayon (c)polyester (d)None
16. Chemical treatment of wood pulp produces-----  
(a) Nylon (b) Rayon (c) Polythene (d) wool
17. Viscose is forced to pass through the tiny holes of a metal cylinder called spinneret into a solution of-----when a silk like thread of rayon is formed.  
(a) Hydrochloric acid (b)sodium hydroxide (c)sulphuric acid (d)nitric acid
18. The clothes of a person working in a kitchen catch fire accidentally causing severe burns. The person is most likely wearing clothes made of  
(a) flax (b) Rayon (c) Terylene (d) cotton
19. Bristles of toothbrush are made up of  
(a) wool (b)nylon (c) thermoplastic (d) thermosetting plastic
20. Wood pulp contains a large amount of natural polymer called\_\_\_\_\_  
(a) starch (b) galactose (c)cellulose (d)fructose

### ONE WORD

- 1) Can ballpoint pen be recycled?
- 2) Are sweaters, shawls and blankets made from natural wool?
- 3) When we add hot water to a plastic bottle, it gets deformed. Such plastic is called as-----  
---(thermoplastic/thermosetting)
- 4) Which organic compound gives fruit like smell?
- 5) What type of waste is wood, what is the approximate time taken to degenerate and what is the nature of material?
- 6) Are polybags carelessly thrown here and there responsible for clogging of drains?
- 7) Is nylon thread stronger than steel wire?
- 8) Nylon is made from-----

- 9) Name the units of which cellulose polymer is made  
10) The material similar to silk in appearance is ---

**ANSWER KEY(MCQ)**

|              |              |              |              |              |
|--------------|--------------|--------------|--------------|--------------|
| <b>1. b</b>  | <b>2. d</b>  | <b>3. d</b>  | <b>4. a</b>  | <b>5. c</b>  |
| <b>6. b</b>  | <b>7. b</b>  | <b>8. b</b>  | <b>9. a</b>  | <b>10. d</b> |
| <b>11. a</b> | <b>12. a</b> | <b>13. d</b> | <b>14. b</b> | <b>15. c</b> |
| <b>16. b</b> | <b>17. c</b> | <b>18. c</b> | <b>19. c</b> | <b>20. c</b> |

**(ONE WORD)**

- (1) No (2) No (3) thermoplastic (4) ester (5) 10 to 15 years, biodegradable (6) yes (7)Yes  
(8) Coal, water, air (9) monomers (10) Rayon

#### **Chapter 4 - materials: metal and non-metals**

1. Which statement is not correct for non-metals?
  - a) Non-metals can be drawn into wires
  - b) Non-metals are not ductile
  - c) Non-metals don't react with acids
  - d) Non-metals are not sonorous
2. Metals are not used in making
  - a) Satellite
  - b) Utensils
  - c) Machinery
  - d) An antiseptic
3. In what form magnesium is found in plants?
  - a) Carbon dioxide
  - b) Magnesium oxide
  - c) Magnesium dioxide
  - d) None of these
4. Which of the following is a chemical change?
  - a) A metal is drawn into wires
  - b) A metal is beaten into thin sheets
  - c) A metal gets a greenish coating on exposure to air
  - d) A metal on heating to a high temperature turns into liquid form
5. Metals generally react with dilute acids to produce hydrogen gas. Which one of the following metals does not react with dilute hydrochloric acid?
  - a) Magnesium
  - b) Iron
  - c) Aluminium
  - d) Copper
6. An element 'a' is soft and can be cut with a knife. This is very reactive to air and reacts vigorously with water. Identify the element:
  - a) Mg
  - b) Na
  - c) P
  - d) Ca
7. Nature of oxides of non-metals is
  - a) Basic
  - b) Acidic
  - c) Neutral

d) None of these

8. \_\_\_\_\_ is called a space age metal and used in military jets and space crafts.

- a) Platinum
- b) Copper
- c) Titanium
- d) Zinc

9. Which of the following metals generally occur in liquid state at room temperature?

- a) Iron
- b) Mercury
- c) Gallium
- d) Both (b) and (c)

10. A very reactive non-metal which does not occur in nature in the free state and is present in the bones, teeth and nervous tissue of animals.

- a) Chlorine
- b) Nitrogen
- c) Phosphorus
- d) Sulphur

11. The non-metal which is known to form the largest number of compounds is

- a) sulphur
- b) Nitrogen
- c) Carbon
- d) Chlorine

12.  $X + \text{CuSO}_4 \rightarrow \text{XSO}_4 + \text{Cu}$

$Y + \text{CuSO}_4 \rightarrow \text{YSO}_4 + \text{Cu}$

in these reactions x and y may be

- a) Zn, ag
- b) Zn, fe
- c) Fe, ag
- d) Ag, al

13. Non-metal which used to sterilized water is:

- a) Bromine
- b) Chlorine
- c) Sulphur
- d) Iodine

14. Which one of the following statements is correct.

- i) A more reactive metal can displace a less reactive metal from its salt solution.
- ii) Copper can displace magnesium from its salt solution
- iii) Magnesium can displace copper from its salt solution

iv) A less reactive metal can displace a more reactive metal from its salt solution

- a) (i) and (ii)
- b) (ii) and (iv)
- c) (i) and (iii)
- d) (iii) and (iv)

15. Which of the following is called a noble metal?

- a) Gold
- b) Lithium
- c) Mercury
- d) Copper

16. Choose the correct sequences of the metals in the increasing order of their reactivity

- a)  $\text{Ag} < \text{Pb} < \text{Cu} < \text{Na} < \text{K}$
- b)  $\text{Cu} < \text{Pb} < \text{Ag} < \text{Na} < \text{K}$
- c)  $\text{Ag} < \text{Cu} < \text{Pb} < \text{K} < \text{Na}$
- d)  $\text{Ag} < \text{Cu} < \text{Pb} < \text{Na} < \text{K}$

17. The gas produced when a metal reacts with dilute hydrochloric acid and burnt by producing a popping sound.

- a) Carbon dioxide
- b) Oxygen
- c) Hydrogen
- d) Nitrogen

18. A carbon rod and a copper rod were hit alternatively with a hammer. The carbon rod broke into pieces. Which property of carbon does this observation indicate?

- a) Ductility
- b) Elasticity
- c) Malleability
- d) Brittleness

19. The process of iron combining with oxygen to form rust is considered a chemical change because rust has\_\_\_\_\_.

- a) Properties that differ from both iron and oxygen
- b) The same chemical composition as iron
- c) Atoms of iron and oxygen
- d) Greater chemical reactivity than oxygen

20. Which of the following represents a correct chemical reaction?

- a) Sodium + hydrogen  $\rightarrow$  sodium hydroxide
- b) Sulphur trioxide + water  $\rightarrow$  sulphuric acid
- c) Carbon + chlorine  $\rightarrow$  potassium chloride
- d) Nitrogen + oxygen  $\rightarrow$  hydrogen peroxide

21. What is the chemical name of rust?
22. Name the property of metal by which it can be drawn into wires?
23. Which metal is largely used in the construction of buildings, bridge, railway lines etc?
24. Elements that show same properties of metals and same properties of non-metals.
25. Name the metals which is not malleable and ductile.
26. Metals react with oxygen on burning to produce metal oxide which are \_\_\_\_\_ in nature.
27. Metal used in table salt to prevent goitre.
28. Which metal is used to decorate sweets?
29. Non-Metal used in preparation of ammonia by Haber's process.
30. Metal used in the preparation of bullet proof alloy steel.

**Answer key**

|           |          |                  |              |             |                   |
|-----------|----------|------------------|--------------|-------------|-------------------|
| 1- a      | 2- d     | 3- b             | 4- c         | 5- d        | 6- b              |
| 7- b      | 8- c     | 9- d             | 10- c        | 11- c       | 12- b             |
| 13- b     | 14- c    | 15- a            | 16- d        | 17- c       | 18- d             |
| 19- a     | 20- b    | 21-iron<br>oxide | 22-ductility | 23-iron     | 24-<br>metalloids |
| 25-sodium | 26-basic | 27-iodine        | 28-silver    | 29-nitrogen | 30-zirconium      |

## CHAPTER 5 COAL AND PETROLEUM

1. Choose the correct statement from the following:
  - a) It is difficult to transport natural gas through pipes.
  - b) The disadvantage of natural gas is that it cannot be used directly for burning in homes
  - c) natural gas is stored under high pressure as compressed natural gas.
  - d) Natural gas cannot be used for power generation
  
2. PCRA stands for
  - a) Petroleum Conservation Refinery Association
  - b) petroleum Conservation Research Association
  - c) Petrol Conservation Recycle Association
  - d) Petrochemicals Conservation Research Association
  
3. Vaseline can be made from
  - a) Bitumen      b) Naphthalene      c) Kerosene      d) Paraffin Wax
4. Which of the following is not recommended by Government save Petrol/Diesel
  - a) Ensure regular maintenance of the vehicle.      b) Run at slow as much as possible
  - c) Switch off the engine at traffic lights or at a place where you have to wait
  - d) Ensure correct tyre pressure
5. Which of the following is not a constituent of petroleum?
  - a) petrol      b) lubricating oil      c) paraffin wax      d) coke
6. The slow process of conversion of dead vegetation into coal is called \_\_\_\_
  - a) Refining      b) carbonization      c) Decantation      d) None of these
7. which of the following statement is false?
  - a) Fossil fuel are formed from the dead remains of living organisms
  - b) Naphthalene balls are obtained from coal tar and are used to repel moth
  - c) Coal is formed from the remains of animals

d) Coke is almost pure form of Carbon

8. The process of separating the various constituents of petroleum is known as\_\_\_\_\_

- a) Refining    b) Carbonization    c) Decantation    d) None of these

9. Petroleum was formed from organisms:

- a) living on the land    b) living in the sea    c) living on the plants    d) living on the rock

10. Coal, petroleum and natural gas are called fossil fuel why?

a) Because they are formed from the pre-historic plants and animals buried under the earth long ago

b) Because they are formed from the remains of the pre-historic buildings buried under the earth long ago.

c) Because they are formed by the composition of the remains of the pre-historic rocks and mountains buried under the earth long ago.

d) All of the above.

11. How CNG is a better fuel than petrol and diesel in vehicle?

a) Because it is cheap than petrol    b) Because it is readily available

c) Because it is cleaner fuel.    d) Because it is more polluting fuel.

12. What are the harmful effects of using fossil fuel

a) Cause air pollution    b) Cause global warming    c) Cause acid rain

d) All of the above

13. air, water, soil and minerals are

a) Natural resources    b) manmade    c) Exhaustible    d) biodegradable

14. Sunlight, air

a) Non-Biodegradable    b) manmade    c) Exhaustible    d) Inexhaustible

15. Forest, wildlife, mineral, coal, petroleum and natural gas are

a) Inexhaustible    b) manmade    c) Exhaustible    d) biodegradable

16. ----- were formed from dead remains of living organisms

a) Fossil fuels    b) Nitrogen dioxide    c) Rocks    d) All of the above

17. X is used in thermal powerplant, Y is used in manufacturing of drugs and z is used as a fuel in industries situated near the coal processing unit.

a) X – Petroleum, Y- Natural gas, Z – Coal gas

- b) X – coal, Y – coal tar, Z – Coal gas
- c) X – electricity, Y – Coke, Z – Natural gas
- d) None of the above

18. ----- is mainly produced when coal is heated in the presence of air and -----is produced when coal is heated in the absence of air.

- a) Natural gas, Petroleum      b) Carbon monoxide, Natural gas
- c) Carbon dioxide, Coke      d) None of the above.

19 ----- is a mixture of about 200 substances

- a) Coke      b) Coal gas      c) Coal tar      d) All of the above.

20. X is a black thick liquid and Y is dark oily liquid

- a) X – Petrol      Y – Petroleum
- b) X – Coal tar      Y – Petroleum
- c) X – Coke      Y – Paraffin
- d) X – Petroleum      Y – Paraffin

Answer the following in one word

1. What is black gold?
2. Which gas is obtained from natural gas?
3. Name the petroleum product used in place of coal tar for metaling the roads?
4. Name the useful product obtained when coal is processed in industry
5. Name the gas used as a fuel in many industries situated near the coal processing plants?
6. What does CNG stands for?
7. Which constituents of petroleum is used for fuel for heavy motor vehicle?
8. What does LPG stand for?
9. Classify the natural resource based on availability?
10. Why is the layer containing Petroleum oil and gas above that of water?

|                                  |              |                                   |                                      |                                           |
|----------------------------------|--------------|-----------------------------------|--------------------------------------|-------------------------------------------|
| 1. C                             | 2. B         | 3. D                              | 4. B                                 | 5. D                                      |
| 6. B                             | 7. C         | 8. A                              | 9. B                                 | 10. A                                     |
| 11. C                            | 12. D        | 13. A                             | 14. D                                | 15. C                                     |
| 16. A                            | 17. B        | 18. C                             | 19. C                                | 20. B                                     |
| 21.<br>Petroleum                 | 22. Hydrogen | 23. Bitumen                       | 24. Coke,<br>Coal tar, Coal<br>gas   | 25. coal gas                              |
| 26.<br>Compressed<br>natural gas | 27. Diesel   | 28. Liquified<br>petroleum<br>gas | 29.<br>Exhaustible,<br>Inexhaustible | 30. oil and<br>gas lighter<br>than water. |

## CHAPTER 6 COMBUSTION AND FLAME

### MCQ

1. Which one of the following has the highest calorific value?  
(a) kerosene (b) biogas (c) LPG (d) petrol
2. What product is obtained when charcoal or coal burns in air?  
(a) carbon dioxide, heat and light (b) carbon monoxide, heat  
(c) both of the above (d) none
3. Combustion produce \_\_\_\_\_ and \_\_\_\_\_.  
(a) heat and dust (b) heat and air (3) heat and light (4) none of the above
4. When matchstick is struck against a rough surface, ----- gets ignited due to the heat of friction  
(a) Potassium chlorate (b) White phosphorus (c) both a&b (d) potassium nitrate
5. A very fast combustion reaction in which a large amount of heat, light and sound are produced, is called  
(a) rapid combustion (b) spontaneous combustion (c) explosive combustion (d) none
6. A substance which vaporize during burning gives,  
(a) light (b) flame (c) colour (d) none
7. The substance which have very ----- ignition temperature and can easily catch fire with a flame are called ----- substance  
(a) high, flammable (b) high, inflammable (c) low, flammable (d) low, inflammable
8. A type of combustion in which material suddenly bursts into flames, without the application of any apparent cause is called?  
(a) fuel (b) rapid combustion (c) spontaneous combustion (d) explosion
9. Which of these is an example of explosion?  
(a) burning of phosphorus (b) burning of matchstick (c) fire crackers (d) forest fires
10. Which of the following statement is not correct about carbon dioxide acting as a fire extinguisher for electrical fires?  
(a) it is heavier than air (b) it is lighter than air (c) it is not combustion

(d) it does not support combustion

11. Kerosene oil is used in

- (a) As a fuel for stoves, lamps etc
- (b) used in nuclear reactors
- (c) in automobiles
- (d) All of these

12. In an experiment, 4.5Kg of a fuel was completely burnt. The heat produced was measured to be 180,000Kj. Calculate the calorific value of the fuel.

- (a) 456000Kj/Kg
- (b) 50000Kj/Kg
- (c) 40500Kj/Kg
- (d) 40000Kj/Kg

13. Hottest part of the flame of a candle has which colour

- (a) blue
- (b) black
- (c) yellow
- (d) red

14. On a cold winter night, the person sleeping in a room with closed door and windows with a coal fire burning inside may die due to the excessive accumulation of -----

- (a) Nitrogen monoxide
- (b) Nitrogen dioxide
- (c) Carbon dioxide
- (d) Carbon monoxide

15. What is the calorific value of methane

- (a) 40000kj/Kg
- (b) 50000kj/Kg
- (c) 6500kj/Kg
- (d) 45000kj/Kg

16. When the oxygen supply or air supply is insufficient, then the fuels burn incompletely producing mainly a ----- flame

- (a) Red
- (b) Yellow
- (c) Orange
- (d) Blue

17. Zones of flames are

- (a) Black zone
- (b) Bright and luminous zone
- (c) Blue Zone
- (d) All of the above

18. Manu was heating oil to fry potato chips. The cooking oil all of a sudden caught fire; he poured water to extinguish the fire. Why was the action of Manu not suitable?

- (a) water is suitable for fires involving oil
- (b) water is not suitable for fires involving oil
- (c) Oil is suitable for fires involving water
- (d) Oil is not suitable for fires involving water

19. Which of the following is/are an examples of a gaseous fuel.

- (a) coal, wood
- (b) Kerosene oil, petrol
- (c) CNG, LPG
- (d) all of these

20. What type of combustion is represented by burning of LPG in a gas stove?

(a) Rapid combustion (b) Spontaneous combustion (c) Explosive combustion (d) none

### ONE WORD

- (1) On burning does camphor form flame?
- (2) Sun produces its own heat and light, is it a type of combustion?
- (3) Are magnesium and charcoal combustible substances?
- (4) Is sulphur dioxide a suffocating and corrosive gas?
- (5) Name the term which is used to express the efficiency of a fuel.
- (6) Alcohol, CNG & LPG are inflammable/flammable substances?
- (7) If u hold a piece of iron with a pair of tongs inside a candle flame or a Bunsen burner flame, will it produce a flame?
- (8) Harmful oxides dissolve in rain water and form acids (true/false)
- (9) If we bring a burning candle near (a) petrol, (b) mustard oil, (c) petrol and mustard oil (d) milk ; which material will catch fire easily?
- (10) If a person's clothes catch fire, the best way to extinguish the fire is to?

### ANSWER KEY(MCQ)

|       |       |       |       |       |
|-------|-------|-------|-------|-------|
| 1. c  | 2. a  | 3. d  | 4. b  | 5. c  |
| 6. b  | 7. d  | 8. c  | 9. c  | 10. b |
| 11. a | 12. d | 13. a | 14. d | 15. b |
| 16. b | 17. d | 18. b | 19. c | 20. a |

### (ONE WORD)

- (1) No (2) No (3) Yes (4) Yes (5) calorific value (6) inflammable (7) No (8) True (9) petrol  
(10) cover the person with a woolen blanket

## **Chapter-7 conservation of plants and animals**

1. Biodiversity is important, as it-
  - a) Purifies air and water
  - b) Helps to preserve soil fertility
  - c) Helps to regulate climate and rainfall
  - d) All of the above
2. What do black buck, elephant, python and golden cat together represent in a forest?
  - a) Fauna
  - b) Flora
  - c) Eco system
  - d) Species
3. Illegal hunting of animals is referred to as
  - a) Deforestation
  - b) Poaching
  - c) Destruction
  - d) None of the above
4. \_\_\_\_\_ includes all the living organisms along with the non-living components of an area: -
  - a) Endemic
  - b) Biosphere
  - c) Ecosystem
  - d) Species
5. Program launched by indian government to protect the tigers in the country: -
  - a) Project tiger in 1972
  - b) Project tiger in 1973
  - c) Save tiger in 1972
  - d) Save tiger in 1973
6. Organisation that focus the attention of conservationists towards endangered species-
  - a) World health organisation
  - b) World conservation resources
  - c) World conservating union
  - d) None of the above
7. First biosphere reserve established in india was: -
  - a) Pachmarhi biosphere reserve
  - b) Satpura biosphere reserve
  - c) Nilgiri biosphere reserve
  - d) Periyarsanchuary
8. Which of the following factors affect the endemic species?
  - a) Introduction of new species

- b) Increasing human population
  - c) Destruction of their habitat
  - d) All of the above
9. The movement of animals periodically to escape severe climatic conditions is called
- a) Hibernation
  - b) Conservation
  - c) Migration
  - d) Preservation
10. The most important strategy for the conservation of biodiversity is the establishment of
- a) National parks
  - b) Biosphere
  - c) Botanical gardens
  - d) Wildlife sanctuaries
11. Which one of the following is the national aquatic animal of india?
- a) Gangetic shark
  - b) Sea horse
  - c) Gangetic River dolphin
  - d) Blue whale
12. Which of the following is not done in a wildlife sanctuary?
- a) Conservation of flora
  - b) Conservation of fauna
  - c) Prohibition of hunting
  - d) Exploitation of flora and fauna
13. Which of the following animal is the symbol of world wildlife fund?
- a) Lion
  - b) Whale
  - c) Panda
  - d) Tiger
14. Which one of the following changes may occur due to desertification?
- a) Increased chances of floods
  - b) Increase in water holding capacity of soil
  - c) Decrease in atmosphere temperature
  - d) Conversion of fertile land into a desert
15. If you recycle one ton of paper, how many trees can you save?
- a) Nine
  - b) One
  - c) Seventeen
  - d) One hundred
16. Which of the following things are found in satpura national park?
- a) Rock shelter

- b) Indian oak
- c) Rock painting
- d) All of the above

17. Different species are classified into different threat categories in the

- a) Yellow data book
- b) Blue data book
- c) Red data book
- d) Black data book

18. Which of the following defines the effect of deforestation on urban areas?

- a) Global warming
- b) Increase the risk of flood and droughts
- c) Both (a) and (b)
- d) None of the above

19. The population of animal 'a' has drastically gone down. Any further decline in its population could wipe the traces of its species from the surface of the earth. animal 'a' belongs to the category of

- a) Extinct species
- b) Endemic species
- c) Threatened species
- d) Endangered species

20. Cyanobacteria is a \_\_\_\_\_ component of ecosystem.

- a) Abiotic
- b) Biotic
- c) Cycle
- d) None of the above

21. Name the group of population that is capable of inter-breeding?

22. Name the endemic fauna of 'Pachmarhi' biosphere reserve?

23. Name any one wildlife sanctuaries in Pachmarhi biosphere reserve?

24. Write the major threat to survival of great variety of plants and animals on earth.

25. A giant animal that is known to be existing long back in the jurassic period became extinct.

26. A name given to those species that have died out completely.

27. Name the areas reserved for wildlife and can be used freely for habitats and natural resources.

28. Plants of a particular area are collectively known as \_\_\_\_\_

29. The wise and judicious use of natural resources is known as \_\_\_\_\_.

30. A place where animals are living in a artificial environment.

**Answer key**

|             |            |                     |           |                        |                      |
|-------------|------------|---------------------|-----------|------------------------|----------------------|
| 1- d        | 2- a       | 3- b                | 4- c      | 5-b                    | 6- c                 |
| 7- c        | 8- d       | 9- c                | 10- b     | 11- c                  | 12- d                |
| 13- c       | 14- d      | 15- c               | 16- d     | 17- c                  | 18- c                |
| 19- d       | 20- b      | 21-species          | 22- bison | 23-bori &<br>pachmarhi | 24-<br>deforestation |
| 25-dinosaur | 26-extinct | 27-national<br>park | 28-flora  | 29-<br>conservation    | 30-zoo               |

## CHAPTER 8 CELL – STRUCTURE AND FUNCTION

### MCQ

- Who discovered cell and in which year?  
a) Leeuwenhoek,1635   b) Robert Brown,1775   c) Robert Hooke,1665  
d) Schwann,1664.
- Nucleolus is present in  
a) Cytoplasm b) Nucleus c) Bacterial cell d) Prokaryotic cell
- Which of the following is found in plant cells only?  
a) Nucleus b) Plasma membrane c) Vacuoles d) Plastids
- Pseudopodia can be seen in \_\_\_\_\_?  
a) Muscle Cells   b) Eukaryotic Cells   c) Paramecium   d) Amoeba
- Structure responsible for transmission of hereditary information is \_\_\_\_\_?  
a) Nucleoplasm b) Chromosomes c) Nuclear Membrane d) Plasma Membrane
- A cell with nuclear membrane around the genetic material.  
a) Cheek Cells b) Bacteria c) Cyanobacteria d) Blue-Green Algae
- Which of the following cells can change its shape?  
a) Amoeba b) White Blood Cells c) Both a and b d) None of the above
- Which of the following statement is incorrect?  
a) Different shapes are related to their specific function.  
b) Amoeba has no definite shape.  
c) The size of the cell has no relation with the size of the animal.  
d) Cell wall is an additional covering of animal cell.
- Movement of substance in and out of the cell is controlled by \_\_\_\_\_?  
a) Cytoplasm b) Cell Wall   c) Plasma Membrane d) Nuclear Membrane
- Which of the following is the characteristic of a cell membrane?  
a) It is porous.  
b) Gives shape to the cell.  
c) It protects the inner contents of the cell.  
d) All of the above.
- Which substance is the jelly like substance present in the cell?  
a) Cell Wall b) Cell Membrane c) Cytoplasm d) Nucleus
- The cells having nuclear materials without nuclear membrane are ----- ?  
a) Nucleolus   b) Prokaryotic cell   c) Eukaryotic cell   d) all of the above
- Which of the following explains protoplasm?  
a) The entire content of a living cell   c) It includes cytoplasm and the nucleus  
b) It is called living substance of the cell   d) All of the above.
- Which of the following organelle is bigger in plants and smaller in animals?  
a) Cell wall   b) Plastid   c) Vacuole   d) All of the above

15. Why plant cell need cell wall?
- For protection against variation in temperature
  - Protection against wind speed
  - Protection against moisture
  - All of the above.
16. Which cell organelle is necessary for photosynthesis?
- Plant cell
  - cell wall
  - plastid
  - All of the above
17. What is the layer outside the cell membrane of a plant cell called?
- Plastid
  - large vacuole
  - Cell wall
  - All of the above.
18. Name one cell which can be seen by unaided eye.
- Prokaryotic cell
  - Eukaryotic cell
  - Hen's egg
  - None of the above
19. The thread like structure of the nucleus is called----- ?
- Nucleolus
  - Chromatin material
  - Nuclear membrane
  - Cytoplasm
20. What is tissue?
- A group of spherical cells
  - A group of prokaryotic cells
  - A group of similar cells performing a specific function
  - All of the above

#### Short answer questions

- Where is gene located?
- What are organisms made of more than one cell called?
- What is the shape and size of the cell related to?
- What is the basic structural unit of living organism?
- What do chloroplast contain?
- Name one instrument used to study cell?
- Which is the control centre of the cell?
- Name one cell in human body which is spherical in shape?
- Name the animal cell which is long and branched.
- Give one example of prokaryote.

#### ANSWER KEY

|       |       |       |       |       |
|-------|-------|-------|-------|-------|
| 1. C  | 2. B  | 3. D  | 4. D  | 5. B  |
| 6. A  | 7. C  | 8. D  | 9. C  | 10. D |
| 11. C | 12. B | 13. D | 14. C | 15. D |
| 16. D | 17. C | 18. C | 19. B | 20. C |

21. Chromosomes
22. Multicellular
23. Specific function
24. Cell
25. Chlorophyll
26. Microscope
27. Nucleus
28. RBC
29. Nerve cell
30. Bacteria.

## CHAPTER 9 REPRODUCTION IN ANIMALS

### (MCQ)

- (1) In human males, the testes lie in the scrotal sacs outside the body because it helps in the;  
(a) Process of mating (b) formation of sperms  
(b) easy transfer of sperms(d)all of the above
- (2) Name one animal which reproduces by binary fission.  
(a) Amoeba (b) hydra(c) bird (d) human
- (3) Name the asexual method of reproduction in Hydra.  
(a) Fertilization (b) binary fission (c) budding(d)none of these
- (4) The human egg(ovum) is round and about----- in diameter.  
(a) 0.15mm (b) 0.05mm (c) 0.05cm (d) 5cm
- (5) Fertilization results immediately in the formation of  
(a) A zygote (b) An embryo (c) a placenta (d) A foetus
- (6) The cells involved in sexual reproduction are called----  
(a) Nerve cells (b)stem cells (c) gametes (d)none of these
- (7) Artificial method of producing organ cells is called-----  
(a) External fertilization (b) IVF (c) metamorphosis(d)cloning
- (8) Soon after fertilization, the zygote divides repeatedly and travels down the \_\_\_\_\_  
(a) ovary (b) ovum (c) oviduct (d) uterus
- (9) Dolly, the sheep, was produced by the technique called  
(a) Cloning (b) binary fission (c) budding (d) none of these
- (10) Outside the cell membrane, an egg or ovum has a thin layer of jelly called  
(a) Cytoplasm (b) jelly coat (c) Nucleus (d) none of these
- (11) The stage of embryo having all body organs is called  
(a) Sperm (b) foetus (c) egg (d) ova
- (12) Which life process ensures that a plant or animal species will not disappear from the earth?  
(a) Excretion (b) reproduction (c) evolution (d) none of these
- (13) What are the functions of uterus?  
(a) Makes eggs (b)holds eggs (c) receives sperms (d) where the baby grows
- (14) The animal that exhibits metamorphosis in its life cycle is  
(a) Butterflies (b) crickets (c) lice (d) cockroaches
- (15) stores the sperms temporarily  
(a) testes (b) spermduct (c) epididymis (d) oviduct
- (16) What are the functions of penis?  
(a) makes eggs (b)holds testes (c) carries sperm out of body (d) none

(17) Internal fertilization is done in

(a) fish (b) starfish (c) human (d) none of these

(18) Fertilization and embryo development takes place in

(a) uterus (b) ovum (c) ova duct (d) testes

(19) An animal that produces both male and female gametes is known as

(a) Hermaphrodite (b) oviparous (c) viviparous (d) none

(20) The incubation period for a hen's egg is

(a) 7 days (b) 21 days (c) 14 days (d) 1 month

#### ONE WORD

(1) Release of ovum from ovary is called---

(2) Genetically identical individuals are produced by ----- reproduction

(3) Are reptiles oviparous/viviparous

(4) Why parrot does not belong to the same group as that of monkey.

(5) What type of fertilization takes place in frog?

(6) In which female reproductive organ does embedding of the embryo take place?

(7) Using which part sperms swim in oviduct?

(8) Cats and dogs reproduce by the method of----- reproduction.

(9) Does sparrow undergo metamorphosis?

(10) Egg laid after fertilization is made up of single/double cell

#### ANSWER KEY(MCQ)

|             |             |             |             |             |
|-------------|-------------|-------------|-------------|-------------|
| <b>1 b</b>  | <b>2 a</b>  | <b>3 c</b>  | <b>4 a</b>  | <b>5 a</b>  |
| <b>6 c</b>  | <b>7 d</b>  | <b>8 c</b>  | <b>9 a</b>  | <b>10 b</b> |
| <b>11 b</b> | <b>12 b</b> | <b>13 d</b> | <b>14 a</b> | <b>15 c</b> |
| <b>16 c</b> | <b>17 c</b> | <b>18 a</b> | <b>19 a</b> | <b>20 b</b> |

#### ONE WORD

(1) Ovulation (2) asexual (3) oviparous

(4) It is oviparous (5) external (6) uterus (7) tail (8) sexual (9) no (10) single

## **Chapter 10 reaching the age of adolescence**

1. Structure present in a cell which is responsible for determination of the sex of a baby is
  - a) Cell membrane
  - b) Cytoplasm
  - c) Nucleus
  - d) Chromosomes
2. The hormone which regulates development of secondary sexual characters in male is
  - a) Estrogen
  - b) Pituitary
  - c) Testosterone
  - d) Adrenaline
3. Adolescents should be careful about what they eat, because
  - a) Taste buds are well developed in teenagers
  - b) Proper diet develops their brain
  - c) Adolescents feel hungry all the time
  - d) Proper diet is needed for the rapid growth taking place in their body
4. Provide the correct order in which the menstrual cycle occurs:
  - i). Release of the egg
  - ii). Thickening of the uterine wall
  - iii). Breakdown of uterine wall if pregnancy does not occur
  - iv). The maturation of the egg
  - a) iv → i → ii → iii
  - b) i → ii → iii → iv
  - c) iii → iv → i → ii
  - d) ii → iv → i → iii
5. The hormone adrenaline help the body to adjust to stress when one is very
  - a) Embarrassed
  - b) Worried
  - c) Angry
  - d) All of the above
6. Apart from stimulating the testes and ovaries for secretion of hormones, the pituitary gland is also responsible for the secretion of
  - a) Thyroxine
  - b) Growth hormone
  - c) Adrenaline
  - d) None of the above
7. In which case does the breakdown of the thickened uterine wall take place?
  - a) If fertilization occurs
  - b) If fertilization does not occur
  - c) If the egg does not mature
  - d) None of the above

8. Which of the following can help in healthy development of adolescents?
- Communication workshop
  - Teenage counselling
  - Positive relationship with parents and teachers
  - All of the above
9. Person 'a' is having xx chromosomes and 'b' has xy chromosomes. Which option is correct for these persons?
- Person a is female
  - Person b is female
  - Person a is male
  - None of the above
10. Secondary sexual characters are:
- The features which help to distinguish male from female
  - The features which are same in male and female
  - Both a and b
  - None of the above
11. Which of the following hormones controls the menstrual cycle, the ovulation process and the development of the uterus in the females?
- Progesterone
  - Estrogen
  - Testosterone
  - Both a and b
12. Which of the following transports hormones from the place of origin to the place of target?
- Blood
  - Nerves
  - Ducts
  - All of these
13. Which of the following statements is true?
- Boys reach puberty at an earlier age than girls
  - At the end of rapid growth, girls are normally heavier than boys
  - Girls reach puberty earlier than boys
  - None of the above
14. Which of the following statements is true?
- In a frog, metamorphosis is brought about by thyroxine hormone
  - The production of thyroxine hormone
  - All the amphibians need thyroxine hormone to undergo metamorphosis and change from larva into adults
  - All of above

15. Most adolescents gain their maximum height around the age of
- 11-15 years
  - 18-19 years
  - 13-15 years
  - 22-25 years
16. Choose the odd-one out from: adrenal gland, testes, pancreas, thyroid gland
- Testes
  - Adrenal gland
  - Pancreas
  - Thyroid gland
17. Aids can be spread from an infected person to another person through:
- Sharing comb
  - Sharing food
  - Blood transfusion
  - A mosquito bite
18. The period of growth from birth to about 2 years of age is known as
- Teenagers
  - Adulthood
  - Childhood
  - Infancy
19. Sunder and Shyam went to play outside in the hot sun during their summer holidays. After playing for a few hours, Shyam felt thirsty and extremely dizzy. What should he take to get okay?
- A cup of chocolate ice-cream with nuts
  - A glass of water with glucose
  - A glass of water with sugar and salt
  - A glass of hot milk with sugar
20. When Saurabh saw a thief entering his house stealthily in the middle of night, he was alarmed and his heart started beating fast. These symptoms could be attributed to the action of which hormone?
- Adrenaline
  - Thyroxin
  - Testosterone
  - Insulin
21. Hormone which regulates blood pressure and help to fight stress.
22. Master gland in humans\_\_\_\_\_.
23. Name the hormones which influence adolescence in girls.
24. Name the virus that causes aids.
25. The first menstruation flow begins at puberty and is termed as\_\_\_\_\_.

26. Chromosomes which determine the sex of unborn child\_\_\_\_\_.
27. Which hormone regulates sugar metabolism in human body?
28. How many chromosomes are there in human cell?
29. What causes acne and pimples on the face of boys and girls during puberty?
30. For production of thyroxine\_\_\_\_\_is required.

**Answer key**

|                 |                        |                   |               |                           |            |
|-----------------|------------------------|-------------------|---------------|---------------------------|------------|
| 1- d            | 2- c                   | 3- d              | 4- a          | 5- d                      | 6- b       |
| 7- b            | 8- d                   | 9- a              | 10- a         | 11- b                     | 12- a      |
| 13- c           | 14- d                  | 15- b             | 16- a         | 17- c                     | 18- d      |
| 19- b           | 20- a                  | 21-<br>adrenaline | 22- pituitary | 23- estrogen              | 24- HIV    |
| 25-<br>menarche | 26- sex<br>chromosomes | 27- insulin       | 28- 23        | 29- oil &<br>sweat glands | 30- iodine |

MCQ

1. Following is not an example of of a pull force  
a) Lifting    b) drag    c) throw    d) move closer
2. State of motion is described by  
a) Position of rest                                  b) Position of motion  
c) Both by the state of rest or motion        d) None of these
3. Force can change the following  
    a) speed of a moving object    b) direction of a moving object  
c) shape and size of an object        d) all of the above
4. A small device pulls iron nails from a distance. Name the type of force involved  
    a) magnetic force    b) gravitational force c) frictional force d) muscular force
5. Why do school bags have wide straps?  
    a) to increase pressure  
    b) to reduce pressure  
    c) to increase force  
    d) none of the above
6. Pressure exerted by a liquid\_\_\_\_\_with increase in depth  
    a) decreases b) increases c) remains the same d) none of the above
7. Gravitational force acts  
    a) only between the sun and the planets moving around it  
    b) only between the earth and the bodies on it  
    c) between all bodies in the universe  
    d) only between the sun and the earth
8. If a force of 100 N acts on an area of  $10 \text{ m}^2$ , the pressure equals  
    a)  $100 \text{ N/m}^2$     b)  $10 \text{ N/m}^2$     c)  $1000 \text{ N/m}^2$     d)  $1000 \text{ N m}^2$
9. The pressure which is exerted by air around us is known as  
    a) Friction    b) Atmospheric pressure    (c) muscular force    d Forces
10. Which of the following statement is incorrect?  
    a) A force arises due to the interaction between 2 objects  
    b) Force has magnitude and direction  
    c) Force applied on an object on same direction add to one another

d) Force applied on an object on opposite direction add to one another

11. Force acting on per unit area is called

(a) non-contact forces      (b) contact forces      (c) force      (d) pressure

12. The force exerted by the earth to pull the object towards itself is called

(a) electrostatic force      (b) gravitational force      (c) muscular force      (d) contact force

13. Muscular force is also called \_\_\_\_\_ force.

(a) non-contact      (b) contact      (c) gravitational      (d) magnetic

14. Which of the following statement is incorrect?

a) A change in speed or direction of motion or both is described as a change in state of motion.      b) An object at rest or in state of motion both are its state of rest.

c) The state of rest is not considered to be the state of zero speed.

d) The state of motion of an object is described by its speed and the direction of motion.

15. The force exerted by a charged body on another charged body

a) gravitational force      b) electrostatic force      c) non-contact force      d) contact force

16. A spring balance is used for measuring

a) mass      b) weight      c) pressure      d) speed

17. Two boys A and B are applying force on a block. If the block moves towards the boy A, which one of the following statements is correct?

a) Magnitude of force applied by A is greater than that of B.

b) Magnitude of force applied by A is smaller than that of B.

c) Net force on the block is towards B.

d) Magnitude of force applied by A is equal to that of B

18. Which of the following statement is incorrect?

a) Liquid won't exert pressure at the bottom of the container

b) Liquid exerts pressure on the sides of the container

c) Liquid exerts equal pressure at the same height

d) Pressure exerted by the liquid increases with increase in depth.

19. Which of the following statement is incorrect?

- a) Porters wear turbans when they have to carry loads to increase area of contact
- b) School bags have broader strap to reduce pressure
- c) Tip of a needle is sharp to increase pressure.
- d) Trucks carrying heavy loads have 8 tyres to increase pressure.

20. The strength of force is expressed by its

- a) weight   b) mass   c) magnitude   d) longitudinal force

#### SHORT ANSWER QUESTIONS

21. What is the unit of force?

22. The strength of force is usually expressed by its----- ?

23. The envelope of air around us is called-----.

24. The force resulting due to the action of muscle is known as ----- --.

25. Force of friction is an example of -----.

26. Force has----- as well as direction.

27. ----- and----- exert pressure on the walls of the container

28. We apply force on ----- while walking

29. Liquid pressure is measured by----- --.

30. Atmospheric pressure is measured by----- --.

Answer key

|       |       |       |       |       |
|-------|-------|-------|-------|-------|
| 1. C  | 2. C  | 3. D  | 4. A  | 5. B  |
| 6. B  | 7. C  | 8. B  | 9. B  | 10. D |
| 11. D | 12. B | 13. B | 14. C | 15. B |
| 16. B | 17. A | 18. A | 19. D | 20. C |

21. Newton   22. Magnitude   23. Atmosphere   24. Muscular force  
25. Contact force   26. Magnitude   27. Liquid & gas   28. Ground  
29. Manometer   30. Barometer

## CHAPTER 12 FRICTION

### MCQ

- 1) whenever the surface in contact tend to move or move with respect to each other, the force of friction comes into play  
(a) only if the objects are solid (b) only if one of the two objects is liquid  
(c) only if one of the two objects is gaseous (d) irrespective of whether the objects are solid, liquid or gaseous
- 2) friction due to fluid is called  
(a) force (b) pressure (c) friction (d) drag
- 3) Lubricants can  
(a) increase friction (b) decrease friction (c) both a & b (d) none
- 4) Force of friction depends on  
(a) roughness of surface (b) smoothness of surface (c) inclination of surface (d) all
- 5) \_\_\_\_\_ is the resistance to motion of one object moving relative to another  
(a) momentum (b) force (c) friction (d) gravity
- 6) Give an example where heat is produced due to friction,  
(a) Striking of a matchstick against the rough surface  
(b) dragging of iron on the ground  
(c) Both the above (d) none of the above
- 7) When a machine is operated, heat generated causes much wastage of ----  
a) force (b) friction (c) energy (d) all of these
- 8) What causes friction  
(a) The irregularities on the two surfaces in contact.  
(b) The similarities on the two surfaces in contact.  
(c) the time (d) the temperature

- 9) As an air cushion can be introduced between the wheel and the rail, what effect will it have on the friction?
- (a) Friction will increase (c) friction will decrease  
(b) No change takes place (d) all of these
- 10) Which of the following statement is incorrect
- (a) Friction acts on a ball rolling along the ground  
(b) Friction acts on a boat moving on water  
(c) Friction acts on a bicycle moving on a smooth road  
(d) Friction does not act on a ball moving through air
- 11) To reduce friction, the shape of an aeroplane is made similar to which organism?
- (a) Clouds (b) birds (c) squirrels (d) ducks
- 12) The force required to overcome friction at the instant when an object starts moving from the rest is a measure of \_\_\_\_\_friction
- (a) Sliding (b) static (c) rolling (d) kinetic
- 13) Example to show that friction is a friend is:
- (a) Friction helps us walk (c) two bodies stick together due to friction  
(b) Brakes work due to friction (d) All of these
- 14) The force required to keep the object moving at a given speed is a measure of \_\_\_\_\_friction
- (a) Sliding (b) rolling (c) static (d) all
- 15) A big wooden box is being pushed on the ground from east to west direction. The force of friction due to ground will act on this box towards:
- (a) North direction (b)south direction(c) east direction (d)west direction
- 16) If you roll a pencil from an inclined plane, then cover the surface by cloth and roll the pencil again. In which case does it travel the least distance?
- (a) Plane inclined surface (c) cloth covered inclined surface  
(b) Both a & c (d) it is difficult to determine
- 17) Maximum friction will exist on
- (a) Wood (b) paper (c) road (d) glass
- 18) Give reason: it is easier to roll than to pull a barrel along a road
- (a) Rolling friction is less than sliding friction (b) rolling friction is equal to sliding friction  
(c)rolling friction is more than sliding friction(d) all of these
- 19) \_\_\_\_\_is a device in which an object to be weighed is attached to the end of a helical spring
- (a) Beam balance (b) spring balance (c) weighing machine (d) calculator
- 20) What happens to the strength of frictional force when logs are lifted by placing logs under it?
- (a) It gets reduced (b) it gets increased (c) it has no change (d) can't say

### ONE WORD ANSWER

- 1) Will force of friction come into play when a rain drop rolls down a glass window pane?
- 2) Can we reduce friction to zero by polishing surfaces or using large amount of lubricants?
- 3) are made in the tyres of vehicles to increase friction and prevent skidding of vehicles on wet roads
- 4) The sliding friction is smaller/greater than static friction
- 5) Name the type of friction for pushing a cart.
- 6) Friction does/doesn't act on a ball moving through air
- 7) A body shape which offers very little resistance to the flow of air or water around it is called?
- 8) You spill a bucket of soapy water on a marble floor accidentally. Would it make easier/more difficult for you to walk on the floor?
- 9) Does water exert frictional force?
- 10) A long and shallow cut or depression in the surface of a hard material is called groove. (true/false)

### ANSWER KEY (MCQ)

|       |       |       |       |       |
|-------|-------|-------|-------|-------|
| 1. d  | 2. d  | 3. b  | 4. d  | 5. c  |
| 6. c  | 7. c  | 8. a  | 9. c  | 10. d |
| 11. b | 12. b | 13. d | 14. a | 15. c |
| 16. c | 17. a | 18. a | 19. b | 20. a |

### ONE WORD ANSWER

- 1) Yes (2) no (3) treads (4) smaller (5) sliding (6) doesn't (7) streamlined (8) more difficult (9) yes (10) true

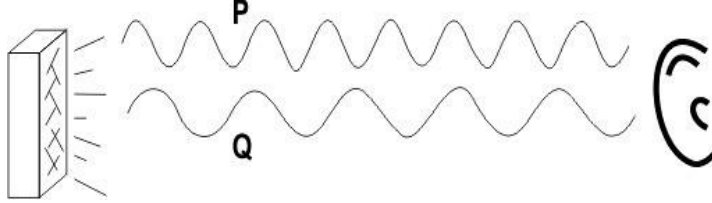
### **Chapter-13 sound**

1. 1 hertz is equal to-
  - a) 10 vibrations per minute
  - b) 60 vibrations per minute
  - c) 500 vibrations per minute
  - d) 1 vibration per minute
2. Which of the following can be caused by noise pollution?
  - a) Lack of sleep
  - b) Hypertension
  - c) Anxiety
  - d) All of the above
3. Some whistles are designed to produce waves that can attract the attention of dogs but humans do not notice these waves. What kind of waves are these: -
  - a) These are normal sound waves whose frequency is less than 20 Hz. It is below human's audible range
  - b) These are normal sound waves whose frequency is more than 20,000 Hz. It is above human's audible range.
  - c) These are electromagnetic waves
  - d) These are supersonic sound waves
4. The eardrum sends the vibration to the \_\_\_\_\_.
  - a) Outer ear
  - b) Nerve cell
  - c) Middle ear
  - d) Brain
5. The siren of an ambulance needs to be a loud and piercing sound. Therefore, its main characteristics should be
  - a) Low pitch and small amplitude
  - b) High pitch and small amplitude
  - c) High pitch and large amplitude
  - d) Low pitch and large amplitude
6. The safe limit of loudness of audible sound is
  - a) 0 to 80 dB
  - b) Above 80 dB
  - c) 120 dB
  - d) Above 120 dB
7. Ultrasonic can be detected by
  - a) Human beings only
  - b) Bats only
  - c) Bats and human beings
  - d) Neither bats nor human beings

8. How does sound is produced by humans?
- a) In humans sound is produced by the larynx
  - b) In humans sound is produced by the voice box.
  - c) In humans sound is produced by the upper part of the wind pipe.
  - d) All of the above
9. Sound of explosion taking on other planets are not heard by a person on the earth. Why?
- a) Only air is present between the planets and the earth.
  - b) The sound of explosion is not so high to reach the earth
  - c) There is a region of vacuum in between the planets and the earth
  - d) The distance between the planets and the earth is too large for the sound to travel.
10. A bicycle wheel spins 25 times in 5 seconds. Calculate frequency of the wheel
- a) 10 hz
  - b) 15 hz
  - c) 40 hz
  - d) 5 hz
11. Vibration of air column produces sound in which of the following instruments?
- a) Siren
  - b) Jaltaranga
  - c) Flute
  - d) All of the above
12. Two astronauts on the surface of the moon cannot talk to each other, why?
- a) The sound cannot propagate
  - b) There is no medium in between the two astronauts
  - c) There is no atmosphere on the surface of the moon
  - d) All of the above
13. What is the main advantage of having two ear rather than only one to hear with?
- a) The clarity of the sound heard increases with two ears.
  - b) The second ear is a backup in case the first ear fails
  - c) The direction of sounds can be judged with two ears.
  - d) The symmetry of the human face is maintained.
14. On a rainy night, mohan observed that every time there was lightning and thunder, he would usually see the lightning a few seconds before he heard the thunder. What could be the reason for this?
- a) Thunder travels faster than lightning.
  - b) Sound waves travel faster than light in air.
  - c) Light waves travel faster than sound waves.
  - d) Light waves travel through a less dense medium than sound waves.
15. What does a tabla player do to increase the pitch of his instrument?
- a) He tightens the skin across the tabla.
  - b) He strikes the tabla harder.

- c) He changes the skin of the tabla.
- d) He cannot increase the pitch of the tabla.

16. In the figure given, compared to wave p, wave q would be \_\_\_\_\_

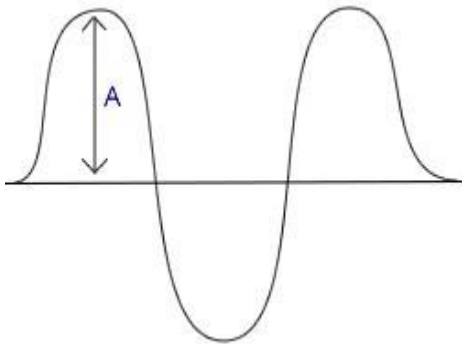


- a) Louder
- b) Softer (less sound)
- c) Of higher pitch
- d) Of lower pitch

17. On a rainy night, Tina observed that every time there was lightning and thunder, she would usually see the lightning a few seconds before she heard the thunder. What could be the reason for this?

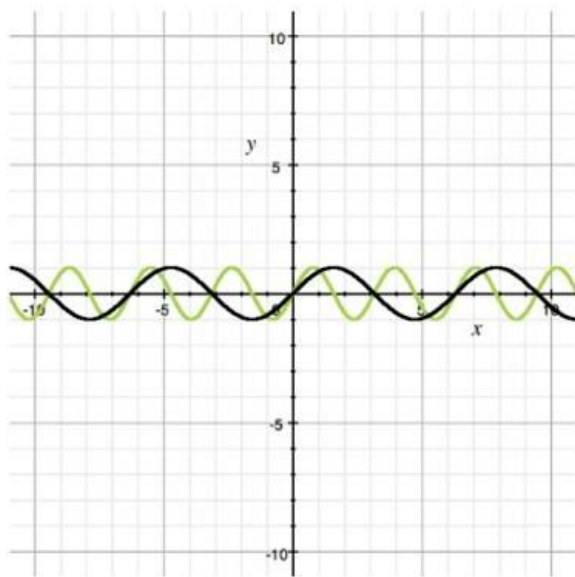
- a) Sound waves travel faster than light in air.
- b) Light waves travel faster than sound waves.
- c) Thunder travels faster than lightning.
- d) Light waves travel through a less dense medium than sound waves.

18. If the distance represented by the letter a were increased, how would it change the way the sound was heard?



- a) The sound would be higher.
- b) The sound would be lower.
- c) The sound would be softer.
- d) The sound would be louder.

19. When comparing the two waves that are shown, how would wave a (green wave) differ than wave b (black wave)?



- a) Wave a and b have the same amplitude, but wave b (black) has a lower pitch.
  - b) Wave a and b have the same amplitude, but wave a has a lower pitch.
  - c) Wave a and b have the same pitch, but wave a is a softer sound.
  - d) Wave a and b have the same pitch, but wave b is a softer sound.
20. You and your father inspect an empty house with the hopes of buying it. You walk through the rooms talking to one another, and you notice that your voices and footsteps are echoing in the big, empty house. What causes the echo?
    - a) Sound waves reflecting off smooth, flat surfaces throughout the house.
    - b) Sound waves refracting around corners in the empty rooms.
    - c) Sound waves moving slowly through air.
    - d) Sound waves moving around the large rooms
  21. On which factor does loudness of sound depends?
  22. Which part of our body vibrate when we speak?
  23. Maximum displacement of a vibrating body from its mean position\_\_\_\_\_.
  24. Name the property of sound which decides whether a given sound is audible or inaudible\_\_\_\_\_.
  25. Name an animal or bird which can hear ultrasonic sound.
  26. The waves that can travel through any medium but not through vacuum.
  27. The number of oscillations made by an oscillating body in one second is known as its \_\_\_\_\_.
  28. Loud and harsh sound is called\_\_\_\_\_.
  29. Name an instrument that produces the sound of a single frequency.
  30. Slower vibration are called \_\_\_\_\_.

**Answer key**

|         |           |                  |                   |                  |                    |
|---------|-----------|------------------|-------------------|------------------|--------------------|
| 1- b    | 2- d      | 3- b             | 4- d              | 5- c             | 6- a               |
| 7- b    | 8- d      | 9- c             | 10- d             | 11- c            | 12- c              |
| 13- c   | 14- c     | 15- a            | 16- d             | 17- b            | 18- d              |
| 19- a   | 20- a     | 21-<br>amplitude | 22- vocal<br>cord | 23-<br>amplitude | 24- frequency      |
| 25- bat | 26- sound | 27- frequency    | 28- noise         | 29- flute        | 30-<br>oscillation |

## **Chapter -14 chemical effects of electric current**

1. Which of the following is a chemical effect of electric current?
  - a) Change of color of solution
  - b) Formation of gas bubbles on the electrodes
  - c) Deposition of metals on the electrodes
  - d) All of the above
2. Aluminium is extracted from its ore by passing an electric current through.
  - a) Copper sulphate ( $\text{CuSO}_4$ ) solution
  - b) Solid bauxite ( $\text{Al}_2\text{O}_3$ ) and cryolite ( $\text{Na}_3\text{AlF}_6$ )
  - c) Fused bauxite ( $\text{Al}_2\text{O}_3$ ) and solid cryolite ( $\text{Na}_3\text{AlF}_6$ )
  - d) Fused bauxite ( $\text{Al}_2\text{O}_3$ ) and cryolite ( $\text{Na}_3\text{AlF}_6$ )
3. The instrument used to measure the current flowing through a circuit is
  - a) Voltmeter
  - b) Voltmeter
  - c) Ammeter
  - d) Galvanometer
4. Tin cans are the tin electroplated on iron. These tin cans are used to preserve food items. Why not iron cans used without tin coating?
  - a) Tin is more reactive than iron
  - b) Tin is less reactive than iron
  - c) Tin is lighter than iron
  - d) Tin is cheaper than iron
5. Which of the following statement is correct while testing for conducting of electricity in lemon juice using an LED tester?
  - a) The bulb glows which indicates lemon juice is a good conductor of electricity
  - b) The current flows in the circuit of the tester
  - c) The lemon juice allows the electric current to pass through. Hence, the circuit is complete
  - d) All of the above
6. In the experiment to test for conduction of electricity through a potato, the greenish blue colour spot on the potato is useful in identifying
  - a) The positive terminal
  - b) The negative terminal
  - c) Both a and b
  - d) Neither a and b
7. Which of the following is true during electroplating?
  - a) The metal gets transferred from one electrode to another
  - b) The metal gets deposited from positive terminal of a battery to negative terminal of the battery
  - c) Some amount of metal gets dissolved in the solution of the electrolyte

- d) All of the above
8. What happens when you join the free ends of the tester for more than a few minute?
- The current will not be able to pass
  - Cells of the battery will drain quickly
  - There would be no conduction of electricity
  - All of the above
9. Which of the following devices can be used to detect a weak current?
- Use of led in tester
  - A tester using magnetic effects of current
  - Use of electric bulb in tester
  - Both a and b
10. In electroplating of the silver spoon with gold, the silver spoon is cleaned with a dilute solution to remove the \_\_\_\_\_ from the surface.
- Chloride layer
  - Oxide layer
  - Silver layer
  - Gold layer
11. Electroplating does not help in:
- Shining appearance
  - Metals to become hard
  - Fine finish to the surface
  - Protect metals against corrosion
12. Non electrolyte solution is a chemical compound which:
- Does not conduct electricity
  - Conduct electricity
  - Contains ions
  - None of the above
13. 'x' is a good conductor of electricity. Which of the following could be 'x'?
- Solid sodium chloride
  - Distilled water
  - Vinegar
  - Liquid oxygen
14. The method of purifying metals by using electricity is called as
- Electrolysis
  - Electro refining
  - Electrolyte
  - None of the above
15. Neeraj's uncle has set up an electroplating factory near his village. He should dispose of the waste of the factory:

- a) In the nearby pond
  - b) In the nearby river
  - c) In the nearby cornfield
  - d) According to the disposals guidelines of the local authority
16. An electrolyte
- a) Conducts electricity but does not undergo decomposition.
  - b) Conducts electricity and undergoes decomposition.
  - c) Neither conducts electricity nor undergoes decomposition.
  - d) Does not conduct electricity but undergoes decomposition.
17. Which of the following is not a chemical reaction caused by electric current passing through liquids.
- a) The colour of the electrolyte changes
  - b) Metal coating can be formed on the electrodes
  - c) Bubbles can form near the electrodes
  - d) Different smells can be released
18. Which of the following is false?
- a) The metal rods dipped in liquids to which cells are attached are called electrodes
  - b) The liquid which can conduct electricity by providing ions are electrolytes
  - c) Electroplating is the process of deposition of thin layer of desired metal on another substance
  - d) Positively charged electrode is called cathode
19. When electrodes were immersed in water and current was passed through water. which of the following things are true:
- a) Bubbles of  $O_2$  and  $H_2$  are produced
  - b)  $O_2$  are formed on anode
  - c)  $H_2$  are formed at cathode
  - d) All the above
20. Ram wants to deposit silver on an iron spoon. He took silver nitrate ( $AgNO_3$ ) solution in a beaker and setup a simple circuit for electroplating. Which terminal of the battery should the spoon be connected to?
- a) Positive terminal
  - b) Negative terminal
  - c) Can't say
  - d) Does not matter
21. During the electrolysis of water, water decomposes to form \_\_\_\_\_ and \_\_\_\_\_.
22. The metal electroplated on kitchen gas burner, bath taps etc.
23. An atom or a molecule with electric charge is known as \_\_\_\_\_.
24. A metallic rod through which electric current either enters or leaves on electrolytic solution called a/an \_\_\_\_\_.
25. Name the electrolyte used for the electroplating of copper.
26. A substance that allow electricity to flow through it.

27. A positively charged ion is called.
28. At which electrode hydrogen gas is evolved during the electrolysis of water?
29. A substance which does not conduct electricity through its solution in water is known as\_\_\_\_\_.
30. The process of decomposition of an electrolyte by passing electricity through it is known as\_\_\_\_\_.

**Answer key**

|                        |                  |                               |                 |                       |                    |
|------------------------|------------------|-------------------------------|-----------------|-----------------------|--------------------|
| 1- d                   | 2- d             | 3- c                          | 4- b            | 5- a                  | 6- a               |
| 7- d                   | 8- b             | 9- d                          | 10- b           | 11- b                 | 12- a              |
| 13- c                  | 14- b            | 15- d                         | 16- b           | 17- d                 | 18- d              |
| 19- d                  | 20- a            | 21-<br>hydrogen<br>and oxygen | 22-<br>chromium | 23- ion               | 24-<br>electrode   |
| 25- copper<br>sulphate | 26-<br>conductor | 27- cation                    | 28- cathode     | 29-<br>nonelectrolyte | 30-<br>electrolyte |

## CHAPTER 15 SOME NATURAL PHENOMENA

1. When two bodies A and B are rubbed against each other and A acquires a charge  $+Q$

then the charge on B is:

- a) greater than  $+Q$       b)  $+Q$       c)  $-Q$       d) less than  $-Q$

2. When an uncharged body B is brought in contact with positively charged body A:

- a) A loses some of its charge to B      b) B acquires no charge  
c) A acquires more positive charge      d) A acquires more negative charge

3. An ebonite rod rubbed with wool:

- a) Attract another ebonite rod rubbed with wool  
b) Has no effect on another ebonite rod rubbed with wool  
c) Attracts a glass rod rubbed with silk  
d) Repel a glass rod rubbed with silk.

4. Atmospheric electricity was discovered by

- a) Thales    b) Newton    c) Benjamin Franklin    d) William Gilbert

5. Which of the following statement is true?

- a) A charged body attracts an uncharged body, but repels a charged body  
b) A charged body repels a body carrying a similar charge but attracts body carrying opposite charge, as well as a body carrying no charge.  
c) A charged body attracts another charged body but repels an uncharged body  
d) A charged body attracts another body irrespective of whether it is charged or uncharged.

6. Charges flows from a charged body to an uncharged one

- a) Until the entire charge from one flows into other  
b) Until they both carry same charge  
c) Until they both become uncharged  
d) continuously

7. Which of the following is not a part of lightning conductor?
- a) spikes    b) rubber cushion    c) copper rod    d) copper plate
8. Which of the following is incorrect?
- a) The spikes of the lightning conductor accept any discharge from the cloud
- b) Metal rod provides easy route for the transfer of electric charge
- c) Sulphur plate is buried underground for safe grounding of charges
- d) Metal plate is buried underground for safe grounding of charges
9. What is the nature of charge on the leaves of an uncharged electroscope if the negatively charged body is brought near its metal cap
- a) positive    b) negative    c) neutral    d) one leaf positive and one leaf negative
10. How many types of charges exist?
- a) one    b) two    c) three    d) four
11. Boundary of a tectonic plate where earthquake occurs is called
- a) Focus    b) Epicenter    c) Fault zone    d) Fault line
12. What kind of material should be used in earthquake prone area?
- a) Heavyweight    b) Conducting material    c) Light material    d) Any of the above
13. What happens when we touch the charged object with our hands?
- a) Object gets charged    b) object get discharged
- c) Hands acquire positive charge    d) hands acquire negative charge
14. The power of an earthquake is expressed on a scale called
- a) seismic scale    b) iron scale    c) richter scale    d) large scale
15. The process of transfer of charges from a charged object to the earth is called
- a) earthing    b) lightning    c) oscillation motion    d) electron movement
16. Which is not a natural phenomenon?
- a) Earthquakes    b) Cyclones    c) Lightning    d) Earthing

17. Lightning always follows

- a) a thunder      b) rain pour      c) the easiest path      d) a straight path

18. Unlike charges attract each other and uncharged object also attracted by charged object. So -----is not a foolproof way of testing for charge.

- a) Repulsion      b) Conduction      c) Attraction      d) None of the above

19. Which is the surest test of charge on a body?

- a) Repulsion      b) Lightning      c) Combustion      d) Insulation

20. Which instrument is used to measure earthquake?

- a) Richter scale      b) Seismograph      c) Polygraph      d) None of these

#### SHORT ANSWER QUESTIONS

21. How will you charge a glass rod by the method of friction

22. What is the flash of light which occurs in the sky during the rainy season called?

23. What happens when two like charges are brought together?

24. The force with which two similar charges repel each other depends on the ----of charge they carry.

25. What is the flow of charge through air or a gas called?

26. The electric charge produced by rubbing is called -----.

27. What is a moving charge called?

28. Which natural phenomenon is not yet able to predict?

29. Is it safe to carry an umbrella during a thunderstorm?

30. Name a device which is used to detect charges.

## ANSWER KEY

|       |       |       |       |       |
|-------|-------|-------|-------|-------|
| 1. C  | 2. A  | 3. C  | 4. C  | 5. B  |
| 6. B  | 7. B  | 8. C  | 9. B  | 10. B |
| 11. C | 12. C | 13. B | 14. C | 15. A |
| 16. D | 17. A | 18. C | 19. A | 20. B |

21. Rubbing with silk    22. Lightning    23. Repel    24. Magnitude    25. Electric discharge

26. Static charge    27. Electric current    28. Earthquake    29. No    30. Electroscope

## CHAPTER 16 LIGHT

### MCQ

- 1) Eyes of the nocturnal birds have large cornea and a large pupil. How does this structure help them?  
(a) It increases their area of vision  
(b) It helps to create a more clear image on the retina.  
(c) It allows more light to enter their eyes so that they can see objects even in faint light  
(d) None of these
- 2) Mention the name of device that is generally used by the designers of wall papers and fabrics.  
a) Kaleidoscope (b) electroscope (c) stethoscope (d)periscope
- 3) How many images of a candle will be formed if it is placed between two parallel plane mirrors separated by 40cm  
(a) One (b) two (c) zero (d) infinite
- 4) At what angles are mirrors inclined in a periscope respectively?  
(a) 65degree (b)45 degree (c) 25 degree (d) 35 degree
- (5) If the still pictures of a moving object are flashed on our eyes at a rate faster than --- pictures per second, the eyes perceives the object as moving.  
(a) 12 (b) 16 (c) 14 (d) 10
- (6) The lens focuses light on the back of the eye, on a layer called?  
(a) retina (b) cornea (c) pupil (d) iris
- (7) The transparent cover of the front of the Eye  
(a) eyelids (b) retina (c) cornea (d) lens
- 8) Which device is used to image the sun?  
(a) plane mirror (b) pinhole camera (c) concave lens(d)glass slab
- 9) Which part of the eye gets affected if someone is suffering from cataract?  
(a) cornea (b) retina (c) lens (d) pupil
- 10) Name one object which can produce regular reflection of light.  
(a) chalk powder (b) cardboard (c) mirror (d) paper

- 11) The process of sending back light rays which fall on the surface of an object is called  
(a) refraction of light (b) rarefaction of light (c) reflection of light (d) dispersion
- 12) what is the range of vision of a normal human eye?  
(a) 5cm to infinity (b) 25cm to infinity (c) 5m to infinity (d) 25m to infinity
- 13) In a kaleidoscope how are the plane mirrors strips arranged at an angle of  
(a) 40degree (b) 60 degree (c) 90degree (d) 30degree
- 14) A ----- is a long, tubular device through which a person can see objects that are out of direct line of sight.  
(a) telescope (b) microscope (c) periscope (d) Kaleidoscope
- 15) What is the angle of reflection when a ray of light is incident normally on a plane mirror?  
(a) 0 degree (b) 30 degree (c) 45 degree (d) 90degree
- 16) Deficiency of which vitamin causes night blindness?  
(a) B (b) C (c) A (d) D
- 17) Hypermetropia can be corrected by using which kind of lens?  
(a) concave lens (b) convex lens (c) both a&b (d) none
- 18) Name the phenomenon which enables us to see movies in a cinema hall  
(a) persistence of vision (b) refraction (c) reflection (d) spectrum
- 19) A perpendicular to the surface of reflection  
(a) normal (b) incident ray (c) reflected ray (d) point of incidence
- 20) Name one object which produces diffuse reflection of light  
(a) Cardboard (b) Marble floor with water spread (c) polished wooden table (d) mirror

### ONE WORD

- 1) How many images of an object will be formed when the object is between two plane mirrors which are inclined at the 120degree to one another?
- 2) Can cataract be corrected by using convex/concave lens?
- 3) What type of reflection takes place from cinema screen?
- 4) Iris has a hole at the center called

- 5) Mention whether regular or diffused reflection will take place when a beam of light strikes on white chalk powder that is used in school?
- 6) The image of an object persists on the retina of an eye for about----- second even after the object has disappeared.
- 7) Night birds have -----cones than rods in their eyes.
- 8) Vitamin A prevents from which disease.
- 9) What kind of lens is there in our eyes?
- 10) Photo receptors that help to detect color are-----

### ANSWER KEY(MCQ)

|              |             |             |             |              |
|--------------|-------------|-------------|-------------|--------------|
| <b>1. c</b>  | <b>2 .a</b> | <b>3 .d</b> | <b>4. b</b> | <b>5. b</b>  |
| <b>6. a</b>  | <b>7. c</b> | <b>8. b</b> | <b>9. c</b> | <b>10. c</b> |
| <b>11. c</b> | <b>12 b</b> | <b>13 b</b> | <b>14 c</b> | <b>15 a</b>  |
| <b>16 c</b>  | <b>17 b</b> | <b>18 a</b> | <b>19 a</b> | <b>20 a</b>  |

### ONE WORD

- (1) 2 (2) no (3) regular (4) pupil (5) diffused (6) 1/16 (7) fewer (8) night blindness  
(9) convex (10) cones

## CHAPTER 17 STARS AND SOLAR SYSTEM

### MCQ

1. Which of the following does not belong to the family of solar system?  
a) Planet b) Galaxy c) Meteors d) Comet
2. The Halley's Comet is seen after every  
a) 76 months b) 76 years c) 56 months d) 56 years
3. Ursa Major is a  
a) star b) constellation c) seen only with telescope d) satellite
4. Which planet has the largest number of satellites?  
a) Jupiter b) Saturn c) Mercury d) Mars
5. Which unit is used to measure astronomical distances?  
a) Leap year b) Light year c) Century d) Sound year
6. The stars forming a recognizable shape is called  
a) constellation b) system c) galaxy d) asteroids
7. Which star is nearest to Earth?  
a) Pole star b) Orion c) Cassiopeia d) Sun
8. What term is used for celestial bodies that revolve around the Sun in highly elliptical orbit?  
a) Comet b) Meteors c) Asteroids d) Planets
9. Which small objects revolve between the orbits of Mars and Jupiter?  
a) Satellites b) Comets c) Asteroids d) Meteorites
10. Which planet is called morning star or evening star?  
a) Venus b) Mars c) Jupiter d) Mercury
11. Our galaxy is known as  
a) Earth galaxy b) Sun galaxy c) Milky Way d) Constellation

12. Which of the following is not a planet?  
a) Mercury    b) Saturn    c) Jupiter    d) Great bear
13. Orion is a  
a) constellation    b) star    c) planet    d) satellite
14. Shooting stars are called  
a) asteroids    b) galaxies    c) meteors    d) andromeda
15. The planet farthest from the Sun is  
a) Uranus    b) Neptune    c) Saturn    d) Mercury
16. If I am 13 years old, I have gone round the sun \_\_\_\_times.  
a) Never gone round the sun    b) 13    c) 26    d) Shall go round the sun when I shall be 15
17. The least dense planet is  
a) Earth    b) Jupiter    c) Saturn    d) Uranus
18. \_\_\_\_appears as a bright head with a long tail. The tail grows in size as it approaches the sun.  
a) Asteroid    b) Comet    c) Planet    d) Meteor
19. During a clear night sky, bright light streaks are often visible. They are called shooting stars. They are actually  
a) Falling stars    b) Comet    c) Meteors    d) Planet
20. \_\_\_\_was the first Indian satellite.  
a) INSAT    b) EDUSAT    c) IRS    d) Aryabhata

#### SHORT ANSWER QUESTIONS

21. Which is the nearest planet to the sun?
22. A body revolving around another body is called -----.
23. Which is the farthest planet to the sun?
24. Which two planets show phases like moon?
25. Which planet has large number of satellites?

26. Which was the first artificial satellite launched by India?

27. Which two planets have asteroid between them?

28. Which is the only natural satellite of earth?

29. Name some artificial satellite of the earth?

30. What is the speed of light?

|      |      |      |      |      |
|------|------|------|------|------|
| 1. B | 2.B  | 3.B  | 4.B  | 5.B  |
| 6.A  | 7.D  | 8.A  | 9.C  | 10.A |
| 11.C | 12.D | 13.A | 14.C | 15.B |
| 16.B | 17.C | 18.B | 19.C | 20.D |

21. Mercury 22. Satellite 23. Neptune 24. Mercury, Venus 25. Jupiter

26. Aryabhata 27. Mars & Jupiter 28. Moon 29. INSAT, IRS 30.  $3 \times 10^8 \text{m/s}$

## CHAPTER 18 POLLUTION OF AIR AND WATER

### MCQ

1. Gas that reduces oxygen carrying capacity in the blood is,  
a) Carbon monoxide    b) Carbon dioxide    c) Sulphur dioxide    d) Oxygen
2. A greenhouse gas that act as a pollutant when present in excess amount in air  
a) Carbon monoxide    b) Carbon dioxide    c) Nitrogen    d) Oxygen
3. Following is the main cause of corrosion of Taj Mahal  
a) CFCs    b) Carbon dioxide    c) Smog    d) Acid rain
4. Increased concentration of carbon dioxide in air can lead –  
a) Smog    b) Greenhouse gases    c) Global warming    d) CFCs
5. A sudden rise in the algal growth in a river is due to  
a) Fertilisers    b) Decomposers    c) sewage    d) None of the above
6. What is added to water to kill the pathogens in water?  
a) Charcoal    b) Chlorine tablet    c) Filter paper    d) Granules
7. The greenhouse gases  
a) keep the earth warm    b) bring acid rain    c) radiate heat of earth    d) trap harmful rays
8. Which of the following affect ozone layer?  
a) carbon dioxide    b) CFCs    c) soot    d) dust
9. which of the following is an oxygen demanding waste?  
a) pesticide    b) oil    c) domestic sewage    d) grease
10. The following gas is not air pollutant  
a) Carbon monoxide    b) Sulphur dioxide    c) Oxides of nitrogen    d) Oxygen
11. How does the air get polluted?  
a) Factories, industries, power plants, automobile exhausts.  
b) Natural sources like smoke and dust arising from forest fires or volcanic eruptions.

c) Burning of firewood and dung cakes.

d) All of the above.

12. Which of the following can be alternate fuel?

a) solar energy b) hydropower c) wind energy d) all of the above

13. Which of the following substance pollute water?

a) sewage b) toxic chemicals c) silt d) All of the above

14. Epidemics such as typhoid and jaundice are caused by

a) metals b) toxic chemicals c) microorganisms d) dissolved salts

15. Which of the following industries cause chemical contamination of water?

a) Oil refineries b) paper factory c) textile & sugar mills d) All of the above.

16. Potable water is the one that is:

a) kept in a pot b) fit to drink c) not fit to drink d) used only in laboratory

17. % of freshwaters on earth

a) 97.4% b) 2.6% c) 2.0% d) 0.01%

18. Air pollution causes

a) asthma b) wheezing in children c) lung damage d) all of the above

19. Which of the following methods is used to purify water?

a) Candle type filter

b) boiling of water.

c) addition of chlorine tablets

d) all of the above

20. Which element is present in the exhaust of automobiles?

a) lead b) calcium c) magnesium d) chromium

#### SHORT QUESTIONS

21. What protects us from the harmful UV rays of the sun?

22. Name the three greenhouse gases present in the atmosphere.
23. What are undesirable particles and gases in the air called?
24. What is formed when a fossil fuel burns in insufficient amount air?
25. What is a mixture of smoke and fog called?
26. What causes corrosion of monument and buildings made of marble?
27. Why has the gangotri glacier in the Himalayas started melting?
28. What has contributed towards the yellowing of the marble at the Taj Mahal in Agra?
29. What is water fit for human consumption called?
30. Does air pollution affect non living things also? Say Yes or No.

|       |       |       |       |       |
|-------|-------|-------|-------|-------|
| 1. A  | 2. B  | 3. D  | 4. C  | 5. A  |
| 6. B  | 7. A  | 8. B  | 9. C  | 10. D |
| 11. D | 12. D | 13. D | 14. C | 15. D |
| 16. B | 17. D | 18. D | 19. D | 20. A |

21. Ozone
22. Methane, CO<sub>2</sub>, Nitrous oxide
23. Air pollutant
24. Carbon monoxide
25. Smog
26. Acid rain
27. Global warming
28. Suspended particulate matter
29. Potable water
30. Yes