

(in Words)

Superintendent Seal & Signature

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BIOLOGY (Fresh) - I

Total Time: 3 Hours

Max: Marks: 85

Note: There are THREE Sections of this Paper i.e. A, B and C, attempt each according to the given instructions.

Time: 20 Minutes

SECTION-A

Marks: 18

Note: Attempt all parts of Section - A. Section - A must be return to the superintendent after 20 minutes even if you have not attempted any question. Overwriting/ defacing/Cutting etc is prohibited in Section-A and no credit will be given to such answer.

I. Write the correct option i.e. A/B/C/D in the empty boxes.

- i. The no. of spores produced in Ascus are \_\_\_\_\_  
(A) 2 (B) 4 (C) 8 (D) 16  C
- ii. The formula of Chlorophyll "b" is \_\_\_\_\_  
(A)  $C_{55}H_{72}O_5N_4Mg$  (B)  $C_{55}H_{70}O_6N_4Mg$  (C)  $C_{55}H_{74}O_5N_4Mg$  (D)  $C_{55}H_{72}O_6N_4Mg$   B
- iii. Number of DNA molecule in the nucleoid of Bacterium is \_\_\_\_\_  
(A) 1 (B) 3 (C) 4 (D) 46  A
- iv. Vessels elements are present only in \_\_\_\_\_  
(A) Gymnosperms (B) Angiosperms (C) Pteridophytes (D) Ferns  B
- v. Which one of the following is included in Annelida \_\_\_\_\_  
(A) Hirudinaria (B) Sea-urchin (C) Planaria (D) Sycon  A
- vi. The group of plants having naked seeds are called \_\_\_\_\_  
(A) Angiosperm (B) Pteridophyta (C) Gymnosperm (D) Bryophytes  C
- vii. In leaves of green plants, photorespiration may occur in \_\_\_\_\_  
(A) Glyoxisome (B) Peroxisome (C) Lysosome (D) Mitochondria  B
- viii. Amino acid differ from each other by the difference in their \_\_\_\_\_  
(A) R-group (B)  $NH_2$ -group (C)  $COOH$ -group (D) Both B and C  A
- ix. Which one of the following bacteria is non-motile \_\_\_\_\_  
(A) Spirillum (B) Bacilli (C) S. Typhi (D) Coccus  D
- x. The HIV core is made of protein \_\_\_\_\_  
(A) P<sub>17</sub> (B) P<sub>24</sub> (C) gp-120 (D) gp41  B
- xi. In aerobic respiration how much ATP molecules are produced from one molecule of glucose \_\_\_\_\_  
(A) 30 (B) 32 (C) 36 (D) 38  C
- xii. The site of enzyme other than Active site is called \_\_\_\_\_  
(A) Competitive site (B) Allosteric site (C) Non-competitive site (D) Frame work  B
- xiii. Sun flower is the example of \_\_\_\_\_  
(A) Corymb (B) Umbel (C) Capitulum (D) Panicle  C
- xiv. Which one of the following phylum is totally marine \_\_\_\_\_  
(A) Protozoa (B) Echinodermata (C) Mollusca (D) Fish  B
- xv. All of the following are macronutrients Except! \_\_\_\_\_  
(A) C (B) H (C) Fe (D) N  C
- xvi. The jejunum is roughly \_\_\_\_\_ feet.  
(A) 3-4 (B) 4-7 (C) 5-7 (D) 4-10  B
- xvii. The average blood pressure in vein is only \_\_\_\_\_  
(A) 100 mm Hg (B) 80 mm Hg (C) 2 mm Hg (D) 120 mm Hg  C
- xviii. All of the following are inflammatory chemical Except \_\_\_\_\_  
(A) Histamine (B) Avil (C) Brady kinin (D) Serotonin  B

**Note:** Time allowed for section B and C is 2 hours and 40 minutes.

**SECTION "B"**

**Marks: 40**

**II. Attempt any TEN Parts out of the following. Each Part carries equal marks.**

- i. What do you know about peroxisome?
- ii. Write a short note on waxes.
- iii. What is prion?
- iv. Define photorespiration and its consequences.
- v. Explain about immunity and name its type.
- vi. How pH of cell affect the enzyme activity.
- vii. Write four distinguish characters of birds.
- viii. What are the general characteristics of fungi?
- ix. What are plasmids and what is their importance.
- x. Explain thrombosis and embolism.
- xi. Write short note on thigmotropism and chemotaxis.
- xii. Write short note on function of stomach.
- xiii. Differentiate between corymb and umbel.

**SECTION "C"**

**Marks: 27**

**Note:** Attempt any THREE questions of the following. Each question carries equal Marks.

- III. Define photosynthesis? Explain light dependent reaction in detail.
- IV. Write briefly in proteins.
- V. Describe the life cycle of *Phytophthora infestans*.
- VI. Write short note on any two of the following:
  - (i) Class Amphibia .
  - (ii) Liver
  - (iii) Antibody