

General Instructions:

- i) Question paper comprises of 5 sections, A, B, C, D and E. There are 26 questions. All questions are compulsory.
- ii) Section A - Question numbers 1 - 12 are MCQ's and carry 1 mark each.
- iii) Section B - Question numbers 13 - 16 are short answer questions and carry 2 marks each.
- iv) Section C - Question numbers 17 - 19 are short answer questions and carry 3 marks each.
- v) Section D - Question numbers 20 - 22 are long answer questions and carry 5 marks each.
- vi) Section E - Question numbers 23 - 26 are case/ source-based questions and carry 4 marks each.

Section – A : Multiple Choice Questions [1 x 12 = 12 marks]

1. AIDS can spread from an infected person to a normal person through

a) Sharing food	b) Mosquito bites
c) Sharing the syringes used for injecting drugs	d) Hugging each other
2. The process of transferring charge from a charged object to the earth is called

a) Earthing	b) Conducting
c) Plating	d) Charging
3. Internal fertilisation occurs

a) In female body	b) Outside female body
c) In male body	d) Outside male body
4. Which of the following cannot be charged easily by friction?

a) A plastic scale	b) A copper rod
c) An inflated balloon	d) A woollen cloth
5. Which of the following solutions will not conduct electricity?

a) Lemon juice	b) Vinegar
c) Vegetable oil	d) Tap water
6. When electric current is passed through water, oxygen gas

a) is obtained at positive electrode	b) is obtained at negative electrode
c) remains dissolved in the water	d) is not obtained during this experiment
7. After fertilisation, the resulting cell which gives rise to a new individual is

a) Embryo	b) Ovum	c) Foetus	d) Zygote
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8. In the dark, we are unable to locate things but owls have excellent night vision. This is because of pigments rods and cones in their eyes. Which of the statement is correct for night vision in the owls?

a) More rods and low cones	b) Low cones and low rods
c) Low rods and more cones	d) Equal number of rods and cones.
9. Given below are events that lead to pregnancy and development of embryo.

(i) Fertilisation of egg	(ii) Maturation of egg
(iii) Release of egg	(iv) Embedding of embryo in uterus

 Which of the following options give the correct order of sequence in which they occur?

a) (i), (ii), (iii), (iv)	b) (ii), (i), (iii), (iv)
c) (i), (iv), (ii), (iii)	d) (ii), (iii), (i), (iv)

Section – C : Short Answer Questions [3 x 3 = 9 marks]

17. a) Define fertilisation.
b) With the help of diagram only explain Binary fission as a method of asexual reproduction.
18. a) What is the term used for secretions of endocrine glands responsible for changes taking place in the body?
b) How is the sex of the baby determined? Explain it with diagram.
19. a) Mention the reason of two different diagrams given below: (3)



Balloons attracted



Balloons repel

- b) What is an earthquake?
c) Sometimes, a crackling sound is heard while taking off a sweater during winters. Explain.

Section – D : Long Answer Questions [3 x 5 = 15 marks]

20. a) Define adolescence.
b) Name the hormone which:
i) Controls the metamorphosis in frogs.
ii) Helps the body to adjust stress.
c) What are sex hormones? State their function.
d) List any two changes in the body that take place at puberty.
21. a) Explain why
i) it is difficult to burn a heap of green leaves but dry leaves catch fire easily.
ii) CNG is considered a better fuel than petrol / diesel.
b) Make a labelled diagram of a candle flame.
22. a) What do you understand by the term migration?
b) Protected forests are also not completely safe for wild animals. Why?
c) Mention the aim of Forest (Conservation) Act.
d) Write any two consequences of deforestation.

Section – E : Case / Source Based Questions [4 x 4 = 16 marks]
For the following questions, read the paragraph given carefully and then answer the questions that follow.

23. Electroplating can be used for purification of copper metal. For this purpose, a thin plate of pure copper and a thick rod of impure copper are used as electrodes. Copper sulphate solution is used as the electrolyte. Copper from impure rod is sought to be transferred to the thin copper plate.
- i) Define electroplating.
ii) Give any two applications of electroplating apart from purification of copper metal.
iii) Which electrode is connected to the positive terminal of the battery and why?

24. The tremors produce waves on the surface of the earth. These are called seismic waves. The waves are recorded by an instrument called the seismograph. The instrument is simply a vibrating rod which starts vibrating when tremors occur. A pen is attached to the vibrating system which records the waves on a paper that moves under it. The point of origin of the earthquake is called focus. The point at which an earthquake causes maximum destruction is called epicentre.
- i) Name the following:
 - a) The scale on which the destructive energy of an earthquake is measured.
 - b) The instrument by which the earthquake waves are recorded.
 - ii) With the help of a diagram show the position of focus and epicentre with respect to each other.
 - iii) Give two steps to protect yourself when an earthquake strikes while you are at home.
25. A great variety of plants and animals exist on the earth. They are essential for the well-being and survival of mankind. To preserve biodiversity, to prevent extinction of endangered species and to maintain ecological balance in nature, wildlife and forests should be conserved.
- i) What do you mean by wildlife sanctuaries?
 - ii) Why should we conserve biodiversity?
 - iii) Differentiate between endangered and extinct species.
26. The size of the pupil of the human eye is controlled by the iris. Behind the pupil of the eye is a lens which is thicker in the centre. The lens focuses light on the back of the eye, called retina. The retina contains several nerve cells. There are two kinds of cells. Cones, which are sensitive to bright light and rods, which are sensitive to dim light.
- i) Which kind of lens is there in our eyes?
 - ii) Where does the lens form the image of an object in the human eye?
 - iii) List any two ways to take care of the eyes.

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