
Answers to this Paper must be written on the paper provided separately. You will not be allowed to write during the first 15 minutes. This time is to be spent in reading the question paper. The time given at the head of this Paper is the time allowed for writing the answers.

Section A is compulsory. Attempt any five questions from Section B. The intended marks for questions or parts of questions are given in brackets.

SECTION A (40 Marks)

(Attempt all questions from this section)

1. Choose the correct option.

[15]

- The temperature range within which enzymes can act best is
a) 20^o to 30^o C
b) 35^o to 40^o C
c) 40^o to 45^o C
d) 35^o to 50^o C
- Which of the following enzyme is not found in pancreatic juice
a) Sucrase
b) Trypsinogen
c) Amylopsin
d) Steapsin
- Which of the following components of a balanced diet enables easy movement of the food through the intestines?
a) Fats
b) Proteins
c) Roughage
d) Vitamins
- Marasmus is due to deficiency of
a) Vitamin C
b) Carbohydrates, fats and proteins
c) Fat
d) Food
- The disease caused due to the deficiency of Thiamine is
a) Osteomalacia
b) Beri Beri
c) Rickets
d) Dermatitis
- The part of an embryo which develops into root is
a) Coleorhiza
b) Plumule
c) Coleoptile
d) Radicle
- The single cotyledon of a maize grain is called
a) Hypocotyl
b) Scutellum
c) Coleorhiza
d) Embryo
- Pollination by birds is termed as
a) Entomophily
b) Anemophily
c) Ornithophily
d) Elephophily
- Which of the following conditions favours self-pollination
a) Homogamy
b) Herkogamy
c) Dichogamy
d) None of these

10. Which part of the pistil serves as the landing place for pollen grains
- a) Style
b) Ovary
c) Stigma
d) Ovules
11. The condition of androecium, when all the stamens are free from each other is termed as
- a) Polyadelphous
b) Polysepalous
c) Polyandrous
d) Polypetalous
12. Cardiac muscles is
- a) Involuntary
b) Smooth
c) Striated
d) Involuntary and Striated
13. Tendons and ligaments are examples of
- a) Cartilage
b) Muscular tissue
c) Fibrous connective tissue
d) Adipose tissue
14. Perianth is the collective term for a group of
- a) Sepals
b) Tepals
c) Bracts
d) Petals
15. Parenchyma containing chloroplasts is known as
- a) Parenchyma
b) Aerenchyma
c) Collenchyma
d) Chlorenchyma

II. Name the following.

- Total living substance of the cell.
- Mode of arrangement of flower on the axis of a plant.
- When maturation time of reproductive parts in a flower is different.
- A chemical used in experiments which absorbs oxygen.
- Mineral element needed for proper working of thyroid.
- The soft connective tissue contained in the central space of tooth.
- Four water bone diseases of human.
- Three pairs of salivary glands.

[8]

III. Fill in the blanks.

- _____ are hereditary units.
- The part of chloroplast where light reaction takes place is _____.
- The pollen tube enters the ovule through the _____.
- _____ shows viviparous germination.
- _____ attaches the ovule to the wall of the ovary.
- WHO headquarters are located in _____.
- Red cross day is celebrated on _____.

[7]

IV. Mention whether the following statements are true or false if false rewrite the sentence.

- Cellulose in our food passes out undigested.
- Assimilation is the process of breakdown of food in simpler form.
- Glycogenolysis is the process in which amino acid broken down in liver.
- Dentine is the material which covers the crown.
- Plumule develops into the root system.

[5]

Column A	Column B
1. Arranging ambulance in emergencies	a) Proteins & Peptides
2. Nucleous	b) WHO
3. Pollen grain	c) Vitamin K
4. Phylloquinone	d) Forms RNA
5. Stapsin	e) Pollen sac
	f) Vitamin B1
	g) Redcross
	h) Emulsified fat

SECTION B (40 Marks)

(Attempt any four questions from this sections)

- VI. a) Define Emasculation. [1]
 b) Mention any two contrivances in flower which favour cross pollination. [2]
 c) Distinguish between Autogamy and Geitonogamy. [2]
 d) What are the advantages of the following in the flower to the plant concerned? [5]
 i. Long and feathery stigma
 ii. Brightly coloured petals
 iii. Smooth and light pollen
 iv. Protruding and easily movable anthers
 v. Fragrant nectar
- VII. a) Define dentition. [1]
 b) Explain bile juice does not contain any enzyme but is still important in digestion. [2]
 c) Give any four reasons why water is necessary in our body. [2]
 d) Give two differences in each of the following pair. [5]
 i) Coleorhiza and coleoptile
 ii) Germination and vivipary.
- VIII. a) What do following abbreviation stand for? [1]
 i. NICD ii. UNO
 b) State the function of Red Cross. [2]
 c) Explain why only animals requires a digestive system and not plants. [2]
 d) Describe the reason for the formation of WHO and main activities of WHO. [5]
- IX. a) Define Bract. [1]
 b) Give any four reasons why water is necessary in our body. [2]
 c) Write the important role of small intestine. [2]
 d) Study the figure and answer the following questions. [5]



- i. Name and define the process.
- ii. Write the technical term of the above-mentioned process.
- iii. Give two examples of plants in which this process takes place.
- iv. Write one advantage and one disadvantage of the process shown.
- v. Name two agents that participate in this process.

X. a) define deamination. [1]

b) Write short note on Glycogenesis and Glycogenolysis. [2]

c) Write the important role of tongue. [2]

d) Explain the terms Monadelphous, Diadelphous and Polyadelphous using suitable diagrams. In each case name a flower possessing such an androecium. [5]

XI. a) Define Monoecious. [1]

b) What is roughage? Give two examples. [2]

c) What is the dental formula of a normal human adult. [2]

d) Study the following figures of human teeth and answer the following question. [5]



- i. What kind of teeth do A, B, C and D represents?
- ii. Name two minerals present in teeth?
- iii. What do you mean by wisdom teeth?
- iv. Mention the total number of teeth of each kind in buccal cavity.
- v. Write one structural feature/ shape of each.