

Time allowed: **3 hours**; Maximum marks: **90**

General Instructions:

- a) All Questions are compulsory
- b) The Question Paper consists of 42 Questions divided in to four sections A, B, C and D
- c) Section- A comprises of 15 questions of one mark each
- d) Section- B comprises of 11 questions of two mark each
- e) Section- C comprises of 11 questions of three mark each
- f) Section- D comprises of 5 questions of Four mark each

Section – A

1. Which gas is associated with the greenhouse effect?

- a. Oxygen
- b. Carbon dioxide
- c. Sulphur dioxide
- d. Nitrogen dioxide

2. LED stands for:

- a. Light Emitting Disco
- b. Light Emitting Diode
- c. Light Emitting Display
- d. Light Emitting Device

3. Streamlined body of a fish:

- a. Reduces weight
- b. Increases weight
- c. Increases friction
- d. Decreases friction

4. An example of contact force is:

- a. Frictional force
- b. Magnetic force
- c. Gravitational force
- d. Electro-static force

5. The master gland in the body is:

- a. Adrenal
- b. Thyroid
- c. Pituitary
- d. Parathyroid

6. The outermost covering of the body of the cell is called:
 - a. Skin
 - b. Nucleus
 - c. Cytoplasm
 - d. Cell membrane

7. The least reactive metal is:
 - a. Iron
 - b. Gold
 - c. Silver
 - d. Sodium

8. Identify the atmospheric pollutant gas.
 - a. Oxygen
 - b. Helium
 - c. Nitrogen
 - d. Sulphur dioxide

9. The right meal for adolescents consists of:
 - a. Chips, noodles, coke
 - b. Rice, noodles, burger
 - c. Chapati, dal, vegetables
 - d. Vegetable cutlets, chips, lemon drink

10. In which method does the cast product harden without the use of pressure?
 - a. molding
 - b. casting
 - c. extrusion
 - d. laminating

11. The microorganisms that play an important role in maintaining the balance of nitrogen gas in the atmosphere are:
 - a. Algae
 - b. Virus
 - c. Bacteria
 - d. Protozoa

12. Firemen crawl when entering a burning building because:
 - a. They are trained to crawl
 - b. Smoke is hot and rises up
 - c. It is faster to move by crawling
 - d. Amount of CO₂ is more at the surface

13. Identify the power house of a cell:

- a. Nucleus
- b. Cytoplasm
- c. Golgi bodies
- d. Mitochondria

14. A common food preservative is:

- a. Nitric acid
- b. Benzoic acid
- c. Sulphuric Acid
- d. Hydrochloric Acid

15. SI unit of force is:

- a. Pascal
- b. Newton
- c. Newton Metre
- d. Newton / Metre²

Section – B

16. What is a nucleus? Name the different components of nucleus.

17. Why is tin electroplated on iron to make cans used for storing food?

18. Identify the action as 'push' or 'pull' in each of the instances given below.

- a. A cricket ball hit by a batsman
- b. Plucking the nail off the wall

19. Explain why sliding friction is less than static friction.

20. Name two soft metals which can be cut with a knife.

21. Mention the important uses of microorganisms in agriculture and medicine.

22. Name two gases which are mainly responsible for acid rain.

23. Mention any two features seen in boys and girls which distinguish them from each other at puberty.

24. Plastics are replacing metals in the car industry. Give two possible reasons to support your answer.

25. We should avoid taking medicines / drugs unless prescribed by a doctor. Give reasons.

26. A lot of dry leaves are collected and burnt every day. Do you think it to be a right practice? If not, what should be done to dispose off the dry leaves?

Section – C

- 27.
- Define balanced and unbalanced forces.
 - Which materials are considered brittle? Give an example of brittle and non-brittle substances.
28. How can we reduce, reuse and recycle water?
29. In the figure, name and mark the positions of the endocrine glands which release the hormones that:
- Controls the release of sex hormones
 - Prevents diabetes
 - Is responsible for the secondary sexual characters in boys
30. With the help of diagrams, explain how the use of oil reduces friction between two surfaces in contact with each other.
31. What are the commercial uses of microorganisms? List any three.
32. Write chemical equations for the following reactions:
- Reaction of aluminum with hydrochloric acid
 - Reaction of zinc with sulphuric acid
 - Reaction of zinc with copper sulphate
33. How much force is needed to apply a pressure of 10000 Pa over an area of 2 cm²?
34. How does the shape of a cell depend on the function it performs? Explain three examples.
35. Iron is more reactive than copper. Can you write an activity to show this?
36. List any three harmful effects associated with plastic disposal.
37. The level of air pollution is higher at a busy traffic intersection. Why?

Section - D

38. What do CFC's stand for? Name some devices where CFC's are being used. Why are they considered to be as pollutants?
39. How is a plant cell different from an animal cell?
40. What are synthetic fibers? List any two advantages and disadvantages of synthetic fibers.
41. Describe any five applications of pressure.
42. Name the hormone which would be released during the following situation:
- A frightened person
 - Development of tadpole to frog
 - Development of caterpillar to moth
 - Growth of a child to adult