

St. Mary's Convent Inter College, Allahabad

First Terminal Examination 2025 - 26

Time : 2 Hrs

Class 10

M.M. : 80

Biology

Name : Roll No. Date :

Section – A

(40)

Note:-Attempt all the questions

Q.1) Choose the correct option :-

(15)

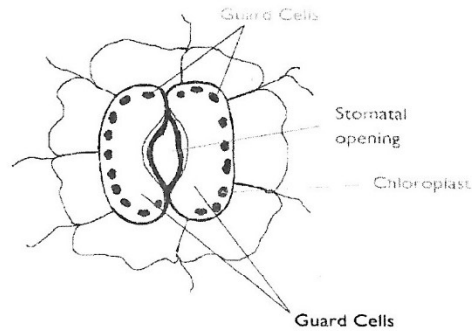
- a.) The hormone which promotes the ripening of fruits is:-
1.) Auxins. 2.) Ethyl alcohol. 3.) Cytokinins. 4.) Ethylene.
- b.) The granum is a pile of many:-
1.) Frets. 2.) Stoma. 3.) Stroma. 4.) Thylakoids.
- c.) Hydathodes are located on:-
1.) The petiole. 2.) Upper surface of leaves.
3.) Lower surface of leaves. 4.) Margins of leaves.
- d.) The factor that **does not** affect rate of transpiration:-
1.) Intensity of light. 2.) Velocity of wind. 3.) Carbon dioxide. 4.) Oxygen.
- e.) Specific sequence of nucleotides, which regulates the body feature:-
1.) Genes. 2.) Centromere.
3.) Chiasmata. 4.) All of the above.
- f.) The process for which energy is required is:-
1.) Passive transport. 2.) Diffusion.
3.) Osmosis. 4.) Active transport.
- g.) The physical expression of a character is called:-
1.) Genotype. 2.) Alleles. 3.) Phenotype. 4.) Traits.
- h.) Function of light energy in photosynthesis is:-
1.) To reduce CO₂. 2.) To activate chlorophyll.
3.) Formation of glucose. 4.) Splitting of water into H⁺ and OH⁻.
- i.) Monohybrid phenotypic ratio is:-
1.) 3:1. 2.) 2:3 3.) 9:3:3:1 4.) 1:2:1
- j.) A cell shrinks in a solution:-
1.) Isotonic. 2.) Hypotonic.
3.) Hypertonic. 4.) None of the above.
- k.) G1, S, G2 phases are present in:-
1.) Prophase. 2.) Interphase. 3.) Metaphase. 4.) Anaphase.
- l.) The chromatin material is formed of:-
1.) DNA only. 2.) DNA and histones. 3.) Histones only. 4.) Nucleotides.
- m.) With increase in atmospheric pressure, the rate of transpiration will:-
1.) Increase. 2.) Decrease
3.) Remain steady 4.) Slowly increase.
- n.) The individual flattened stacks of membranous structure inside the chloroplast:-
1.) Grana. 2.) Stroma 3.) Thylakoids. 4.) Cristae.
- o.) Growth of pollen tube towards the ovule is an example of:-
1.) Phototropism. 2.) Geotropism 3.) Chemotropism. 4.) Hydrotropism.

- Q.2) A) Fill in the blanks with the correct alternative: (5)**
- When conditions are.....there is no osmotic movement in either direction. (hypertonic/isotonic)
 - Low atmospheric pressure the rate of transpiration. (decreases/increases)
 - While destarching a leaf, it is boiled into remove chlorophyll (methylated spirit / ethylated spirit)
 - Ageing of plant organs can be delayed with the help of the hormones (Ethelene / gibberellins)
 - Plasmolysed cell should be kept into revive it (water/concentrated solution)
- B.) Name the following:- (5)**
- The surgical technique in males for contraception.
 - The phase of mitosis in which chromosomes are seen on the poles.
 - A sex linked inherited disease.
 - A cell in a fully distended condition.
 - One gaseous component that depletes the ozone layer.
- C.) Arrange and rewrite the terms in correct order in a logical sequence beginning with the term that is underlined. (5)**
- Spongy cells, Upper epidermis, Stoma, Palisade tissue, Substomatal space.
 - Endodermis, Cortex, Soil water, Xylem, Root hair.
 - Water molecule, Oxygen, Grana, Photolysis, Photon
 - Metaphase, Telophase, Prophase, Anaphase, Cytokinesis.
 - Genes, Chromosome, Allele, Chromatin.
- D.) State the exact location of the following:- (5)**
- Centromere.
 - Hydathodes.
 - Guard cells.
 - Chloroplast.
 - Auxin.
- E.) State whether following statements are true or false:- (5)**
- The chromosomes are duplicated in S phase. ()
 - Chromosomes other than the pair of sex chromosome are called alleles. ()
 - Bleeding is because of root pressure. ()
 - Moist cobalt chloride paper is yellow in colour. ()
 - Light reaction of photosynthesis is light independent. ()

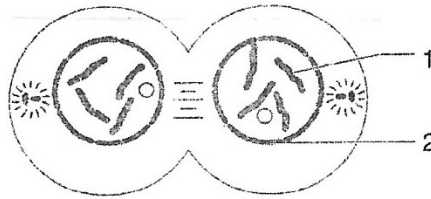
Section – B. (40)
Attempt any four questions

- Q.3)**
- Define growth rate of population. (1)
 - Give one difference between Mortality and Natalty. (2)
 - Give two harmful effects of radiation. (2)
 - Give one difference between flaccid condition and turgid condition. (2)
 - Write three objectives of clean India movement. (3)
- Q.4)**
- Expand the abbreviation of NADP. (1)
 - Name any two kinds of nucleic acids. (2)
 - State Mendel's Law of Independent assortment. (2)
 - Give one difference between Genes and Genome. (2)
 - Write the aim of Euro Bharat Vehicular Standards. (3)

- Q5.) i.) Expand the abbreviation of ABA. (1)
 ii.) Mention two important role of hormone CYTOKININS. (2)
 iii.) Why do we destarch the leaves before performing the transpiration? (2)
 iv.) Explain the term Photolysis of water. (2)
 v.) Study the given diagram below and answer the questions:- (3)



- a.) Identify the structure and write its location. (1)
 b.) Mention one important role of chloroplast. (2)
- Q.6) i.) Define Demography. (1)
 ii.) State two external factors which affect photosynthesis. (2)
 iii.) Mention two precautions of using Ganong's photometer. (2)
 iv.) Give two examples of turgor movements in plant. (2)
 v.) Given below is a diagram representing a stage during mitotic cell division. Study the diagram and answer the following questions:- (3)



- a.) Identify the stage. Give one reason in support of your answer. (1)
 b.) Name the stage prior to this stage. (2)
- Q.7) i.) Define Thigmotropism. (1)
 ii.) Define law of segregation. (2)
 iii.) Give one difference between guttation and bleeding. (2)
 iv.) Write the role of cohesive force in ascent of sap. (2)
 v.) Mention three adaptations found in plants to reduce transpiration. (3)

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