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Answer Sheet No. _____

Sig. of Candidate. _____

Sig. of Invigilator. _____

BIOLOGY HSSC-I**SECTION – A (Marks 17)****Time allowed: 25 Minutes**

NOTE:- Section-A is compulsory and comprises pages 1–2. All parts of this section are to be answered on the question paper itself. It should be completed in the first 25 minutes and handed over to the Centre Superintendent. Deleting/overwriting is not allowed. Do not use lead pencil.

Q. 1 Circle the correct option i.e. A / B / C / D. Each part carries one mark.

- (i) Who used the technique of X-ray diffraction to determine the structure of DNA?
- | | |
|-------------------------|-----------------------|
| A. Wilkins and Franklin | B. Watson and Crick |
| C. Wilkins and Crick | D. Watson and Wilkins |
- (ii) Which of the following kinds of atom does **NOT** occur in carbohydrates?
- | | |
|-------------|-------------|
| A. Carbon | B. Hydrogen |
| C. Nitrogen | D. Oxygen |
- (iii) Which of the following is/are example(s) of enzymes attached to membrane systems inside the cell in specific and orderly arrangement?
- | | |
|-----------------|-------------------------------|
| A. Mitochondria | B. Chloroplasts |
| C. Both A and B | D. Ribosomes and Mitochondria |
- (iv) Which of the following cell organelle is responsible for the transmission of impulses and detoxification of harmful drugs?
- | | |
|--------------|--------|
| A. RER | B. SER |
| C. Ribosomes | D. DNA |
- (v) The botanical name for Potato is _____
- | | |
|----------------------|----------------------|
| A. Solanum melangena | B. Solanum Tuberosum |
| C. Cassia fistula | D. Solanum Nigram |
- (vi) The enzyme involved in viral replication are synthesized _____
- | |
|--|
| A. On the viral ribosome |
| B. By the host cell |
| C. On the interior surface of viral coat |
| D. On the interior surface of the viral membrane |
- (vii) Mesosomes are internal extensions of the _____
- | | |
|-------------------|------------------|
| A. Cell wall | B. Cell membrane |
| C. Chromatin body | D. Capsule |

DO NOT WRITE ANYTHING HERE

- (viii) Frequilaria belongs to phylum_____
- A. Chrysophyta B. Phaeophyta C. Pyrrophyta D. Chlorophyta
- (ix) Arthrotrys is a/an_____
- A. Carnivorous fungus B. Decomposer
- C. Symbiont D. Active predator
- (x) Which of the following types of Fungi is used in the production of bread and liquor?
- A. Penicillium B. Saccharomyces cerevisiae
- C. Neurospora D. Aspergillus
- (xi) The medicinal plant Clitoria ternatea is used against_____
- A. Dogbite B. Snake bite C. Bee sting D. Cat bite
- (xii) Virtually all biologists agree that animals evolved from_____
- A. Monera B. Protocista C. Algae D. Fungi
- (xiii) Respiration is the universal process by which organisms break-down complex compounds containing_____
- A. Calcium B. Copper C. Carbon D. Cobalt
- (xiv) Which of the following animals has no need for a gall bladder?
- A. Cat B. Man C. Lion D. Goat
- (xv) Respiratory pigment present in the muscles is called_____
- A. Haemoglobin B. Myoglobin
- C. Globin D. Haemocyanins
- (xvi) The respiratory distress syndrome is common in premature infants with a gestation age of less than_____months.
- A. 2 B. 4 C. 7 D. 6
- (xvii) The heart of fish always receives_____
- A. Deoxygenated blood B. Oxygenated blood
- C. Both A and B D. None of these

For Examiner's use only:

Total Marks:

17

Marks Obtained:

-----1HA 1110(L) -----



BIOLOGY HSSC-I

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Time allowed: 2:35 Hours

Total Marks Sections B and C: 60

NOTE:- Sections 'B' and 'C' comprise pages 1-2 and questions therein are to be answered on the separately provided answer book. Answer any fourteen parts from Section 'B' and attempt any two questions from Section 'C'. Use supplementary answer sheet i.e. Sheet-B if required. Write your answers neatly and legibly.

SECTION – B (Marks 42)

Q. 2 Attempt any FOURTEEN parts. The answer to each part should not exceed 3 to 4 lines. (14 x 3 = 42)

- (i) a. What do you understand by the term Integrated disease management?
b. What is biome?
- (ii) a. What is the general formula for Aminoacids?
b. Draw the structure of Glycylalanine to show peptide linkage in proteins.
- (iii) a. What happens if some enzymes are manufactured in their active form?
b. Name any two cell organells in which enzymes are attached to membrane system.
- (iv) Compare the structure and functions of Mitochondria and Chloroplast
- (v) a. Why are the viruses called Obligate Intracellular Parasites?
b. What are Paramyxoviruses?
- (vi) Write a brief note on the types of Respiration in Bacteria.
- (vii) Differentiate between Hormogonia and Akinetes.
- (viii) Draw a labelled life cycle of malarial parasite.
- (ix) Why the Taxonomic status of Fungi has been changed from that of group plant kingdom to Separate kingdom?
- (x) Which class of plants do Pteris and Adiantum belongs to? Also write the characteristics of that class.
- (xi) Write down the name and characteristics of the earliest bird fossil.
- (xii) a. Write down the molecular formula for chlorophyll a and b.
b. What is the function of Spectrophotometer?
- (xiii) Draw a cyclic pathway to show the path of electron in the respiratory chain.
- (xiv) Where does the dark reaction of photosynthesis take place? What are the raw material and products of dark reaction of photosynthesis?
- (xv) Define Parasites. Also classify the following living organisms as ectoparasite or endoparasites:
Flea, Aphid, Tapeworm, Mites.

- (xvi) Saliva is produced by the salivary glands. Write down the three important ingredients of the saliva.
- (xvii) Reproduce the following table on your answer book and fill in the same by inserting proper functions and the secretions given by these accessory glands:

Organ	Function	Secretion
Liver		
Gall bladder		
Pancreas		

- (xviii) Name the respiratory pigment in humans. How does it help in the transport of oxygen within the body.
- (xix) Do Lymphocyte T and B have some relationship with Thymus glands and lymphoid structure? If yes, explain briefly how.

SECTION – C (Marks 26)

Note:- Attempt any TWO questions. All questions carry equal marks. (2 x 13 = 26)

- Q. 3** a. Draw a labelled diagram of human heart. (05)
 b. Write in detail the functions performed by blood in humans. (08)
- Q. 4** a. Write down the general characteristics of the mammals. Also give examples to support your answer. (07)
 b. Briefly discuss the sub-class Eutheria. Also give examples. (04)
 c. Write down the common name of the following parasitic worms. Also give examples:
 (i) Enterobius Vermicularis (ii) Ancylostoma duodenale (02)
- Q.5** a. Describe how air is cleaned and moistened as it travels from the nose to lungs. (04)
 b. What is the function of the cartilage rings in the wall of trachea? (01)
 c. During exercise the breathing rate rises to 30 times per minute. Why? Write down the changes in the composition of the breathed air during inhalation and exhalation. (3+2)
 d. Write a short note on Tuberculosis. (03)

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