T1-Biology

Model Question Paper I

9th Standard

Science

Reg.No. : | | | | | | |

I. Answer all the questions

Time : 01:30:00 Hrs

Total Marks : 45

Part-A

5 x 1 = 5

1) The organelle that destroys worn-out cells is the _____
   (a) centrosome (b) vacuole (c) lysosome (d) chromosome
2) Substances taken up in fluid form
   (a) phagocytosis (b) exocytosis (c) receptor-mediated endocytosis (d) pinocytosis
3) The plant cell does not have a _____.
   (a) cell wall (b) vacuole (c) centriole (d) chloroplast
4) _____are the non-living components of the cell
   (a) Lysosomes (b) Vacuoles (c) Nuclei (d) Golgi bodies
5) Petals of flowers bear_____
   (a) chloroplasts (b) leucoplasts (c) chromoplasts (d) amyloplasts

Part-B

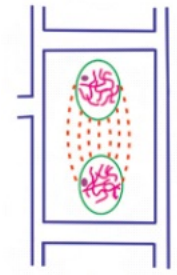
5 x 1 = 5

6) Classify the following organisms by giving reasons:
   Cockroach
7) Classify the following organisms by giving reasons:
   Crow
8) "If two animals belong to the same family then they belong to the same order, class and phylum". Is this True or False? Why do you think so?
9) Explain the statements:
   Hydra is a hermaphrodite.
10) Arrange the words in the correct sequence.
    species, kingdom, family, genus

Part-C

10 x 2 = 20

11) Mammals are homeotherms. List the vertebrate classes that are poikilotherms.
12) Nymphs undergo a process to become an adult grasshopper. Describe it.
13) The snail and the slug are related. Mention one difference between them.
14) List out the functions of the tube feet of starfish.
15) Given below is a list of five animals with four features each. Underline the feature which does not match the animal.
    a) Sea anemone – tentacles, aquatic, parasitic, cnidoblasts
    b) Butterfly – backbone, insect, exoskeleton, bilateral symmetry
    c) Dolphin – heterodont, poikilothermic, 4-chambered heart, mammary glands
    d) Octopus – mantle, soft body, appendages, metameres.
    e) Leech – suckers, bisexual, ectoparasite, acoelomate
16) Look at the given picture:
    Identify the phase of cell division.
    What happens to the cell immediately after this stage?



17) If the number of chromosomes in a nucleus is 24, how many finger-like structures will you be able to see during the metaphase. Why?
18) Genes are the physical basis of heredity. How are chromosomes, genes and DNA connected? Explain.
19) Pick the odd one out giving suitable reasons:
    a) Nucleus, Nucleolus, Chromosome, Ribosome
    b) Chloroplast, Cell wall, Dictyosome, Centriole.
    c) Crista, inner membrane, outer membrane, granum

20) Identify the cell structures from their description:

a) contains cellulose and surrounds a plant cell

b) controls the entry and exit of substances

c) Jelly-like material which fills most of the cells

d) involved in ribosome formation

e) involved in intracellular digestion

(cell structures – cytoplasm, Lysosome, cell wall, cell membrane, nucleolus)

Part-D

5 x 3 = 15

21) How do poikilotherms adapt themselves to changes in temperature. Give an example.

22) Young insects undergo certain changes to become adults. Define this change. Compare the life cycle of a grasshopper with that of a butterfly.

23) Identify the phyla based on their characteristic features and fill the box:

INVERTEBRATA	**PHYLUM**
Organism with jointed legs, hard endoskeleton	
Soft body covered by a shell	
Flat ribbon like body with hooks and suckers	
Body with minute pores	
Spiny skinned marine animals	

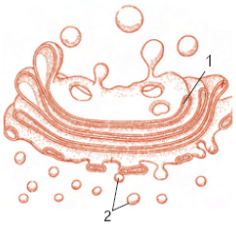
24) Study the diagram.

a) Identify the organelle shown.

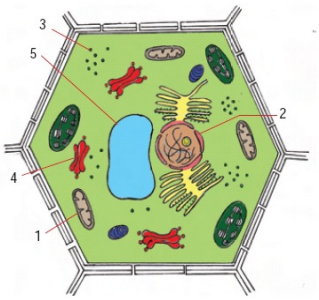
b) Copy and label the parts 1 and 2.

c) Who discovered the organelle?

d) List out its functions.



25) Observe the diagram carefully and answer the following.



a) Name the structure that carries out aerobic respiration.

b) Name the structure that controls the activities of the cell.

c) Name the structure that helps in the formation of lysosomes.

d) Name the structure that synthesises protein.

e) Name the structure that stores food.

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