

HALF YEARLY EXAMINATION - 2023**11 - STD****BIOLOGY**

Marks : 70

TIME: 3.00 Hrs

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SECTION - 1 (BIO-BOTANY) (35 MARKS)

8 x 1 = 8

I. Choose the correct answer.

- The correct statement regarding Blue green alga is
 - Lack of motile structures
 - Presence of cellulose in cell wall
 - absence of mucilage around the thallus
 - presence of floridean starch
- A true fruit is the one where
 - Only ovary of the flower develops into fruit
 - Ovary and calyx of the flower develops into fruit
 - Ovary, calyx and thalamus of the flower develops into fruit
 - All floral whorls of the flower develops into fruit
- The two subunits of ribosomes remain united at critical ion level of...
 - Magnesium
 - Calcium
 - Sodium
 - Ferrous
- When a leaf trace extends from a vascular bundle in a dicot stem, what would be the arrangement of vascular tissues in the veins of the leaf ?
 - xylem would be on top and the phloem on the Bottom
 - Phloem would be on the top and the xylem on the bottom
 - Xylem would encircle the phloem
 - Phloem would encircle the xylem
- Munch hypothesis is based on...
 - Translocation of food due to TP gradient and imbibition force
 - Translocation of food due to TP.
 - Translocation of food due to imbibition Force
 - None of the above
- Synapsis occur between
 - mRNA and ribosomes
 - Spindle fibres and centromere
 - two homologous chromosomes
 - a male and a female gamete
- Seed dormancy allows the plants to
 - Overcome unfavourable climatic conditions
 - develop healthy seeds
 - reduce viability
 - Prevent deterioration of seeds
- The correct sequence of flow of electrons in the light reaction is.....
 - PSII, Plastoquinone, cytochrome, PSI ferredoxin
 - PSI, Plastoquinone, cytochrome, PSII ferredoxin
 - PSII, Ferredoxin, Plastoquinone, Cytochrome, PSI
 - PSI, Plastoquinone, Cytochrome, PSII, ferredoxin

4 x 2 = 8

II. Answer any four questions

- What are Archae Bacteria?
- What do you infer from the term Pycnoxylic?
- What are Quantosomes?
- What is Binomial nomenclature?
- Draw and labell the structure of stomata?
- What is long day plants?

III. Answer any three questions. Q.No. 19 is compulsory.

3 x 3 = 9

- Draw and Label the parts of regions of root?
- Difference between mitosis in plants and Animals?
- Write the role of nitrogenase enzyme in nitrogen fixation?
- Short note on Photolysis of water?
- List out the Physiological effects of Cytokinin?

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IV. Answer all the Questions.

PART - IV

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2 x 5 = 10

20. Write the characteristic feature of DNA? (OR)

In Botany class, teacher explains, synthesis of one glucose requires 30 ATPs, in C_4 plants and only 18 ATPs in C_3 plants. The same teacher explains C_4 plants are more advantageous than C_3 plants. Can you identify the reason for this contradiction?

21. Give the floral characters of *Clitoria ternatea*? (OR) Draw Krebs's cycle (or) Citric acid cycle?

SECTION - 2 (BIO - ZOOLOGY) (35 MARKS)

8 x 1 = 8

I. Choose the correct answer.

- Find the book written by Aristotle
 - History of Animals
 - Philosophie Zoologique
 - Historia Generalis palntarum
 - Methodus plantarum Nova
- Identify the phylum with features of combplates and Bioluminescence
 - Cnidaria
 - Ctenophora
 - Arthropods
 - Leech
- Match it :

A) Dense irregular	- i) Fluid connective Tissue
B) Elastic connective Tissue	- ii) Found in the skin as leathery dermis
C) Blood	- iii) Tissue fluid
D) Areolar connective Tissue	- iv) helps in passive recoil of lungs following inspiration
- The type of vision in Cockroach is
 - Three Dimensional
 - Two Dimensional
 - Simple vision
 - mosaic vision
- During inspiration volume of the human thoracic chamber increases Anteriorly due to
 - Contraction of diaphragm muscles
 - contraction of internal intercostal muscles
 - Contraction of external intercostal muscles
 - Relaxation of Diaphragm muscles
- Arteries do not always branch into arterioles some time they get connect with another artery and form
 - Capillary beds
 - collecting tubules
 - Anastomoses
 - Filtering bodies.
- If any one of your classmate found to have rough irregular curvature of cornea and lens which is said to be
 - Astigmatism
 - Hypermetropia
 - Presbyopia
 - myopia
- Isinglass is used in
 - Distillation of wines
 - Preparation of wines
 - clearing wines
 - preservation of wines

4 x 2 = 8

II. Answer any four questions

- Mention any four characteristics of subphylum cephalochordata and cite an example.
- Differentiate between Tergum and sternum in Cockroaches.
- What are the main functions of skeletal system.
- Write about important function of Limbic system.
- Sarcomere - Define.
- What are connective tissues mention their basic types.

3 x 3 = 9

III. Answer any three questions. Q.No. 16 is compulsory.

- Compare schizocoelom and Enterocoelom.
- How do vomiting happens, vomit colour is not as faecal yellow colour instead of its is white in colour - how?
- What are the main objectives of Animal breedings.
- Differentiate between Rod and Cone cells.
- List out the functions of hormone Adrenalin.

2 x 5 = 10

IV. Answer all the Questions.

- Explain (RAAS) Renin - Angiotensin Aldosterone system in human. (OR)
Explain Respiratory volumes in human Respiratory system and add note on vital capacity.
- Explain Origin and conduction of heart beat in human with neat labelled diagram. (OR)
Briefly explain the structure and function of Thyroid gland with neat labelled diagram.

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