

Roll No. : _____

Objective
Paper Code**8465**

Intermediate Part Second - 103

BIOLOGY (Objective) GROUP - I

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.coa

FBD-91-22

S.#	Questions	A	B	C	D
1	In DNA structure are more strongly linked:	Adenine with thymine	Guanine with cytosine	Bases with sugar	All these
2	Intercalary meristems are situated at:	Root apex	Shoot apex	Top of internode	Base of internode
3	Germ layers are formed at:	Cleavage	Gastrulation	Organogenesis	Neurulation
4	The plants which are stimulated to flower by exposure to low temperature are said to have:	Vernalization	Parthenocarp	Parthenogenesis	Apomixis
5	Adrenocorticotrophic hormone (ACTH) is secreted by:	Adrenal gland	Hypothalamus	Pituitary gland	Thyroid gland
6	Bone dissolving cells are:	Osteoblasts	Osteoclasts	Osteocytes	Chondrocytes
7	Disease in which bone resorption outpaces bone deposit:	Osteoporosis	Osteomalacia	Rickets	Spondylosis
8	Liver functions are pivotal to:	Osmo-regulation	Excretion	Homeostasis	Thermo-regulation
9	As CFCs rise to atmosphere, ultraviolet rays release:	Chlorine	Fluorine	Carbon	Hydrogen
10	The desert of Southern Punjab is:	Thal	Sahara	Thar	Cholistan
11	The conversion of nitrate to ammonium with in plant cell is called:	Ammonification	Nitrification	Assimilation	Denitrification
12	Prokaryotes have arisen more than:	1.5 billion years ago	2.5 billion years ago	3.5 billion years ago	4.5 billion years ago
13	If correct proportions of auxin and cytokinin are added in a liquid medium, thousands of copies of new shoots will develop from a single shoot tip by:	Protoplast culture technique	Meristem culture technique	Anther culture technique	Cell suspension technique
14	Which one of them is mostly used to develop transgenic animal?	Sanger method	Maxam Gilbert method	Particle gun method	Micro injection method
15	What is the risk of a haemophiliac child in a family when father is haemophiliac but mother is carrier?	All sons normal	All sons affected	All sons affected but all daughters normal	Half sons and half daughters affected
16	The actual decrease of chromosome number occur in:	Meiosis-I	Meiosis-II	Mitosis	Cytokinesis
17	Which tumor has branches:	Malignant	Benign	Both	None of these

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BIOLOGY (Subjective) GROUP - I

Time: 02:40 Hours

Marks: 68

FBD-51-22**SECTION – I****2. Write short answers to any EIGHT parts.**

16

- (i) Distinguish between osmoconformers and osmoregulators.
- (ii) Compare the nitrogen excreted in lower quantities with the one excreted in very small quantities.
- (iii) Differentiate between protonephridium and metanephridium. Give examples.
- (iv) What is vascular cambium? Which new tissues develop from it?
- (v) What is phototactic movement? Give example.
- (vi) Define vertebral column. What names can be given to them according to their location?
- (vii) Differentiate between identical and fraternal twins.
- (viii) Which hormone is released by pituitary gland at puberty? Also define follicle atresia.
- (ix) Write a note on profundal zone. Which organisms inhabit this zone?
- (x) Write the names of any eight animals which inhabit coniferous alpine and boreal forests.
- (xi) Write a note on ocean thermal gradient.
- (xii) Write any two factors which are responsible for modification of environment.

3. Write short answers to any EIGHT parts.

16

- (i) Compare Addison's disease and Cushing's disease.
- (ii) Give the role of midbrain in humans.
- (iii) What are neurotransmitters? How acetylcholine is different from other neurotransmitters?
- (iv) Why Mendel uses *Pisum sativum* (Garden Pea) in his experiments?
- (v) What is test cross? Write its significance.
- (vi) What are multiple alleles?
- (vii) What are restriction endonucleases? Give an example.
- (viii) What is PCR? Write the role of taq polymerase.
- (ix) What is gene therapy? What are its two methods?
- (x) How the relationship of predator and prey is maintained?
- (xi) Compare primary and secondary succession.
- (xii) Differentiate between autecology and synecology.

4. Write short answers to any SIX parts.

12

- (i) Define neurulation. State events of neurulation and explain its significance.
- (ii) What is morulla and blastula?
- (iii) Interpret how many types of tRNA molecules are necessary for a living cell, if the genetic code is triplet code.
- (iv) On the basis of position of centromere describe the four types of chromosomes.
- (v) Differentiate between point mutation and chromosomal mutation.
- (vi) Describe the symptoms and causes of down syndrome.
- (vii) Compare mitosis with meiosis.
- (viii) How does fossil record provide evidence of evolution?
- (ix) What is genetic drift?

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

5. (a) Explain the structure of nephron with the help of a diagram.

04

- (b) What predation? Discuss its significance.

04

6. (a) How is support provided to those animals which lack a hard skeleton? Explain your answer with two examples.

04

- (b) Describe the replication process of DNA in detail.

04

7. (a) Explain how reflex action prevent the body damage during emergency.

04

- (b) Describe the importance of forest.

04

8. (a) Explain the process of birth in humans.

04

- (b) Define diabetes and explain type-I in detail.

04

9. (a) Define growth correlation. Describe apical dominance in detail.

04

- (b) Can the comparative anatomy and fossil record be discussed as evidence of evolution? Explain it.

04