SET - A

GENERAL INSTRUCTIONS

1. Read all the questions carefully.
2. All the answers to be written on the answer sheet provided.
3. Total number of questions - 48. All questions are compulsory.

SECTION - A

1. Choose the correct answer from the following options: (1x15 =15 marks)

1. ____________ is a liquid metal.
   a) Sodium       b) Potassium       c) Mercury       d) Copper

2. Boys develop moustaches and beard because of ________________ hormone.
   a) Testosterone   b) Estrogen        c) Adrenalin      d) Thyroxin

3. The fusion of egg and sperm is called ________________.
   a) Pollination    b) Fertilisation   c) Fragmentation  d) Budding

4. Irregular shaped organism
   a) WBC             b) Paramecium     e) Amoeba       d) Elephant

5. A non metal, which is used in water purification
   a) Chlorine       b) Iron           c) Nitrogen      d) Calcium

6. The asexual mode of reproduction in hydra
   a) Budding       b) Binary fission   c) Regeneration   d) Spore formation

7. The most conspicuous change during puberty is the increase in ____________
   a) Height        b) Weight         c) Colour        d) None

8. Blank looking structures in the cytoplasm
   a) Nucleus       b) Cell membrane   c) Plastids      d) Vacuole

9. The smallest unit of an element
   a) Mixture       b) Atom           c) Compound      d) All of these

10. Angle of incidence is equal to angle of reflection
    a) Sometimes     b) Always        c) under special conditions  d) never
11. The number of nuclei present in a zygote is.
   a) One    b) Two    c) Three    d) Four

12. ------------------ is called the living substance of the cell.
   a) Cytoplasm    b) Nucleus    c) Protoplasm    d) Cell membrane

13. The eye lens is -------
   a) Convex    b) Concave    c) Cylindrical    d) Rectangle

14. External fertilisation takes place in
   a) Hen    b) Frog    c) Cat    d) Dog

15. The size of ------------ is controlled by Iris.
   a) Cornea    b) Iris    c) Retina    d) Pupil

SECTION - B

II. Name the following (1x4 = 4 marks)
16. The period of life, when the body undergoes changes leading to reproductive maturity.
17. Fertilized egg
18. Cells in retina which are sensitive to dim light.
19. The gas that burns with a pop sound.

III. Fill in the blanks( 1x3 = 3 marks)
20. _____________ is a very reactive non metal.
21. ________________ are the thread like structures present in the nucleus.
22. ________________ fertilisation takes place outside the female body.

IV. Rewrite the false statements correctly (1x2 = 2 marks)
23. Two mirrors placed at an angle to each other give a single image.
24. All human beings have 33 pair of chromosomes.

V.25.Match the following (1/4 x 4 = 1 marks)
   a) Silkworm    -    Bacteria
   b) Retina    -    Oxygen
   c) Non metal    -    Cone cells
   d) Prokaryote    -    Metamorphosis
VI. Answer the following in one or two sentences. (2 x 10 = 20 marks)

26. Why is Sodium stored in kerosene?
27. Differentiate organisms in terms of the number of cells. Give one example for each.
28. Why do fishes and frogs lay eggs in hundreds?
29. State the laws of reflection.
30. Define Hormones. Name the hormones produced by Testes and Ovary.
31. Define Displacement reaction. Give an example for displacement reaction.
32. Why do plants cells have an additional layer of cell wall?
33. Define metamorphosis. Draw flowchart to show metamorphosis in frog.
34. Write any four characteristics of the image formed by a plane mirror.
35. Draw the flow chart to show sex determination in human beings.

SECTION - D

VII. Answer the following in 3 or 4 sentences (3 x 10 = 30 marks)

36. a) What is the reaction of a metal with oxygen and water.
   b) Write an equation to show the reaction between Sulphur with oxygen and water.
37. Explain IVF and test tube babies .
38. a) Why do copper vessels acquire a greenish coat when exposed to air?
   b) Write the chemical equation to represent the above reaction.
39. a) Differentiate prokaryotic and eukaryotic cell.
   b) Who discovered the cell?
40. Explain the structure of nucleus and write its functions. (2 functions)
41. a) How to take care of the eyes? (Any 4 points)
   b) Name four food items that are rich in vitamin A.
42. Explain the development of chick starting from fertilisation.
43. List six changes during adolescence
44. a) Write one use each of kaleidoscope and periscope.
   b) What is the principle behind the working of kaleidoscope?
45. a) Why do young people get pimples and acne during adolescence?
   b) Name the hormone secreted by Pancreas and Thyroid. Also name the diseases that is caused due to the deficiency of these hormones

SECTION - E

VIII. Answer in details. (5 x 3 = 15 marks)

46. a) Differentiate metals and non metals based on their physical properties. (Six points) (3)
   b) A non metal used in fertilizers to enhance the growth of plants. (1)
   c) Define Metalloid. (1)

47. a) Label the given diagram. (2)

   5
   6
   7
   8

   1. ______________________________

   b) Explain diffused and regular reflection with diagram.

   OR

47. a) Draw the diagram of plant cell and label 6 parts. (3)
   b) List any 2 ways by which AIDS can be transmitted from an infected person to a healthy person? (2).

48. a) Explain Binary fission with diagram. (3)
   b) Write two functions of Adrenalin (2)

ALL THE BEST