

Objective
Paper Code
8467

FSD

Intermediate Part Second
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	DNA polymerase enzyme which plays a supporting role in DNA replication is:	Polymerase II	Polymerase I	Polymerase III	Polymerase IV
2	The S-phase of cell cycle takes:	9 hours	4.5 hours	1.30 hours	10 hours
3	Pairing of homologous chromosomes called synapsis starts during:	Leptotene	Zygotene	Pachytene	Diakinesis
4	A person having neither antigen A nor B would have blood group:	O	A	B	AB
5	Organisms that have a foreign gene inserted into them are called:	Transduct	Transform	Transgenic organism	Bioreactors
6	Archaeobacteria tolerate temperature up to:	10°C	40°C	120°C	140°C
7	Lithosphere includes:	Air	Water	Gases	Earth, soil
8	In grassland ecosystem, tropical climates have woody trees called:	Savanna	Pampas	Prairies	Alpine
9	The cause of acid rain is:	Oxides of hydrogen	NO ₂ and SO ₂	Oxides of potassium	Oxides of magnesium
10	Removal of salts with water from sweat glands and of sebum seems to be:	Excretory	Protective	Thermo-regulation	Both B & C
11	Kidneys receive what amount of blood supplied with each cardiac beat:	10 %	20 %	1 %	25 %
12	Long tubular structures join end to end to form long water conducting pipes in xylem are known as:	Fibers	Vessels	Sclereids	Trachea
13	Tropomyosin is a complex of how many polypeptide chains?	Single	Double	Triple	None
14	The receptors which have undifferentiated endings and produce sensation of pain are called:	Chemo-receptors	Nociceptors	Mechano-receptors	Thermo-receptors
15	Which is a haploid cell?	Spermatogonia	Primary spermatocyte	Secondary spermatocyte	Germinal epithelium
16	The final size of a given type of a cell is attained during:	Maturation	Differentiation	Growth	Elongation
17	The peripheral part of the blastoderm where the cells lie unseparated from the yolk is called:	Hypoblast	Epiblast	Area pellucida	Area opaca

339-XII121-26000

FSD

Intermediate Part Second **F00-41-21** Roll No. _____
BIOLOGY (Subjective) **GROUP - I**
 Time: 02:40 Hours Marks: 68

SECTION - I

2. Write short answers to any **EIGHT** parts.

- (i) Define anhydrobiosis with an example.
- (ii) What is glomerular filtrate?
- (iii) What is pyrexia?
- (iv) What is a ligament?
- (v) Differentiate between hyaline cartilage and elastic cartilage.
- (vi) How many ribs do not attach with the sternum?
- (vii) What is after birth?
- (viii) Define climacteric.
- (ix) What is the productivity of grassland ecosystem?
- (x) What are zooplankton? Give example.
- (xi) Define eutrophication.
- (xii) Give importance of forests.

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3. Write short answers to any **EIGHT** parts.

- (i) Compare nerve impulse with saltatory impulse.
- (ii) What is cerebrospinal fluid? Give its function.
- (iii) What is acetylcholine? Give its role.
- (iv) Differentiate between alleles and multiple alleles.
- (v) What is universal blood donor?
- (vi) What are opsins?
- (vii) Give difference between ex-vivo and in-vivo gene therapy.
- (viii) How hypercholesterolemia can be cured by gene therapy?
- (ix) How cancer patients are being treated by gene therapy?
- (x) Define biosphere.
- (xi) Differentiate between habitat and ecological niche.
- (xii) Define food chain. Give example.

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4. Write short answers to any **SIX** parts.

- (i) Compare morula and blastula.
- (ii) How does coelom develop in chick embryo?
- (iii) Compare heterochromatin and euchromatin.
- (iv) Define transformation.
- (v) Differentiate between template and coding strand of DNA.
- (vi) Calculate the length of human cell cycle.
- (vii) Compare kinetochore microtubules and polar microtubules.
- (viii) How does molecular biology provide an evidence for evolution? Give at least one example.
- (ix) Can migration affect the genotype frequency? If yes, how?

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SECTION - II

Attempt any **THREE** questions. Each question carries 08 marks.

5. (a) How osmoregulation occurs in fresh water and terrestrial environment?
 (b) Describe symbiosis and mutualism. 04
6. (a) Write the process of ecdysis in arthropods.
 (b) Explain process of translation. 04
7. (a) What are receptors? Write names and functions of any four receptors
 (b) What is greenhouse effect? 04
8. (a) Give an account of sexually transmitted diseases in man.
 (b) Write note on mother-foetal Rh incompatibility. 04
9. (a) Discuss the Notochord and Mesoderm formation in chick embryo.
 (b) Describe the evidences of evolution from comparative anatomy. 04

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