

Objective
Paper Code
8462

Intermediate Part Second
BIOLOGY (Objective) GROUP - II
Time: 20 Minutes Marks: 17

Roll No. : _____



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.

FBD-42-22

S.#	Questions	A	B	C	D
1	The special excretory structures of terrestrial arthropods are called:	Nephridia	Protonephridia	Malpighian tubules	Nephrons
2	The plant tissues that lack secondary walls.	Parenchyma	Collenchyma	Sclerenchyma	Aerenchyma
3	How many pair of ribs are present in human rib cage?	Ten pairs	Twelve pairs	Six pairs	Twenty four pairs
4	The neurotransmitter that lie outside the central nervous system:	Adrenaline	Serotonin	Dopamine	Acetylcholine
5	The plant which is not a day neutral:	Tomato	Soya bean	Cucumber	Zea mays
6	The optimum temperature for maximum growth of plant is:	0 – 35 °C	25 – 30 °C	5 – 10 °C	10 – 15 °C
7	Grey equational cytoplasm give rise to:	Notochord & neural tube	Gut	Muscle cells	Larval epidermis
8	Each segment of DNA that is coiled around eight histone proteins:	Karyotype	Genotype	Phenotype	Nucleosome
9	In which syndrome the 21st pair of chromosome fails to segregate?	Klinefelter's syndrome	Turner's syndrome	Down's syndrome	Jacobs
10	In human cell the duration of G2 phase is:	10 hours	30 min	9 hours	4.5 hours
11	The chromosomes that carry its linked genes en bloc in the form of called:	Linkage groups	Linkage	Recombinants	Linked genes
12	The major goal of genetic engineer is to increase the efficiency of rubisco to introduce cycle:	C2 cycle	C4 cycle	C3 cycle	C6 cycle
13	The example of vestigial organ is:	Nose	Hairs	Bones	Vermiform appendix
14	The profession or job of any organism in their ecosystem called:	Ecology	Niche	Autecology	Synecology
15	The overall weather patterns are known as:	Climate	Weather	Humidity	Precipitation
16	The last biome seen before reaching the polar ice caps is:	Taiga	Boreal	Arctic tundra	Desert
17	Nuclear power station can last only for years:	10 years	20 years	30 years	40 years

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Intermediate Part Second

BIOLOGY (Subjective) GROUP - II

Roll No. _____

Time: 02:40 Hours

Marks: 68

FRD-92-22

SECTION - I

2. Write short answers to any EIGHT parts.

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- (i) How are xerophytes adapted to survive in dry environment?
- (ii) What are the structural differences between protonephridium and metanephridium?
- (iii) Describe the procedure adopted to remove kidney stones.
- (iv) Differentiate between heartwood and sapwood.
- (v) What is sciatica?
- (vi) What do you know about antagonistic arrangements of muscles?
- (vii) What is the location and function of Sertoli cells in the male reproductive system of man?
- (viii) Describe the process of generation of labour pain in human females.
- (ix) What do you know about deserts of Pakistan?
- (x) Describe profundal zone in fresh water lakes.
- (xi) What is algal bloom?
- (xii) Define soil and write its composition.

3. Write short answers to any EIGHT parts.

16

- (i) How does the nervous system of hydra differ from planaria? Give any two differences.
- (ii) Which part of the hind brain controls body movements and maintains position of body?
- (iii) Write the effects of over secretion and under secretion of somatotropin hormone.
- (iv) What are multiple alleles?
- (v) What is meant by genic system?
- (vi) What are sex limited traits?
- (vii) What are restriction enzymes?
- (viii) What is the significance of Taq polymerase enzyme?
- (ix) What is gene pharming?
- (x) Differentiate between autecology and synecology.
- (xi) What is ammonification?
- (xii) What are decomposers? Give their significance in ecosystem.

4. Write short answers to any SIX parts.

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- (i) Why are morphogenetic determinants essential in gene selection?
- (ii) Discuss the concept of differentiation.
- (iii) Why is CsCl used for ultracentrifugation?
- (iv) Discuss the properties of DNA Polymerase-III.
- (v) Discuss the findings of Archibald Garrod in certain genetic diseases.
- (vi) Discuss the importance of meiosis.
- (vii) What are events of cell death?
- (viii) What is artificial selection?
- (ix) What is the difference between endangered species and threatened species?

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

5. (a) Write a detailed note on excretion in earthworm with the help of diagram. 04
(b) Explain the principal stages of the nitrogen cycle. Draw the nitrogen cycle as well. 04
6. (a) Justify the division of joints on the basis of their structure. 04
(b) How does DNA encode protein structure? Discuss with special reference to the central dogma of molecular biology. 04
7. (a) How does insulin depress blood glucose levels. Also discuss diabetes mellitus. 04
(b) Describe the importance of forests. 04
8. (a) Describe the events of the menstrual cycle and explain its hormonal regulation. 04
(b) Discuss the Rh-blood group system in man. 04
9. (a) Write a note on differentiation in plants. 04
(b) Discuss any two factors affecting gene frequency. 04

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