

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)

I. Choose the correct option.

[15]

1. Direction:- In the following question, the assertion and reason have been put forward. Read the statements carefully and choose the correct alternative from the following.

- a) Both A and R are true
b) Both A and R are false
c) A is true and R is false
d) A is false and R is true

Assertion(A) We must include roughage in our diet.

Reason(R) Roughage helps to move the food along the wall of intestine

2. Cardiac muscles is

- a) Involuntary
b) Smooth
c) Striated
d) Involuntary and Striated

3. Marasmus is due to deficiency of

- a) Vitamin C
b) Carbohydrates, fats and proteins
c) Fat
d) Food

4. Fat soluble vitamins are

- a) A, D and E
b) B, C and D
c) B, D and E
d) A, B and C

5. Fruit is ripened

- a) Ovary
b) Embryo
c) Ovule
d) Zygote

6. Which of the following is the largest seed

- a) Watermelon
b) Pumpkin
c) Double coconut
d) Mango

7. Bright, showy and nectar producing flowers are needed for pollination to occur by

- a) Wind
b) Water
c) Insects
d) Elephant

8. Wing and keel petals are found in the flowers of

- a) Pea plants
b) Vallisneria
c) Maize plants
d) Dahlia

9. Bougainvillea flower has

- a) Large sepals
- c) Large colourful petals

- b) Large nectary
- d) Large colourful bracts

10. Perianth is the collective term for a group of

- a) Sepals
- c) Bracts

- b) Tepals
- d) Petals

11. Parenchyma containing chloroplasts is known as

- a) Parenchyma
- c) Collenchyma

- b) Aerenchyma
- d) Chlorenchyma

12. Which of the following connects muscle to a bone

- a) Cartilage
- c) Tendon

- b) Ligament
- d) Interstitial fluid

13. Plant cell has a cell wall made of

- a) Protein
- c) Cellulose

- b) Fructose
- d) Fatty acid

14. The pigment which is not found in plastids

- a) Xanthophyll
- c) Anthocyanin

- b) Carotene
- d) Chlorophyll

15. Which of the following organelle is involved in the formation of the acrosome of a sperm?

- a) Dictyosome
- c) Lysosome

- b) Centrosome
- d) Golgi apparatus

II. Name the following.

1. Amoeboid cells in animals.
2. Two important international bodies concerned with people's health.
3. When pollen grains of a flower reach the stigma of the same flower.
4. When maturation time of reproductive parts in a flower is different.
5. A chemical used in experiments which absorbs oxygen.
6. Mineral element needed for synthesis of haemoglobin.
7. Mode of arrangement of flower on the axis of a plant.
8. Four insect borne diseases of human.

[8]

III. Fill in the blanks.

1. _____ consists of membranous sacs and secretes 40 types of digestive enzymes.
2. _____ is structural unit of life.
3. The organisms having only one cell is called _____.
4. _____ is the protective layer of the radicle.
5. The sweet fragrant liquid of flowers is termed as _____.
6. Enzyme present in saliva _____.
7. _____ shows viviparous germination.

[7]

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

1. Cellulose in our food passes out undigested.
2. Lateral meristems are responsible for the increase in height of a plant.
3. The flower contains only gynoecium is called as staminate flower.
4. Germination is the period of rest in a seed.

[5]

5. Plumule develops into the root system.

V. Match the column.

[5]

Column A	Column B
1. Nucleous	a) Vitamin C
2. coleorhiza	b) Pollen sac
3. Ascorbic acid	c) Bombax
4. Night blindness	d) power house of the cell
5. Pollen grain	e) Forms RNA
	f) Retinol
	g) Protective covering of root
	h) Protein

SECTION B (40 Marks)

(Attempt any four questions from this sections)

- VI. a) What do following abbreviation stand for? [1]
i. WHO ii. UNO [2]
b) List any three health problems in India. [2]
c) Distinguish between Autogamy and Geitonogamy. [2]
d) Describe the reason for the formation of WHO and mention its functions. [5]
- VII. a) Write the exact locations of the following. [1]
i. Centrosome ii. Mesosome [2]
b) Why are the cells generally of a small size? [2]
c) What is the cell theory? Who propounded it and when? [2]
d) State the function of Red Cross. [2]
e) Mention three features found only in plant cell and one only in animal cells. [3]
- VIII. a) Define Bract. [1]
b) Give any four reasons why water is necessary in our body. [2]
c) Write the important role of proteins and cellulose in our body.. [2]
d) Explain the terms Monadelphous, Diadelphous and Polvadelphous using suitable diagrams. In each case name a flower possessing such an androecium. [5]
- IX. a) Define germination. [1]
b) What are the advantages of the following in the flower to the plant concerned? [2]
i. Long and feathery stigma
ii. Brightly coloured petals
c) Germinated grams are considered highly nutritive. Give reason? [2]
d) The figure shows a disease spreading. [5]
i. Name the animal.
ii. Name the disease spread by it.
iii. How does it spread disease?



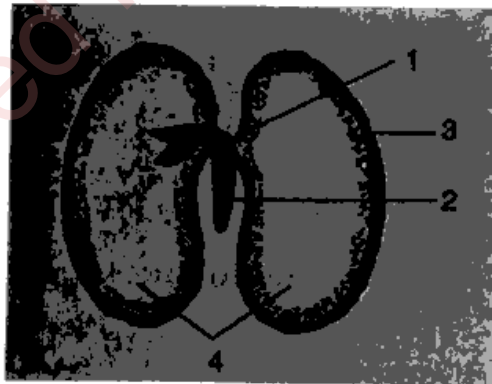
- X.a) Distinguish between Tocopherol and Panthonic acid on the basis of solubility. [1]
 b) Write short note on Glycogenesis and Glycogenolysis. [2]
 c) Write the important role of tongue. [2]
 d) Study the figure and answer the following questions. [5]



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

*I.a) Define Emasculation.

- Mention any two contrivances in flower which favour cross pollination. [1]
- What is the difference between flower and inflorescence? [2]
- Study the figure and answer the following questions. [5]



- Identify the seed and mention whether it is mono or dicotyledonous.
- Label 1 to 4.
- Write an important role of part 2.
- Mention the food component found in part 4.
- What kind of germination takes place in the above-mentioned seed?