



Version No.			
7	1	0	1

ROLL NUMBER					

- 0
- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9

- 0
- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9

Answer Sheet No. _____

Sign. of Candidate _____

Sign. of Invigilator _____

Section - A is compulsory. All parts of this section are to be answered on this page and handed over to the Centre Superintendent. Deleting/overwriting is not allowed. Do not use lead pencil.

BIOLOGY HSSC-I

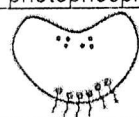
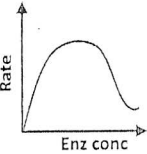
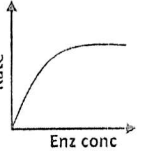
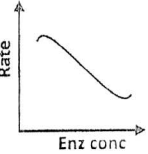
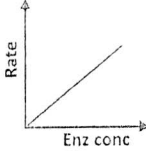
SECTION - A (Marks 17)

Time allowed: 25 Minutes

حصہ اول لازمی ہے۔ اس کے جوابات اسی صفحہ پر دے کر ناظم مرکز کے حوالے کریں۔ گات کردہ بارہ گنتے کی اجازت نہیں ہے۔ لیڈ پینسل کا استعمال ممنوع ہے۔

Fill the relevant bubble against each question:

ہر سوال کے سامنے دیے گئے درست دائرہ کو پر کریں۔

- The DNA is present in:
 - Mitochondria
 - Chloroplast
 - Centriole
 - Mitochondria
 - Chloroplast
 - Plasmid
 - Chloroplast
 - Centriole
 - Plasmid
- Which one of the following is mismatched?
 - Keratin - nails
 - Casein - clotting
 - Histone - DNA
 - Hemoglobin - RBC
- The technique used to separate fragments of charge bearing polymers is:
 - Centrifugation
 - Chromatography
 - Electrophoresis
 - Spectrophotometry
- All of the following cells are part of Embryo sac EXCEPT:
 - Male gamete
 - Synergids
 - Antipodal
 - Female gamete
- Which of the following is NOT electron acceptor during cyclic photophosphorylation?
 - Cytochromes
 - Ferredoxin
 - Plastocyanin
 - NADP
- 
 Choose the option which best describes the diagram:
 - Haploid Green sporophyte
 - Diploid Green gametophyte
 - Diploid Independent sporophyte
 - Haploid Independent gametophyte
- Agaricus* belongs to:
 - Basidiomycota
 - Ascomycota
 - Oomycota
 - Zygomycota
- The expected relationship between enzyme concentration and rate of enzyme catalyzed reaction is shown in:
 - 
 - 
 - 
 - 
- Allergic response is produced due to production of:
 - Histamine
 - Heparin
 - Perforin
 - Interleukin
- All of the following are coelomates EXCEPT:
 - Mollusca
 - Ashelminthes
 - Annelida
 - Arthropoda
- TACT theory includes all of the following EXCEPT:
 - Transpiration
 - Tension
 - Adhesion
 - Translocation
- An organism with Chlorophyll a, phycobilins and heterocyst is:
 - Bacterium
 - Alga
 - Cyanobacterium
 - Slime mold
- In human stomach HCl is secreted by:
 - Oxyntic cells
 - Mucus cells
 - Zymogen cells
 - Chief cells
- The causative agent of Cotton Curl Disease of Leaf is:
 - Begomovirus
 - Prions
 - Viroids
 - Herpes virus
- Which one of the following characteristic is NOT related to Algae?
 - Have multicellular sex organs
 - No embryo formation
 - Have chlorophyll a and carotenoids
 - Are simple multicellular
- The thickest layer of left ventricle of human heart is:
 - Epicardium
 - Myocardium
 - Endocardium
 - Pericardium
- The transfer of Antibodies from one individual to the other individual is a type of:
 - Natural active immunity
 - Artificial active immunity
 - Natural passive immunity
 - Artificial passive immunity



BIOLOGY HSSC-I

30

Time allowed: 2:35 Hours

Total Marks Sections B and C: 68

NOTE: Answer any fourteen parts forms Section 'B' and attempt any two questions from Section 'C' on the separately provided answer book. Write your answers neatly and legibly.

SECTION – B (Marks 42)

Q. 2 Attempt any FOURTEEN parts from the following. All parts carry equal marks. (14 x 3 = 42)

- (i) Narrate the role of Peroxisomes and Glyoxisomes in plant cells.
- (ii) Describe three types of Cofactors with one example of each.
- (iii) Starch is a homopolysaccharide.
 - (a) How can presence of starch be confirmed in a given sample?
 - (b) Differentiate between its types.

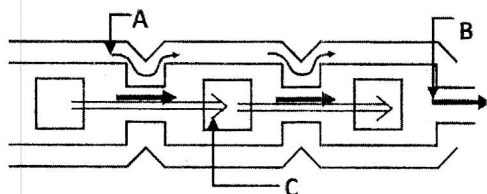
(iv) Complete the table:

Sr. No.	Property of water	Benefit to life
I	High polarity	
II		As transport medium
III	Ionization	
IV		Protect from thermal changes
V	Lower density of ice	
VI		Maintain lipids integrity in membrane

- (v) List any three groups of enzymes on the basis of Types of Reactions with one respective enzyme example.
- (vi) Write any three Plasma Membrane Proteins with their respective functions.
- (vii) Draw Z-scheme for explaining the events of light dependent reactions of photosynthesis.
- (viii) What is Absorption Spectrum? How do Absorption Spectrum of Chl a,b and carotenoids differ?
- (ix) Write down steps of Lytic cycle in Bacteriophage.
- (x) Complete the table:

Sr. No.	Disease	Causative agent	Symptoms	Prevention
I		<i>Helicobacter pylori</i>	X	
II			Immune system weakens	X
III		X		Sabin vaccine

- (xi) Why Archaea are regarded as Extremophiles? Elaborate answer with examples.
- (xii) In the given diagram, Identify and define the pathways labelled as A, B & C



- (xiii) Which cells produce Antibody Mediated Response and how?
- (xiv) Relate the evolutionary adaptations in Digestion, Respiration and Nervous System of Echinoderms.
- (xv) Elaborate major roles performed by large Intestine in humans.
- (xvi) Draw and label life cycle of a slime mold.
- (xvii) Fungi are neither placed in Plantae nor in Animalia but in a separate kingdom Fungi. Justify.
- (xviii) Classify plants on the basis of Photoperiod with one example of each group.
- (xix) What is Transduction and how it occurs in bacteria?
- (xx) If a cell is infected by microbes; How will Natural killer cells act?

SECTION – C (Marks 26)

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

- Q. 3 a. Describe the steps which lead to Evolution of Seed in seeded plants. (2+3+2)
- b. Liver is an Accessory Gland. Describe its Storage and Metabolic roles. (2+4)
- Q. 4 a. Describe General Characteristics of Mammals. Also name subgroups of Mammals. (6.5+1.5)
- b. Explain the main features of Watson and Crick model of DNA. (05)
- Q. 5 a. How SA node, AV node and Purkinje Fibers play a role in conducting a heart beat in human heart? (08)
- b. Explain Mechanism of movement of Sugars in plant body. Illustrate with a labelled diagram. (3+2)