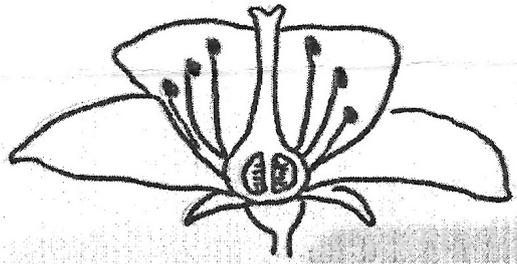


- (ix) In plant cells, the cell wall is primarily composed of:
- | | |
|-------------|--------------|
| a) Chitin | b) Cellulose |
| c) Glycogen | d) Starch |
- (x) In a neuter flower :
- | | |
|---|----------------------------------|
| a) Androecium and Gynoecium are present | b) Calyx and Corolla are present |
| c) Androecium and Gynoecium are absent | d) Calyx and Corolla are absent |
- (xi) A biology teacher asked her students to give two examples of dicot seeds:
- | | |
|-------------|----------------|
| Raj said: | Maize and Gram |
| Sonu said: | Gram and Bean |
| Lata said: | Pea and Gram |
| Abhay said: | Rice and Bean |
- Who were correct
- | | |
|-------------------|------------------|
| a) Abhay and Sonu | b) Sonu and Lata |
| c) Raj and Lata | d) Abhay and Raj |
- (xii) In which part of the cell does the Krebs cycle take place?
- | | |
|--------------|--------------------------|
| a) Cytoplasm | b) Mitochondria |
| c) Nucleus | d) Endoplasmic reticulum |
- (xiii) Assertion(A): Seeds sown deep in the soil do not germinate.
Reason (R): Seed sown deep in the soil do not get oxygen.
- | | |
|--------------------------|---------------------------|
| a) A is True R is False | b) A is False R is True |
| c) Both A and R are True | d) Both A and R are False |
- (xiv) During a practical exam,a flower was placed.Students were told to observe the essential whorls of a flower.Which one of the following is the correct answer?

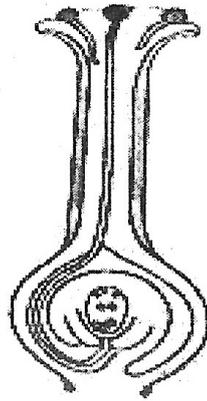


- | | |
|-----------------------------|--------------------------|
| a) Calyx and Corolla | b) Androecium and Calyx |
| c) Androecium and Gynoecium | d) Gynoecium and Corolla |
- (xv) Assertion (A): Wind pollinated flowers are brightly coloured.
Reason (R):Wind pollinated flower rely on attracting insects for pollination..
- | | |
|--------------------------|---------------------------|
| a) A is true R is false | b) A is false R is true |
| c) Both A and R are True | d) Both A and R are false |

Question 2

- (i) Name the following: [5]
- | |
|---|
| a) Process of fusion of male and female gametes |
| b) Layer of endosperm of maize, rich in protein. |
| c) Plant tissue that conducts water and nutrients |
| d) Process by which a seed develops into a new plant. |
| e) Special glands found at the base of the pistil or on the base of petals. |
- (ii) Arrange and rewrite the terms in each group in the correct order so as to be in a logical sequence beginning with the term that is underlined. [5]
- | |
|--|
| (a) Pollen tube, Stigma, Ovary, <u>Pollen grain</u> |
| (b) Nuclear membrane, Cytoplasm, Nucleolus, <u>Cell wall</u> . |
| (c) Axon, Dendron, Cell body, <u>Dendrites</u> . |
| (d) Seed, <u>Pollination</u> , Germination, Fertilisation. |
| (e) <u>Species</u> , Order, Genus, Family. |

- (iii) After pollination, when a pollen grain reaches stigma, it absorbs moisture and swells. It results in the rupture of exine and intine and the pollen grows out from one of the germ pores in the form of pollen tube: [5]
Given below is the longitudinal section of pistil. Read the information below the diagram and fill in the blanks.



The pollen tube along with the (a) _____ male gametes passes through the nucleus and reaches the (b) _____ where it enters the (c) _____ through the (d) _____ and reaches the embryo sac. The tip of the pollen tube ruptures releasing the two (e) _____ gametes.

- (iv) Read the explanation given below and name the following : [5]
- Group of cells performing special functions.
 - Body soft, covered by mantle and a calcareous shell.
 - The breathing roots in plants growing in swamps.
 - Conversion of ammonia to nitrates.
 - Plant in which reproductive organs are in the form of cones.
- (v) Given below is the diagram showing the structure of a cell. Match the structures marked (a) to (e) with their correct functions. [5]

Structure of a plant cell	Functions
	i. Release energy
	ii. Regulates all life process of cell.
	iii. Keeps the cell turgid and provides rigidity.
	iv. Participate in photosynthesis.
	v. Highly permeable

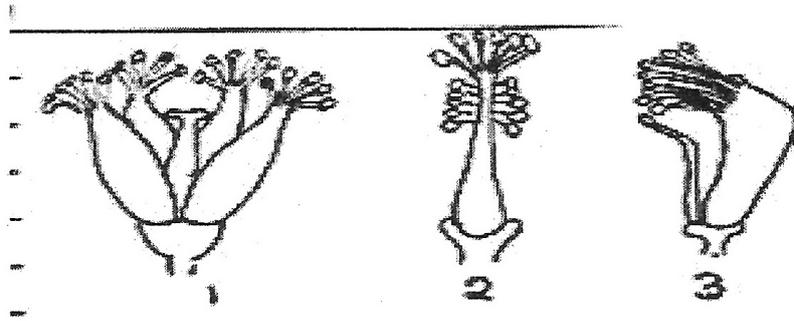
SECTION - B

(Attempt any four questions from this section)

Question 3

- Define the term allogamy. [1]
- What are staminate flowers? Give one example. [2]
- Name the various components of phloem. [2]
- Give difference between blood and lymph. [2]

- v) Given below are three types of androecium. Name these types and give one example of each. [3]

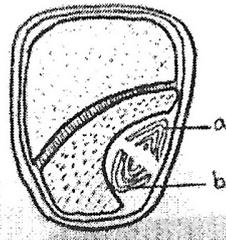


Question 4

- i) What is Nitrogen fixation? [1]
- ii) Mention any two uses of bacteria in industry. [2]
- iii) Write any two functions of lymph. [2]
- iv) Differentiate between aerobic and anaerobic respiration. [2]
- v) Draw a neat labelled diagram showing the structure of a nerve cell. [3]

Question 5

- i) What are antibiotics? [1]
- ii) Write the balanced equation of aerobic respiration. [2]
- iii) What is entomophily? Give one example. [2]
- iv) What is triple fusion? [2]
- v) Study the diagram given below and answer the questions that follow [3]



- a) Label the parts marked (a) and (b)
- b) Identify the given seed as monocot or dicot.
- c) What kind of germination takes place in this seed?

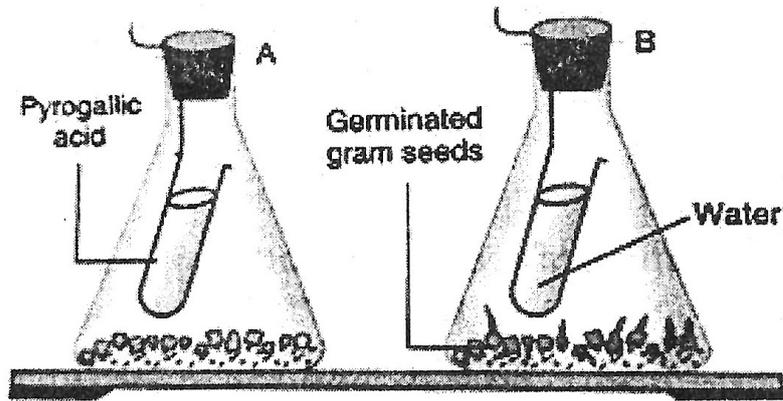
Question 6

- i) What is double fertilisation ? [1]
- ii) What are endospermic seeds? Give one example. [2]
- iii) Differentiate between polypetalous and gamopetalous corolla. [2]
- iv) Write two disadvantages of cross pollination [2]
- v) Draw a neat labelled diagram showing epigeal germination. [3]



Question 7

- i) What is vivipary germination? Give one example. [1]
- ii) Differentiate between self pollination and cross pollination. [2]
- iii) Define the following terms: [2]
 - i) Placentation
 - ii) Respiration
- iv) Write the full form of ATP and DNA [2]
- v) Study the diagram given below and answer the questions that follow : [3]



- i) What is the aim of the experiment shown above?
- ii) What is the purpose of taking pyrogallol acid?
- iii) What changes will you observe in the experiment after two days?

Question 8

- i) What is a dichogamy? [1]
- ii) Given below are two statements which are incorrect. Rewrite the correct statements: [2]
 - (a) Coral forming organisms belong to the phylum annelida
 - (b) Anemophily means pollination by animals.
- iii) Mention two characteristics of class mammalia. [2]
- iv) What is denitrification? Name the bacteria which help in denitrification. [2]
- v) Draw a neat labelled diagram showing the structure of a bean seed [3]