PRACTICE PAPER

STD-11TH **TOTAL MARKS-70**

General Instructions:

(i) *All questions are compulsory.*

(ii) *The question paper has five sections and 33 questions. All questions are compulsory.*

(iii) *Section–A has 16 questions of 1 mark each; Section–B has 5 questions of 2 marks each; Section– C has 7 questions of 3 marks each; Section– D has 2 case-based questions of 4 marks each; and Section–E has 3 questions of 5 marks each.*

(iv) *There is no overall choice. However, internal choices have been provided in some questions. A student has to attempt only one of the alternatives in such questions.*

(v) *Wherever necessary, neat and properly labeled diagrams should be drawn*

SECTION-A

Q. No. **Question** **Marks**

1. As we go from species to kingdom in a taxonomic hierarchy, the number of common characteristics **1**
   a. Will increase
   b. Will decrease
   c. Remain same
   d. May increase or decrease

2. Select the correct match: **1**

I	II
A. Family	1. Tuberosum
B. Kingdom	2. Polemoniales
C. Order	3. Solanum
D. Species	4. Plantae
E. Genus	5. Solanaceae

   (a) A-3, B-1, C-4, D-2, E-5
   (b) A-2, B-5, C-4, D-3, E-1
   (c) A-5, B-1, C-2, D-4, E-3
   (d) A-5, B-4, C-2, D-1, E-3

3 An association between roots of higher plants and fungi is called **1**
   a. Lichen
   b. Fern
   c. Mycorrhiza
   d. BGA

4 All eukaryotic unicellular organisms belong to **1**
   a. Monera 1
   b. Protista
   c. Fungi

d. Bacteria

5. Holdfast, stripe and frond constitutes the plant body in case of **1**
   a. Rhodophyceae
   b. Chlorophyceae
   c. Phaeophyceae
   d. All of the above
6. Fusion of two gametes which are dissimilar in size is termed as **1**
   a. Oogamy
   b. Isogamy
   c. Anisogamy
   d. Zoogamy
7. Match the following list of animals with their level of organization: - **1**

Division of Labour	**Animal**
A. Organ level	i. Pheritima
B. Cellular aggregate level	ii. Fasciola
C. Tissue level	iii. Spongilla
D. Organ system level	iv. Obelia

   Choose the correct answer showing division of labour with animal example.
   a. i-A, ii-C, iii-D, iv-A
   b. i-B, ii-D, iii-C, iv-A
   c. i-B, ii-C, iii-D, iv-A
   d. i-A, ii-D, iii-C, iv-B
8. Which of the following is a pseudocoelomate? **1**
   (a) Platyhelminthes
   (b) Aschelminthes
   (c) Mollusca
   (d) Hemi-chordates
9. The term phyllotaxy is used to describe the **1**
   (a) type of ovary in a plant
   (b) mode of arrangement of leaves
   (c) type of roots
   (d) arrangement of sepals and petals
10. Cymose inflorescences commonly occurs in **1**
   (a) Cruciferae
   (b) Malvaceae
   (c) Solanaceae
   (d) Liliaceae
11. Epiblema of root is equivalent to **1**
   a. Pericycle
   b. Epidermis
   c. Endodermis
   d. Stele

12 Glycogen is a homopolymer made of **1**

a. Glucose units
b. Galactose units
c. Ribose units
d. Amino acids

***Question No. 13 to 16 consist of two* statements – Assertion (A) and Reason (R). Answer these questions selecting the appropriate option given below:**

A. **Both A and R are true and R is the correct explanation of A.**
B. **Both A and R are true and R is not the correct explanation of A.**
C. **A is true but R is false.**
D. **A is False but R is true.**

13. Assertion: Increase in substrate concentration increase the rate of reaction. **1**
Reason: Substrate molecules occupy one and more active sites.

14. Assertion: Meiosis is called reductional division division. **1**
Reason: It involves pairing of homologous chromosome and recombination between non-sister chromatids of homologous chromosome.

15. Assertion: Interphase is resting stage. **1**
Reason: The interphase cell is metabolically inactive..

16. Assertion: In animal cells, the cytokinesis is marked by the appearance of a furrow in plasma membrane. **1**
Reason: In plant cells, the formation of the new cell wall starts with the formation of simple precursor called cell plate.

SECTION-B

17. Classify man and wheat. **2**

18. Distinguish between Taxonomy and systematics. **2**

19 Give the important features of protozoa. **2**

Differentiate between the followings: - **2**

a. Red algae and Brown algae
20 b. Liverworts and Mosses

21 How can you differentiate between free central and axile placentation? **2**

OR

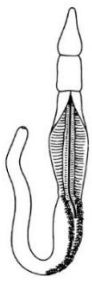
What do you mean by aestivation? Name and draw any two types of aestivation for a typical pentamerous flower.

SECTION-C

22 Give the importance of Lichens. **3**

23 Apart from chlorophyll, different classes of algae have several other pigments in their chloroplast. What pigments are found in blue, green, red and brown algae, that are responsible for their characteristic colours ? **3**

24 Identify the animal given in picture and write features of its phylum/class. **3**



25 Write floral formula of solanaceae family and describe its symbols. **3**

26 Draw a labelled diagram of stomata. Write two functions of stomata. **3**

OR

Point out the differences between in the anatomy of leaf of peepal and maize with the help of diagram.

27 State the location and function of different types of meristem. **3**

28 Draw a labelled diagram of digestive system of frog. **3**

SECTION-D

Q.no 29 and 30 are case based questions. Each question has subparts with internal choice in one subpart.

29 Frogs can live both on land and in freshwater and belong to class Amphibia of phylum Chordata. The most common species of frog found in India is Rana tigrina. **4**

Frogs do not have constant body temperature as their body temperature varies with the temperature of the environment. Such animals are called cold blooded or poikilotherms. Frogs have the ability to change the colour to hide them from their enemies (camouflage). This protective coloration is called mimicry. Frogs are not seen during peak summer and winter. During this period, they take shelter in deep burrows to protect them from extreme heat and cold. This is known as summer sleep (aestivation) and winter sleep (hibernation) respectively. The skin of frog is smooth and slippery due to the presence of mucus. The skin is always maintained in a moist condition. The colour of dorsal side of body is generally olive green with dark irregular spots. On the ventral side the skin is uniformly pale yellow. The frog never drinks water but absorb it through the skin. Body of a frog is divisible into head and trunk. A neck and tail are absent. Above the mouth, a pair of nostrils is present. Eyes are bulged and covered by a nictitating membrane that protects them while in water. On either side of eyes, a membranous tympanum (ear) receives sound signals. The forelimbs and hind limbs help in swimming, walking, leaping and burrowing. The hind limbs end in five digits and they are larger and muscular than fore limbs that end in four digits. Feet have webbed digits that help in swimming. Frogs exhibit sexual dimorphism. Male frogs can be distinguished by the presence of sound producing vocal sacs and also a copulatory pad on the first digit of the fore limbs which are absent in female frogs.

I. Frogs eyes are generally covered by _____ which is protective in function.

a) Camouflage membrane

b) Copulatory membrane

c) Nictitating membrane

d) Tympanum membrane

II. _____ is the unique and distinguishing as well as sexual character of male frog.

a. Presence of webbed digits

b. Presence of copulatory pad

c. Presence of Nictitating membrane

d. Presence of membranous tympanum

III. What is mean by poikilotherms?

IV. Why Frogs are not seen during peak summer and winter?

OR

IV. What is mean by camouflage and mimicry?

30. In 1838, Matthias Schleiden, a German botanist, examined a large number of plants and observed that all plants are composed of different kinds of cells which form the tissues of the plant. At about the same time, a British Zoologist, studied different types of animal cells and reported that cells had a thin outer layer which is today known as the 'plasma membrane'. He also concluded, based on his studies on plant tissues, that the presence of cell wall is a unique character of the plant cells. On the basis of this, Schwann proposed the hypothesis that the bodies of animals and plants are composed of cells and products of cells. Schleiden and Schwann together formulated the cell theory. This theory however, did not explain as to how new cells were formed. Rudolf Virchow (1855) first given the statement "Omnis cellula-e-cellula". He modified the hypothesis of Schleiden and Schwann to give the cell theory a final shape. Cell theory as understood today is: (i) all living organisms are composed of cells and products of cells. (ii) All cells arise from pre-existing cells. **4**

I. Identify the incorrect statement: -

Statement 1 – Theodore Schwann reported the presence of cell membrane

Statement 2 – Rudolph Virchow give the cell theory a final shape.

Statement 3 – New cells arise from pre-existing cells.

Statement 4 – Living organisms are composed of cells and products of cells.

a. Statement 1 and 3 are incorrect
b. Statement 2 and 3 are incorrect
c. Statement 4 is incorrect
d. All statements are correct

II. _____ proposed the theory, which states that the bodies of animals and plants are composed of cells and products of cells.

a. Antony Von Leeuwenhoek
b. Matthias Schleiden (1838)
c. Rudolph Virchow (1855)
d. Theodore Schwann (1839)

III. Give the name of scientist who stated that the animal cell had a thin outer layer.

IV. What is meant by "Omnis cellula-e cellula"?

SECTION-E

31 What is a centromere? How does the position of centromere form the basis of classification of chromosomes? Support your answer with a diagram showing the position of the centromere on different types of chromosomes. **5**

OR

Name two cell-organelles that are double membrane bound. What are the characteristics of these two organelles? State their functions also.

32. Draw the structure of: **5**

a. Glucose b. Ribose c. Alanine d. Glycine e. Serine

OR

Explain the concept of activation energy with graphical representation.

33. List five differences between mitosis and meiosis? **5**

OR

Describe the following:

(a) Synapsis

(b) Bivalent

(c) Chiasmata

Draw a diagram to illustrate your answer.