

Roll No. : _____

Objective
Paper Code
6464Intermediate Part First
BIOLOGY (Objective) GROUP - II
Time: 20 Minutes Marks: 17

Q.No.1 You have four choices for each objective type question as A, B, C and D. The choice which you think is correct, fill the relevant circle in front of that question number on computerized answer sheet. Use marker or pen to fill the circles. Cutting or filling two or more circles will result in zero marks in that question. Attempt as many questions as given in objective type question paper and leave other circles blank.

S.#	Questions	A	B	C	D
1	If $\psi_w = -800\text{kPa}$ and $\psi_s = -1400\text{kPa}$, then ψ_p will be:	600 kPa	- 600 kPa	- 2200 kPa	2200 kPa
2	How many liters of blood are present in man whose body weight is 96kgs?	6	7	8	9
3	When carbon dioxide pressure increases, the capacity of haemoglobin to hold oxygen is:	Decreased	Increased many folds	Remained constant	Doubled
4	Dipeptides are broken down into amino acids by:	Lipase	Pepsin	Trypsin	Erypsin
5	The NADPH molecule reduces the sugar during in:	Cyclic phosphorylation	Non cyclic phosphorylation	Calvin cycle	Electron transport chain
6	The molecular formula of chlorophyll "b" is:	$C_{55}H_{72}O_5N_4Mg$	$C_{55}H_{70}O_6N_4Mg$	$C_{50}H_{72}O_5N_4Mg$	$C_{50}H_{70}O_6N_4Mg$
7	The left aortic arch is present in:	Cat	Crow	Frog	Cockroach
8	Polymorphism is the characteristics of phylum:	Mollusca	Arthropoda	Coelenterata	Porifera
9	The earliest group of vascular plants belongs to:	Psilopsida	Lycopsida	Sphenopsida	Pteropsida
10	Citric acid is obtained from a species of:	Aspergillus	Penicillium	Saccharomyces	Neurospora
11	Polysiphonia is an example of:	Green algae	Red algae	Brown algae	Golden algae
12	Which type of the bacterium E.coli is?	Aerobic	Anaerobic	Microaerophilic	Facultative anaerobic
13	The scientific name of tomato is:	<u>Solanum nigrum</u>	<u>Solanum tuberosum</u>	<u>Solanum esculentum</u>	<u>Allium cepa</u>
14	Organelles found in both prokaryotic and eukaryotic cells are:	Endoplasmic reticulum	Mitochondria	Ribosomes	Lysosomes
15	Vitamins are the essential raw material for the synthesis of:	Prosthetic group	Coenzyme	Activator	Apoenzyme
16	The secondary structure of protein is found in:	Trypsin	Insulin	Glucagon	Keratin
17	Tentative explanation of observation is called as:	Hypothesis	Deduction	Theory	Law

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SECTION - I

2. Write short answers to any EIGHT parts.

- (i) How yeast differs from other fungi?
- (ii) What is paraxuality? Give its importance.
- (iii) Write three general characteristics of animals.
- (iv) Name two animals in which hairs have become modified.
- (v) How water enters water vascular canals in echinoderm? Name that structure and its location on body side.
- (vi) What are two adaptations for parasitic mode of life in flatworms?
- (vii) Why do all biochemical reactions not follow the lock and key model?
- (viii) What are enzymes? Give their importance.
- (ix) How does enzymes accelerate the rate of metabolic reaction?
- (x) Why photosynthesis is called redox process? Write its equation.
- (xi) What is photosystem? Name its two parts.
- (xii) How would you identify starch and glycogen solution?

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3. Write short answers to any EIGHT parts.

- (i) Define bioelements. Name the bioelements which occur in traces in human body.
- (ii) Distinguish the micromolecules and macromolecules.
- (iii) Give two functions of endoplasmic reticulum.
- (iv) Define cell. Who discovered the cell?
- (v) What are kelps? Give their structure.
- (vi) Differentiate the diatoms and dinoflagellates.
- (vii) How algae differ from plants?
- (viii) Define water blooms. What is their effect on animals?
- (ix) Differentiate the organismic respiration from cellular respiration.
- (x) What are tracheoles in cockroach and state their function?
- (xi) Name four parts of heart of fishes.
- (xii) Differentiate the osmotic potential and pressure potential.

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4. Write short answers to any SIX parts.

- (i) Differentiate the phage virus and a prophage.
- (ii) What are plasmids? Give their importance for bacteria.
- (iii) How would you clarify microphylls and megaphylls?
- (iv) Why calyx and corolla are called non-essential reproductive parts of flower?
- (v) How ovules of gymnosperms differs from that of angiosperms?
- (vi) What are arthropyte plants? Give example.
- (vii) Write names and position of salivary glands in man.
- (viii) Where are the villi located? Give their role.
- (ix) How Sundew (Drosera) shows its insectivorous activity?

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SECTION - II Attempt any THREE questions. Each question carries 08 marks.

5. (a) Suggest measures to conserve deteriorating environment of Pakistan. 04
 (b) Air is better respiratory medium than water. Justify. 04
6. (a) Define lipids. Explain phospholipids with their structural formula. 01,02,01
 (b) Describe different ways in which fungi are useful and harmful to human. 02,02
7. (a) What are lysosomes? If some lysosomal enzymes are absent, what happens? Explain it with examples. 01,03
 (b) The digestive tract of a sheep is different from that of cats. How? 04
8. (a) Give biological classification of corn. Also write the importance of binomial nomenclature. 02,02
 (b) How evolution of heart took place in vertebrates? 04
9. (a) Write characteristics and economic importance of cyanobacteria. 04
 (b) Discuss and draw Calvin cycle. 04

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