

Roll No. of Candidate : _____

607-41-21

BIOLOGY

(INTERMEDIATE PART - I) 321 - (IV) Paper - I Group - I

Time: 20 Minutes

OBJECTIVE - - - - Code : 6467

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 - Percentage of red pigment the haemoglobin in cytoplasm of red blood cells is _____.
(A) 95 (B) 90 (C) 85 (D) 80
- 2 - Plants open their stomata by actively pumping which ions, causing water to follow by osmosis.
(A) sodium ions (B) potassium ions (C) magnesium ions (D) iron
- 3 - Arterial blood contains carbon dioxide about _____.
(A) 50 ml / 100 ml (B) 52 ml / 100 ml (C) 54 ml / 100 ml (D) 60 ml / 100 ml
- 4 - Zymogenic cells of gastric glands secrete
(A) mucous (B) hydrochloric acid (C) pepsinogen (D) ptyalin
- 5 - During respiratory chain NADH is oxidized by
(A) cytochrome b (B) cytochrome c (C) cytochrome a (D) coenzyme Q
- 6 - Plastocyanin is a protein which contains _____.
(A) calcium (B) iron (C) copper (D) phosphorus
- 7 - Which of the following annelids is marine?
(A) stylaria (B) nereis (C) hirudo (D) pheretima
- 8 - The member of coelenterate commonly called Portuguese man of war is _____.
(A) obelia (B) hydra (C) physalia (D) aurelia
- 9 - The example of foliose lichens is _____.
(A) ramalina (B) bacidia (C) parmelia (D) lecanor
- 10 - Among gymnosperms taxus plant is commonly called as _____.
(A) sago-palm (B) pine (C) deodar (D) yew
- 11 - Which of the following belongs to red algae?
(A) chondrus (B) fucus (C) chlorella (D) ulva
- 12 - When flagella surround the whole cell of bacterium, such condition is called _____.
(A) atrichous (B) lophotrichous (C) amphitrichous (D) peritrichous
- 13 - Which of the following viral disease is caused by DNA virus?
(A) herpes simplex (B) influenza (C) mumps (D) polio
- 14 - Number of chromosomes in a diploid cell of potato is _____.
(A) 46 (B) 48 (C) 26 (D) 14
- 15 - If non-protein part of an enzyme is loosely attached to the protein part, it is known as _____.
(A) activator (B) prosthetic group (C) co-enzyme (D) Apo enzyme
- 16 - The percentage of water in human bone cells is _____.
(A) 10 (B) 20 (C) 30 (D) 85
- 17 - Study of distribution of animals in nature is called _____.
(A) Ecology (B) Environmental Biology (C) Zoogeography (D) Social Biology

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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 - Differentiate between anabolism and catabolism.
- ii - What do you know about "Induced Fit Model" of enzyme action?
- iii - Define active site and also give its two regions.
- iv - How enzyme-substrate complex is formed?
- v - What is nuclear mitosis?
- vi - Describe some antibiotics obtained from fungi.
- vii - Differentiate between radial and biradial symmetry.
- viii - Give four parasitic adaptations in Platyhelminthes.
- ix - Write down the characteristics of amphibians.
- x - What are running birds? Give examples.
- xi - What do you know about compensation point?
- xii - Give accessory photosynthetic pigments.

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

- i - What are bio-pesticides? Give example.
- ii - Define integrated disease management.
- iii - Differentiate between phagocytosis and pinocytosis.
- iv - What are choanoflagellates? Why they are of special interest?
- v - How algae differ from plants?
- vi - Define thallus.
- vii - How green algae and plants form a monophyletic lineage?
- viii - Why bryophytes are called amphibians of plants?
- ix - Differentiate between microphyll and megaphyll.
- x - Write down something about the Irish potato famine.
- xi - How pyruvic acid is activated?
- xii - Why calvin cycle is called as C₃-Pathway?

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

- i - Write down about five kingdom classification system proposed by Margulis and Schwartz.
- ii - How conjugation occurs in bacteria?
- iii - Differentiate between cardiac and pyloric sphincter.
- iv - Define digestion. Give its types.
- v - How trapping and digestion of insects occurs in venus-fly trap?
- vi - Define trachea.
- vii - How inspiration occurs in human?
- viii - Write down about the concentration of carbon dioxide in arterial and venous blood.
- ix - What is tuberculosis?

(SECTION – II)

5. (a) Write down a note on "protection and conservation of environment". (4)
(b) Write down about "Cohesion Tension Theory" of ascent of sap. (4)
6. (a) Explain the primary and secondary structure of proteins. (4)
(b) Write down a note on sac-fungi. (4)
7. (a) Describe flagella and their functions. (4)
(b) Write down a note on life cycle of angiospermic plant. (4)
8. (a) Write down a note on AIDS. (4)
(b) Draw and label calvin cycle. (Description is not required) (4)
9. (a) Write down a note on mitochondria. (4)
(b) How absorption of food takes place in small intestine? (4)