

P-428

11181
BIOLOGY
PART-I

(A) 2011

NOTE: Attempt all questions of Section-A by filling the corresponding bubble on the MCQ ANSWER SHEET and return it to the Superintendent within given time, even if you have not attempted any question.

SECTION-A**Marks: 18****Time: 20 Minutes**

1. All are the anatomical layers of an artery except A) tunica media, B) tunica externa, C) endothelium, D) endometrium
2. Inflorescence of mango is A) panicle, B) spike, C) catkin, D) corymb
3. All of the following contribute to continuous working of heart except A) AV node, P waves, C) SA node, D) purkinji fibers
4. The phagocytic cells of liver that digest cellular debris and destroy any invading bacteria are called as A) alpha cells, B) kuff cells, C) acinar cells, D) kupffer cells
5. All are components of "First Line of Defense" except the complement system, B) perspiration, C) sebaceous gland, D) dermis of skin
6. All are living genera of "Lycopsidea" except A) isoetes, B) selaginella, C) sigillaria, D) psilotum
7. All are the functions of "endoplasmic reticulum" except A) endocytosis, B) detoxification, C) lipid metabolism, D) nerve transmission
8. Panicle type of inflorescence is NOT found in A) oat, B) mango, C) grapes, D) carrot
9. All are biological functions of "water" except A) heat absorbance, B) emulsification, C) maintaining pH, D) universal solvent
10. "Rhizopus stolonifer" is the member of A) oomycota, B) ascomycota, C) deutromycota, D) zygomycota
11. Which one is NOT true for enzymes? A) reduce activation energy, change after reaction, C) increase rate of reaction, D) convert substance into products
12. The accessory pigments are carotenoids, B) bacterio-chlorophylls, C) chlorophyll a, D) chlorophyll b
13. "Multiplies in throat, passes to intestinal tract, enters the blood stream then attacks the nerves of muscles and causes paralysis". This indicates A) herpes simplex virus, B) HIV, C) HCV, polio virus
14. The archaea which live in very hot environment are called A) extreme halophiles, B) thermophiles, extreme thermophiles, D) methanogens
15. In eukaryotic cells photosynthetic pigments are present in chloroplast, B) mitochondria, C) nucleolus, D) none of these
16. Following are the characteristics of mammals except A) air breathing, cold blooded, C) mostly terrestrial, D) tetrapods
17. All of the following are correct regarding the chromosome members except A) human = 46, B) drosophilla = 8, C) garden pea = 14, pigeon = 64
18. "Salmonella typhi" and "clostridium tetani" belong to which of the following bacterial groups? A) bacilli, B) cocci, C) spirilla, D) none of these

7-424

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(A)2010

Time: 2 Hours 40 Minutes

SECTION-B

Marks: 40

1. Attempt any ten of the following. All carry equal marks.
- Classify proteins on the basis of "structural organization".
 - Describe various types of "chlorophylls".
 - What is "coral reef"? Mention its different types.
 - Name different classes of fungi. Describe the aid of fungi to pharmaceutical industries.
 - Differentiate between "short day" and "long day" plants.
 - Differentiate between prokaryotic and eukaryotic cells.
 - Describe different types of bacteria based on "flagella".
 - What are different components responsible for continuous working of heart?
 - Shortly describe the structure of "bacteriophage" with labeled diagram.
 - What do you mean by "cyanosis"?
 - Describe "malfunctions" of lysosomes.
 - Mention different types of RNAs.
 - Differentiate between "cyclic" and "non-cyclic" photo phosphorylation.

SECTION-C

Marks: 27

NOTE: Attempt any three of the following questions. All questions carry equal marks.

- What are plastids? Name the different types of plastids. Discuss the structure of chloroplast and explain its role in photosynthesis.
- What are enzymes? Discuss various structural and functional characteristics of enzymes. Explain the "lock and key model hypothesis" of enzymes.
- Illustrate the human digestive system in detail.
- Write notes on the following:
 - Normal bacterial flora of human and its merits.
 - Bacterial classification on the basis of flagella.