

PART-A: CREATIVE QUESTIONS

Observe the stems and write down the answer of the following creative questions.

1.



Figure-1



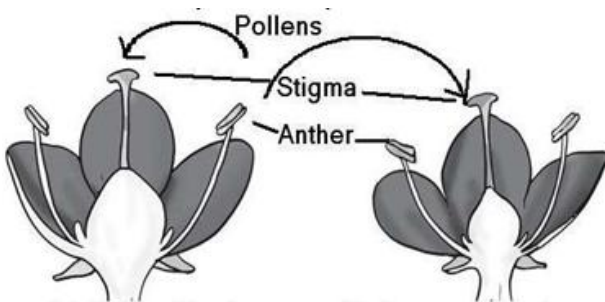
Figure-2



Figure-3

- a) What is the name of the organ by which the animal of figure-1 releases nitrogenous wastage?
- b) Why are gills present in the animal of figure-2 instead of lungs?
- c) What type of cell division occurs in the zygote of the animal of figure-2?—Explain.
- d) Though both of the animals of figure-1 and figure-3 are parasites, they are not same in their structure and character.—Analyze.

2.



Process-1

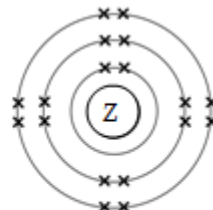
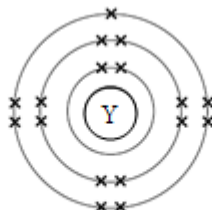
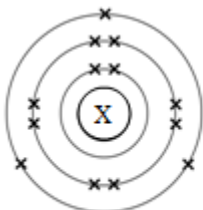


Sperm nuclei

Process-2

- a) By which process pollens are produced from pollen mother cell?
- b) Why does petal of flower become colorful and scented?
- c) Explain how process-2 is dependent on process-1.
- d) Process-2 is very important to maintain the existence of plants in the world.—Analyze.

3.



[Here X, Y and Z are not real symbols of the elements.]

- a) What is ion?
- b) Which one of the above three is stable and why?
- c) If the mass number of X, Y and Z are 27, 35 and 40 respectively, find out their neutron number.
- d) Which two of three elements will form a compound and how?—Analyze with logic.

PART-B: SHORT QUESTIONS

Write down the answer of the following questions in one word.

1) What is the name of the branch of biology which discusses the step-wise grouping of the living world?

Ans:

2) What is the name of the layer of embryo from which different organs of an animal are originated?

Ans:

3) Which part of a Salpa contains notochord?

Ans:

4) In which stage of karyokinesis do the chromosomes split at their centromeres?

Ans:

5) Which stage of mitosis is the reversal of the prophase?

Ans:

6) By which process of cell division is egg created in the embryo sac?

Ans:

7) What is the name of the character controlling part of the chromosome?

Ans:

8) What is the name of the process by which cell wall of plant absorbs water?

Ans:

9) Which process decreases water pressure of the plant body?

Ans:

10) Which modified vegetative part of a plant bears distinct nodes and internodes?

Ans:

11) How many female gametes are there in ten embryo sacs?

Ans:

12) What of embryo sac develops into cereal grains?

Ans:

13) Write down the name of a receptor of your body.

Ans:

14) Due to the effect of which organic compound are deformed seedlings produced?

Ans:

15) Which part of a neuron receives a stimulus?

Ans:

16) What type of neuron is present in the gray matter of spinal cord?

Ans:

17) How many electrons does a magnesium ion (Mg^{2+}) contain?

Ans:

18) Write down the electronic configuration of a chloride ion (Cl^-).

Ans:

19) Which element has same electronic configuration as phosphorous ion (P^{3-})?

Ans:

20) Which atoms are isotopes of each other among $^{35}_{17}Cl$, $^{40}_{19}K$, $^{37}_{17}Cl$, $^{40}_{20}Ca$ and $^{40}_{16}S$?

Ans: