

SEMESTER-ONE

BIOLOGY

Class XI

Sample Paper—1

Max. Marks: 50

Time Allowed: 90 minutes

General Instructions:

- (i) This question paper consists of 45 questions in 5 sections.
- (ii) Section A consists of 10 Objective type questions carrying 1 mark each.
- (iii) Section B consists of 10 Fill in the blanks type questions carrying 1 mark each.
- (iv) Section C consists of 10 True or False statement type questions carrying 1 mark each.
- (v) Section D consists of 10 Very short answer type questions carrying 1 mark each.
- (vi) Section E consists of 5 Short answer type questions carrying 2 marks each.

Section A

Select and write one most appropriate option out of the four options given for each of the questions 1 – 10.

1. The ways by which all living organisms including plants, animals and human beings obtain their food are called_____.
 - (a) modes of nutrition
 - (b) modes of chewing
 - (c) modes of photosynthesis
 - (d) none of the above
2. In addition to rock particles, the soil contains
 - (a) Air and water
 - (b) Mineral salts, organic matter, air and water
 - (c) Water and plants
 - (d) Water, air and plants

3. There are following major types of nutrition – autotrophic nutrition, heterotrophic nutrition and _____ nutrition.
- (a) Holozoic (b) Benzoic
(c) Autotrophic (d) None of the above
4. Which of the following statement is true about sandy soil?
- (a) It has limited air space. (b) It is light and easy to dig.
(c) It drained slowly. (d) It is heavy and poorly aerated.
5. In autotrophic mode of nutrition, organisms are able to synthesise their own food and are called _____.
- (a) Autotrophs (b) Heterotrophs
(c) Chemosynthetic (d) None of the above
6. _____ can be further divided into two types. These are photosynthetic nutrition and chemosynthetic nutrition.
- (a) Autotrophic nutrition (b) Benzoic nutrition
(c) Holozoic nutrition (d) None of the above
7. The photosynthetic nutrition is performed by green plants and _____ nutrition is performed by certain bacteria.
- (a) Chemosynthetic (b) Benzoic
(c) Holozoic (d) None of the above
8. _____ are the organisms that do not make their food and their mode of nutrition is called heterotrophic nutrition.
- (a) Heterotrophs (b) Mesotrophs
(c) Autotrophs (d) None of the above
9. The soil particles are tightly packed in
- (a) Clayey soil (b) Loamy soli
(c) Sandy soil (d) Silt
10. If 90 ants are found in a field with a total area of 100 m², what is the population density of the ants?
- (a) 0.09 (b) 0.90
(c) 9.00 (d) 90.00

Section B

Fill in the blanks with a suitable word for each of the questions 11 – 20.

11. The _____ content of the soil refers to the amount of water present in the soil.

12. There are three or four _____ on a microscope. They can be of 4X, 10X, 40X and 100X magnification powers.
13. _____ hold the slide in place.
14. In lysogenic cycle, the phage becomes integrated with the chromosome of the host cell and is known as a _____.
15. _____ projects light upwards through the diaphragm, slide and lenses.
16. The _____ bacteria are spherical, ellipsoidal or ovoid in shape.
17. _____ is the outer part of the tooth, and the hardest substance present in the body.
18. The last premolar in the upper jaw and first molar in the lower jaw are large and modified to form _____.
19. _____ refers to the composition of the soil in terms of the size of its particles. These particles make up the solid phase of the soil.
20. _____ of the soil helps to predict the ability of the soil to retain plant nutrients.

Section C

State whether the following statements are true or false for each of the questions 21–30.

21. Soil pH helps in maintaining the nutrient availability of the soil. A pH range of 5.6-7 is optimum for soil fertility.
22. Fertilizers such as Helium, potassium and phosphorus are added to the soil to make it fertile.
23. Leguminous plants contain nitrogen-fixing bacteria such as *Rhizobium* in the root nodules.
24. Mammals have two sets of teeth in their life time—temporary teeth and permanent teeth.
25. A lack of any nutrients in the balanced diet leads to malnutrition.
26. A diet that provides all the essential nutrients in a proper proportion required by the body for proper growth and good health is called balanced diet.
27. Water constitutes the major part of our body, 75% of our body is water.
28. Vitamins are organic compounds needed in small quantities to support life.

29. Various metabolic activities require different mineral salts for their proper functioning.
30. Classes of minerals include calcium, phosphorus, magnesium, sulphur, sodium, chlorine, iron, iodine, manganese, fluorine, copper and cobalt.

Section D

Answer each of the questions 31 – 35.

31. What is Herpes simplex also known as?
32. How does Gonorrhoea spread?
33. *Where is Streptococcus pneumoniae bacterium found?*
34. Infected bacterial cell is lysed releasing the progeny phages. The phage enzymes weaken the cell wall of bacteria during replication. What is it called?
35. The simplest type of asexual reproduction in which a single unicellular organism splits into two or more daughter cells is known as?

Section E

Answer each of the questions 36 – 40.

36. What do you mean by Dentine?
37. How is riboflavin (vitamin B12) produced?
38. What is a capsid?
39. What are the types of Heterotrophic nutrition?
40. What is Chemical weathering?