

FIRST TERMINAL EXAMINATION, 2016

BIOLOGY

Time : 3 hrs.

Class XI

M.M. : 70

Date : 23.09.2016

General Instructions:

- There are a total **26 questions and 5 sections**.
- **Section A** contains question number **1 to 5 of 1 mark each**. **Section B** contains question number **6 to 10 of 2 marks each**. **Section C** contains question number **11 to 22 of 3 marks each**. **Section D** contains a **value based** question of **4 marks**. **Section E** contains question number **24 to 26 of 5 marks each**.
- There are no overall choices. However, internal choice has been provided in one question of 2 marks, in one question of 3 marks and all the questions of 5 marks. An examinee is to attempt any one question out of the two given in the question paper with the same question number.

SECTION – A

- Q.1** What is an association between roots of higher plants and fungi called?
- Q.2** Name the family in which carpels of the flower are obliquely placed.
- Q.3** Give the term used for the stacks of thylakoids.
- Q.4** At which stage of meiosis, the chromosomes appear to be beaded.
- Q.5** A chemical substance changes pepsinogen into pepsin. Identify it.

SECTION – B

- Q.6** Define vital capacity. What is its significance?
- Q.7** How do chylomicrons differ from micelles with regard to their structural components?
- Q.8** How are prosthetic groups different from co-factors?
- Q.9** Mention the differences between metaphase of mitosis and metaphase-1 of meiosis.
- Q.10** Write the floral formula and draw the floral diagram of flower of family fabaceae.

OR

Give one example each of –

- a) an acidic amino acid b) a basic amino acid

SECTION - C

- Q.11** How do neutral solutes move across the plasma membrane? Can the polar molecules move across it in the same way? If not then how these are transported across the membrane?
- Q.12** Describe briefly the structure of a typical nucleus.
- Q.13** Distinguish between –
- a) reducing sugars and non-reducing sugars
- b) purine and pyrimidine
- Q.14** List the main differences between mitosis and meiosis.
- Q.15** a) What happens to the extra glucose or carbohydrates consumed by a person?
- b) Justify the statement “pancreatic juice contains strong proteolytic enzymes”.

Q.16 What is the effect of $p\text{CO}_2$ on oxygen transport?

OR

Draw a labelled diagram of a section of an alveolus with a pulmonary capillary.

Q.17 Describe the ultrastructure of cilia and flagellum diagrammatically.

Q.18 Draw a well labelled diagram of a cyanobacterial cell.

Q.19 Draw the diagram of different types of aestivation.

Q.20 a) Bring out the difference between lyases and ligases.

b) Give the general characteristics of dinoflagellates.

Q.21 a) Describe the binomial nomenclature with example.

b) Differentiate between sucrose and maltose.

Q.22 a) Name the part of the alimentary canal where major absorption of digestive food takes place. What are the absorbed forms of different kinds of food materials?

b) Give the conditions of the following muscles during expiration:

a) diaphragm

b) intercostal muscle

SECTION - D

Q.23 Neha was walking in the garden early morning and observed many beautiful flowering plants. She got attracted by the brightly coloured flowers and their beautiful appearance. Neha was curious to know about the variation of colours in flowers and asked her Biology teacher about this. Teacher told her about the plastids found in only plant cells.

i) Which plastids are found in flowers and fruits?

ii) Which plastids are known as 'kitchen of the cell' ?

iii) Name the colourless plastids.

iv) What values are shown by Neha?

SECTION – E

Q.24 What are the various stages of meiotic prophase-I? Enumerate the chromosome events during each stage.

OR

Describe the various phases of cell cycle. Illustrate your answer with diagram.

Q.25 Describe the different regions of root and draw a well labelled diagram.

OR

Define the following terms :

a) Perianth

b) Placentation

c) Actinomorphic

d) Zygomorphic

e) Superior ovary

f) Perigynous ovary

Q.26 Make an outline of the five kingdom classification. Explain the criteria used for the five kingdom system of classification. Briefly explain the merits and demerits of five kingdom classification.

OR

Describe human digestive system with a well labelled diagram.

