

BIOLOGY (Subjective) GROUP - I

Time: 02:40 Hours

Marks: 68

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

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- (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.

3. Write short answers to any EIGHT parts.

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- (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.

4. Write short answers to any SIX parts.

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- (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?

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

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