

Roll No. of Candidate : \_\_\_\_\_

**BIOLOGY**

(Intermediate Part-I, Class 11<sup>th</sup>) 322 - (IV) Paper I (Group - I)

Time: 20 Minutes

**OBJECTIVE** ----- Code : 6467 **905-91-22** Marks: 17

**Note:** You have four choices for each objective type question as A, B, C and D. The choice which you think is correct, fill that circle in front of that question number. Use marker or pen to fill the circles. Cutting or filling two or more circles will result in zero mark in that question. Attempt as many questions as given in objective type question paper and leave others blank.

1. 1 - The example of parasitic plant is \_\_\_\_\_.  
(A) puccinia (B) sun dew (C) cuscuta (D) pitcher plant
- 2 - The surplus food in plants is stored in \_\_\_\_\_.  
(A) photosynthetic cells (B) collenchymatous cells  
(C) parenchymatous cells (D) sclerenchymatous cells
- 3 - Which of the following group includes the largest number of species?  
(A) chordates (B) arthropods (C) vertebrates (D) insects
- 4 - John Hogg in 1861 proposed kingdom \_\_\_\_\_ for microorganisms.  
(A) monera (B) Protista (C) plantae (D) prokaryotae
- 5 - The 16 elements that occur in organisms are called \_\_\_\_\_.  
(A) essential elements (B) bio-elements (C) common elements (D) important elements
- 6 - The bird's lungs have thin walled ducts called \_\_\_\_\_.  
(A) alveoli (B) bronchi (C) peri-bronchi (D) parabronchi
- 7 - Fungi grow best in the habitat \_\_\_\_\_.  
(A) dry (B) moist (C) hot (D) cold
- 8 - The genus which is not included in gymnosperms is called \_\_\_\_\_.  
(A) pinus (B) cycas (C) crataegus (D) taxus
- 9 - Which of the following is produced by the reactions taken place in thylakoids?  
(A)  $\text{CO}_2 + \text{H}_2\text{O}$  (B)  $\text{NADP}^+ + \text{ADP}$  (C)  $\text{ATP, NADPH}_2 + \text{CO}_2$  (D)  $\text{O}_2 + \text{ATP}$
- 10 - Certain electromagnetic rays below 300 nm are effective in killing \_\_\_\_\_.  
(A) virus (B) algae (C) microorganisms (D) germs
- 11 - An enzyme and its substrate react with each other through a definite charge bearing structure.  
(A) active site (B) binding site (C) catalytic site (D) reaction site
- 12 - Which of the following is not a part of human immune system?  
(A) antibody (B) antigen (C) B-lymphocyte (D) T-lymphocyte
- 13 - The paired gill openings are developed in all chordates but non-functional in \_\_\_\_\_.  
(A) rat (B) fish (C) frog (D) amphioxus
- 14 - The glucose forms a six cornered ring when dissolved in water is called \_\_\_\_\_.  
(A) glucofuranose (B) ribofuranose (C) glucopyranose (D) ribopyranose
- 15 - Which of the following initiates the process of blood clotting?  
(A) conversion of fibrinogen to fibrin (B) conversion of fibrin to fibrinogen  
(C) exposure of blood to air (D) by platelets
- 16 - The bacteriophage replicates only in the \_\_\_\_\_.  
(A) animal cell (B) plant cell (C) fungal cell (D) bacterial cell
- 17 - In which of the following the first molecule is reduced to second molecule?  
(A) pyruvic acid to acetyl-CO-A (B) glucose to pyruvic acid  
(C) glucose to lactic acid (D) glucose to  $\text{CO}_2$

Note: Section I is compulsory. Attempt any three (3) questions from Section II.

**(SECTION - I)****2. Write short answers to any EIGHT questions.****(2 x 8 = 16)**

- i - Why are lipids important to living organisms?
- ii - Why are enzymes considered as integral part of ribosomes?
- iii - How does enzyme accelerate the rate of metabolic reaction?
- iv - Why is catalytic region of active site necessary to enzyme?
- v - Write down two differences between spores and conidia.
- vi - What is parasexuality?
- vii - What is the importance of hook worm from parasitic point of view?
- viii - Differentiate between amniotes and anamniotes. Give example.
- ix - Define metameric segmentation. In which phylum is it found?
- x - Give two basic characteristics of chordates.
- xi - Define bioenergetics. Does it obey the law of thermodynamics?
- xii - What are accessory pigments? Give their role.

**3. Write short answers to any EIGHT questions.****(2 x 8 = 16)**

- i - What is inductive method to formulate a hypothesis? Give an example.
- ii - Define biome and community.
- iii - Name any two structures / organelles which are common in plant cell, animal cell and prokaryotic cell.
- iv - Compare the cell wall of plant cell and a prokaryotic cell.
- v - Why diatoms are considered as major producer of an aquatic ecosystem?
- vi - Compare foraminiferans and actinopods.
- vii - Write down two characteristics of euglenoids.
- viii - Write down two characteristics of oomycetes.
- ix - What is prothallus? Give its characteristics.
- x - What is overtopping in evolution of megaphyll leaf?
- xi - What is electro cardio gram (ECG)?
- xii - Differentiate between open and close circulatory system.

**4. Write short answers to any SIX questions.****(2 x 6 = 12)**

- i - What are prions?
- ii - What are water blooms?
- iii - How constipation and diarrhea are caused?
- iv - How sundew shows its insectivorous activity?
- v - Define pyrosis.
- vi - What is myoglobin?
- vii - How air composition changes after breathing?
- viii - Why lungs collapse if gestation age is less than seven months?
- ix - In plants how respiration occurs in presence of light?

**(SECTION - II)**

Note: Attempt any three (3) questions from Section II.

5. (a) How is Biology important to control diseases in man? (4)
- (b) Describe lymphatic system. Also discuss its various functions. (4)
6. (a) Describe importance of water for living organisms. (4)
- (b) Write down the characteristics of ascomycetes and importance of yeasts. (4)
7. (a) For growth, maintenance and reproduction nutrients are necessary. How bacteria get them? (4)
- (b) Why sporophytes and gametophytes of plants alternate with each other? Give its significance. (4)
8. (a) What is hepatitis? Describe its different types. (4)
- (b) Write down the role of water in photosynthesis. (4)
9. (a) Discuss structure and functions of plasma membrane. (4)
- (b) Describe digestion in stomach of man. (4)

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**BIOLOGY**

(Intermediate Part-I, Class 11<sup>th</sup>) 322 - (II) Paper I (Group - II)

Time: 20 Minutes

**OBJECTIVE** - - - - - Code : 6464 **945-9222**

Marks: 17

**Note:** You have four choices for each objective type question as A, B, C and D. The choice which you think is correct, fill that circle in front of that question number. Use marker or pen to fill the circles. Cutting or filling two or more circles will result in zero mark in that question. Attempt as many questions as given in objective type question paper and leave others blank.

1. 1 - Blade, stipe and holdfast are parts of \_\_\_\_\_.  
(A) polysiphonia (B) chlorella (C) laminaria (D) spirogyra
- 2 - \_\_\_\_\_ solvent does not dissolve chlorophyll.  
(A) alcohol (B) benzene (C) water (D) carbon tetrachloride
- 3 - \_\_\_\_\_ is not a member of phylum Mollusca.  
(A) slug (B) sea urchin (C) land snail (D) water snail
- 4 - The amount of CO<sub>2</sub> transported in the form of HCO<sub>3</sub><sup>-</sup> is \_\_\_\_\_.  
(A) 60% (B) 70% (C) 50% (D) 80%
- 5 - \_\_\_\_\_ is not lipid.  
(A) oil (B) wax (C) cholesterol (D) maltose
- 6 - The animal having intracellular digestion is \_\_\_\_\_.  
(A) hydra (B) frog (C) fish (D) man
- 7 - How much nitrogenous compounds are present in honey dew?  
(A) 0.5% (B) 1% (C) 2% (D) 3%
- 8 - Cell wall of archaeobacteria does not contain \_\_\_\_\_.  
(A) cellulose (B) peptidoglycan (C) chitin (D) cutin
- 9 - The detachable organic co-factor of an enzyme is known as \_\_\_\_\_.  
(A) activator (B) prosthetic group (C) co-enzyme (D) apoenzyme
- 10 - Blood clots are prevented by \_\_\_\_\_.  
(A) alanine (B) glycine (C) histamine (D) heparin
- 11 - The number of ascospores in each ascus is \_\_\_\_\_.  
(A) 2 (B) 4 (C) 6 (D) 8
- 12 - The diameter of peroxisome is approximately.  
(A) 0.2 μm (B) 0.3 μm (C) 0.4 μm (D) 0.5 μm
- 13 - Mammals became dominant in \_\_\_\_\_.  
(A) Proterozoic era (B) Palaeozoic era (C) Mesozoic era (D) Cenozoic era
- 14 - \_\_\_\_\_ is not a part of electron transport chain.  
(A) plastoquinone (B) cytochromes (C) plastocyanin (D) acetyl CO-A
- 15 - Horsetail belongs to sub division \_\_\_\_\_.  
(A) lycopsida (B) psilopsida (C) sphenopsida (D) pteropsida
- 16 - The sponge of fresh water is \_\_\_\_\_.  
(A) spongilla (B) euplectella (C) sycon (D) leucoselenia
- 17 - \_\_\_\_\_ is an insect.  
(A) silver fish (B) hag fish (C) cray fish (D) lampreys

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**BIOLOGY****(Intermediate Part-I, Class 11<sup>th</sup>) 322 Paper I (Group – II)****Time: 2:40 Hours****SUBJECTIVE****Marks: 68****Note: Section I is compulsory, Attempt any THREE (3) questions from Section II.****(SECTION – I)****2. Write short answers to any EIGHT questions. (2 x 8 = 16)**

- i - Define that branch of Biology which deals with study of chemicals and give its significance.
- ii - How irreversible inhibitors inhibit the activity of enzyme?
- iii - How active site of an enzyme is formed?
- iv - How the lining of digestive tract is protected by the action of pepsin?
- v - How spores are different from conidia?
- vi - What is histoplasmosis? How is it caused?
- vii - Define metamorphosis. Give example.
- viii - How osculum is different from ostia?
- ix - What are the features of archaeopterys?
- x - Why exoskeleton of echinoderms may be called endoskeleton?
- xi - Define bioenergetics.
- xii - What is oxidative phosphorylation?

**3. Write short answers to any EIGHT questions. (2 x 8 = 16)**

- i - Define population and state its attributes.
- ii - Differentiate between organ and organelle.
- iii - Enlist two self replicating organelles of the cell and mention their roles.
- iv - Why food is stored in underground parts of plants?
- v - How ciliates differ from other protozoans?
- vi - Why limestone deposits are formed from foraminiferans rather than actinopods?
- vii - What is African sleeping sickness?
- viii - Write down importance of algae.
- ix - Differentiate between homospory and heterospory.
- x - What is overtopping?
- xi - Differentiate between antigen and antibodies.
- xii - Define plasmolysis.

**4. Write short answers to any SIX questions. (2 x 6 = 12)**

- i - What is hepatitis? How is it caused?
- ii - Differentiate between flagellum and flagellin.
- iii - What is hunger pang? Give its reason.
- iv - How hydra captures its prey?
- v - What is hemorrhoids? Give its treatment.
- vi - How does respiration take place through cork tissues?
- vii - In hot dry season, why the level of O<sub>2</sub> rises inside the leaf?
- viii - Why larynx is important during the act of swallowing?
- ix - Why myoglobin pigment is required by animals in addition to haemoglobin?

**(SECTION – II)****Note: Attempt any three (3) questions from Section II.**

5. (a) In what ways Biology helps us to save our deteriorating surrounding? (4)  
(b) Explain the structure of human heart with the help of diagram. (4)
6. (a) Explain primary and quaternary structure of proteins, each with one example. (4)  
(b) Fungi are well adapted to land. Give reasons. (4)
7. (a) How antibodies affect the health of humans? Give detail. (4)  
(b) Why microphylls are different from megaphylls? How evolution of leaf has taken place? (1+3)
8. (a) Describe life cycle of bacteriophage. (4)  
(b) Give an account on light independent reactions of photosynthesis. (4)
9. (a) Differentiate between prokaryotic and eukaryotic cells. (4)  
(b) Explain the digestion in cockroach. (4)