

FBD - 12-1-23

Objective
Paper Code
8467

Intermediate Part Second - 136

BIOLOGY (Objective) GROUP - I

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.

S.#	Questions	A	B	C	D
1	How many kinds of t.RNA are in human cell?	54	20	25	45
2	Full cell cycle in yeast cell has length of:	90 minutes	60 minutes	30 minutes	120 minutes
3	Form of appearance of a trait is:	Genotype	Pleiotropy	Phenotype	Metastasis
4	Antithrombin-III is biotechnology product produced in:	Mice	Cow	Sheep	Goat
5	Cell suspension culture of digitalis lanata produces:	Antitoxin	Quinine	Digitoxin	Penicillin
6	Endosymbiont hypothesis was proposed by:	Lynn Margulis	Wallace	Lamarck	Linnaeus
7	The abiotic component of an ecosystem is:	Decomposer	Producer	Consumer	Temperature
8	Northern coniferous forests are also called:	Taiga	Prairies	Savanna	Tundra
9	Total area of world under cultivation is:	9 %	10 %	11 %	12 %
10	Production of sweat and sebum is related with:	Skin	Liver	Lung	Gills
11	Which is stimulus for thigmotropism?	Light	Touch	Water	Chemicals
12	The living cells of cartilage are called:	Cnidocyte	Blastocyte	Nematocyst	Chondrocyte
13	Nissl's granules is the group of:	Ribosome	Chromosome	Mesosome	Lysosome
14	Insulin and glucagon are in nature:	Carbohydrate	Steroid	Protein	Polypeptide
15	Pregnancy is maintained by:	Progesterone	Oxytocin	FSH	Testosterone
16	The hypoblast is mainly presumptive of:	Blastoderm	Ectoderm	Mesoderm	Endoderm
17	Which strand of DNA is transcribed?	Coding	Sense	Template	Both strand

1213-XII112336-30000

BIOLOGY (Subjective) GROUP - I

F13D-12-1-23

Time: 02:40 Hours

Marks: 68

SECTION – I**2. Write short answers to any EIGHT parts.**

16

- (i) How do terrestrial animals overcome the problem of evaporative water loss?
- (ii) Justify the statement, "Excretion of uric acid in some terrestrial animals is an adaptation to conserve water".
- (iii) Compare poikilotherms and homeotherms.
- (iv) Compare sapwood with heartwood.
- (v) Outline the mechanism by which intervertebral disc is herniated.
- (vi) Compare sarcolemma and sarcomere.
- (vii) How is pollen tube significant in the life histories of spermatophytes?
- (viii) Justify the role of fetus in initiating the process of birth in human females.
- (ix) Compare weather and climate.
- (x) What kind of soil conditions are found in grassland ecosystem?
- (xi) How is ozone layer depleted by CFCs?
- (xii) Write the causes of water pollution.

3. Write short answers to any EIGHT parts.

16

- (i) What is chlorosis? How is it caused?
- (ii) What are effectors? Quote an example.
- (iii) Elaborate action of nicotine on humans.
- (iv) Define epistasis. How does it differ from dominance?
- (v) Name four traits of garden pea studied by Gregor Mendel.
- (vi) Differentiate quantitative trait with polygenic trait with examples.
- (vii) What are restriction enzymes? Who first isolated them?
- (viii) How taq polymerase act as a thermocycler?
- (ix) What is cell suspension? Quote an example.
- (x) What are lichens? How are they important?
- (xi) Differentiate between biosphere and niche.
- (xii) Write the significance of root nodules in plants.

4. Write short answers to any SIX parts.

12

- (i) Differentiate between determinate and indeterminate growth.
- (ii) Write the importance of red and blue light in growth.
- (iii) Write the structural formula of a dinucleotide.
- (iv) Write the factor causing alkaptonuria.
- (v) Give the role of aminoacyl-tRNA synthetase.
- (vi) Write the events of telophase in animal cell.
- (vii) Give the importance of Meiosis.
- (viii) Give the importance of sedimentary rocks regarding fossil formation.
- (ix) Define Hardy-Weinberg Theorem.

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

5. (a) Define and explain the process of dialysis. 04
(b) Define non-disjunction and explain Down's syndrome. 04
6. (a) Why bones break and also explain the repair process of a simple bone fracture? 04
(b) Give a detailed account of food chain and food web with its trophic levels. 04
7. (a) Discuss working of sensory receptors with special reference to skin. 04
(b) What are endangered species? What measure could be adopted for their preservation? 04
8. (a) Describe female reproductive cycle in detail. 04
(b) What are sex-chromosomes? Discuss the chromosomal patterns of sex-determination in organisms. 04
9. (a) Explain the mechanism of gastrulation during embryonic development in chick. 04
(b) Explain the techniques of micro-injection and vortex-mixing to produce a transgenic animal. 04

1213-XII123-30000