

CBSE Sample Papers for

Class 11 Biology 2016 (Set 3)

Time Duration:3Hrs

Maximum Marks:60

General Instructions:

1. All questions are compulsory.
2. The question paper comprises of five sections A,B,C, D and E .
3. There is no overall choice however, internal choice has been provided in one questions of 2 marks, one questions of 3 marks and all the two questions of 5 marks category. Only one option in such questions is to be attempted.
4. Questions 1 to 5 in section A are very short questions of 1 mark each
5. Questions 6 to 9 in section B are short questions of 2 marks each.
6. Questions 10 to 20 in section C are questions of 3 marks each . Question 21 is of 4 marks.
7. Questions 22 to 23 in section D are questions of 5 marks each.
8. In the exam, section E will have three questions (question number 24,25 and 26 covering a total of 10 marks) based on OTBA study material provided by CBSE. This sample paper does not have this section.

Section A

1. What do you understand by hydrostatic skeleton?
2. Few organisms are known to have capacity to regenerate from their own body parts or cells. Which type of cell division do you think is responsible for it?
3. Name the most common respiratory substrate. Also suggest what would be its respiratory quotient when used in respiration.
4. Why there arises a need to classify organisms?
5. The cross section of a plant when observed under microscope shows a central core of xylem surrounded completely by phloem. Identify the type of vascular bundle, citing an example where it is found?

Section B

6. Though the opening of ureters into the urinary bladder is not guarded by valves, yet urine does not flow back into them on contraction of bladder. Explain.
7. Proteins have primary structure. If you are given a method to know which amino acid is at either of the two termini (ends) of a protein, can you connect this information to purity or homogeneity of a protein?
8. Name a chelating agent. In hydroponics, why iron is added along with chelating agent?
9. A virus is considered as a living organism and an obligate parasite when inside a host cell. But, virus is not classified along with bacteria or fungi. What are the characters of virus that are similar to non-living objects?

or

Both carrot and ginger grow underground, but are still different from each other. Give reasons in support of this statement.

Section C

10. Write a short note

(a) Synaptonemal complex

(b) Metaphase plate

11. Differentiate between metatheria and eutheria.

or

Justify the statement that 'plant parts show symptoms of deficiency depending on the mobility of that element in the plant'.

12. Explain why pure water has the maximum water potential.

13. How do ears help us in maintaining equilibrium?

14. Name a gaseous plant hormone regulating its growth and other physiological functions. Describe some of its commercial uses in agriculture now-a-days.

15. Give a comparative account of ribosomes of prokaryotic and eukaryotic cells. Enumerate both the similarities and dissimilarities among them.

16. Palm is a monocotyledonous plant, yet it increases in girth. Why and how?

17. Enlist three factors that regulate glomerular filtration rate.

18. The heterosporous pteridophytes show certain characteristics. Which are precursor to the seed habit in gymnosperms? Explain.

19. State the differences between

(i) Chl-a and Chl-b

(ii) Photosystem-I and II

20. Stratified epithelial cells have limited role in secretion. Justify their role in our skin.

21. While playing on a sunny afternoon, Payal felt dizzy, weak and fell on ground. Seeing this, one of her friend, Rahul took her in shade and called their class teacher. She gave her a glass of glucose water to drink, and within a few minutes, she regained her energy and stood up. To, this Rahul amazingly asked their teacher, how was this possible and how did the lunch she had did not give her energy?

(a) What could be the reason for glucose providing instant energy?

(b) Name the cellular energy currency and its components.

(c) What is the net gain of energy molecules from one molecule of glucose? .

(d) What values are reflected by Rahul?

Section D

22. 'Hypothalamus and pituitary function as an integrated and coordinated system'. Justify the statement.

or

What are the assumptions made during the calculation of net gain of ATP during aerobic respiration ?

23. Structure and function are correctable in living organisms. Can you justify this by taking plasma membrane as an example?

or

Give an account of abdomen of female cockroach.