PSD

Roll No. : _____

Objective
Paper Code
8461

Intermediate Part Second (New Scheme)
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.**

S.#	Questions	A	B	C	D
1	Fresh water protozoans pump out excess water by:	Food vacuole	Contractile vacuole	Pinocytosis	Phagocytosis
2	The incidence of uric acid kidney stones is:	10%	15%	20%	70%
3	The joint that allows movement in two directions only:	Cartilaginous joint	Fibrous joint	Hinge joint	Ball & socket joint
4	Turgor pressure is generated by high osmotic pressure of cell:	Cytoplasm	Vacuole	Cell wall	Cell membrane
5	The first convoluted part of vas deferens is:	Epididymis	Seminiferous tubule	Urethra	Germinal epithelium
6	Release of egg from follicle is called as:	Ovulation	Menstruation	Follicle atresia	Fertilization
7	Synapsis takes place during:	Leptotene	Zygotene	Pachytene	Diplotene
8	Cancer is mainly caused by mutations in:	Malignant cells	Somatic cells	Sex cells	Reproductive cells
9	Structure of human brain that controls hunger is:	Amygdala	Hippocampus	Thalamus	Hypo-thalamus
10	In ascidian fertilized egg, yellow cytoplasm gives rise to:	Muscle cells	Larval epidermis	Notochord & neural tube	Gut
11	The particular array of chromosomes that an individual possesses is:	Kinetochore	Centromere	Karyotype	Kinesis
12	Blood serum containing antibodies is called as:	Plasma	Antigen	Immuno-globulin	Antigen
13	Which enzyme acts as molecular scissors?	DNA polymerase	RNA polymerase	Restriction endonuclease	DNA gyrase
14	Biogeography, is the geographical distribution of:	Phylum	Class	Species	Genus
15	Once nitrate enters the plant cell it is reduced to:	Nitrite	Ammonia	Proteins	Carbohydrate
16	Northern coniferous forests are called as:	Boreal	Taiga	Alpine	Deciduous
17	The decline in thickness of ozone layer is due to increasing level of:	CO_2	CFCs	Hydrogen	Hydrocarbons

FSD

Intermediate Part Second (New Scheme) Roll No. 2019

BIOLOGY (Subjective) GROUP - I

Time: 02:40 Hours Marks: 68

SECTION – I

2. **Write short answers to any EIGHT parts.** 16
   (i) Write at least two characters of xerophytes.
   (ii) What is lithotripsy? How it takes place?
   (iii) What are heat-shock proteins? Give their role.
   (iv) Define cartilage. Give its types.
   (v) What is osteoporosis? Why it occurs in aged women?
   (vi) Differentiate between passive and active flight.
   (vii) What is plasmid? Give an example.
   (viii) What is cystic fibrosis?
   (ix) Define climate and weather.
   (x) How the productivity of aquatic ecosystem is determined?
   (xi) Enlist at least two ways to conserve energy.
   (xii) Differentiate between reforestation and afforestation.

3. **Write short answers to any EIGHT parts.** 16
   (i) Differentiate between chemoreceptors and mechanoreceptors.
   (ii) Define reflex arc and give its components.
   (iii) Which hormones are secreted by posterior lob of pituitary gland?
   (iv) Define seed dormancy. Give its importance.
   (v) What is ovoviviparity? Give its example.
   (vi) Describe the process of cloning.
   (vii) What is a test cross? Give its significance.
   (viii) What are multiple alleles? Give one example.
   (ix) Explain testicular feminization syndrome.
   (x) Define succession. Name its types.
   (xi) Differentiate between habitat and niche.
   (xii) Differentiate between predation and parasitism.

4. **Write short answers to any SIX parts.** 12
   (i) What is Hensen's node?
   (ii) What is discoidal cleavage?
   (iii) Differentiate between karyokinesis and cytokinesis.
   (iv) What changes occur in a cell during G_1-phase of interphase?
   (v) What are vestigial organs? Give two examples.
   (vi) Define genetic drift. Give its effect on a population.
   (vii) Name three types of RNA's. Give function of each RNA.
   (viii) What are Okazaki fragments?
   (ix) Differentiate between transcription and translation.

SECTION – II

Attempt any THREE questions. Each question carries 08 marks.

5. (a) Define osmoregulation. Describe the various categories of plants on the basis of osmoregulation. 04
   (b) Define an ecosystem. Write a note on biotic components of an ecosystem. 04

6. (a) What are paratonic movements? Discuss its various types. 04
   (b) Discuss Meselson and Stahl experiment to show semi-conservative replication. 04

7. (a) Explain gonadotrophic hormones. 04
   (b) What do you know about wild life? Explain it. 04

8. (a) Describe the process of birth in human female. 04
   (b) Describe the different patterns of sex determination. 04

9. (a) Explain signs and process of aging. 04
   (b) How did evolution proceed from prokaryotes to eukaryotes. 04

FSD

Roll No. : _____

Objective Paper Code **8462**

Intermediate Part Second (New Scheme)

BIOLOGY (Objective) GROUP – II

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.**

S.#	Questions	A	B	C	D
1	The active uptake of sodium ions in the loop of Henle is provided by the action of hormone:	Insulin	Aldosterone	Oxytocin	Adrenaline
2	Fresh water protozoans pump out excess water by:	Food vacuoles	Cilia	Contractile vacuoles	Pseudopodia
3	The disease which causes immobility and fusion of vertebral joints is called:	Sciatica	Microcephaly	Arthritis	Spondylosis
4	Number of cervical vertebrae in human is:	7	5	12	9
5	Galls are growth on plants that are induced by:	Fungi	Parasites	Insects	Protozoans
6	Oviduct opens into:	Uterus	Cervix	Vagina	Bladder
7	Decrease of FSH and increase of estrogen cause pituitary gland to secrete:	Progesterone	Luteinizing hormone	Lactogen	Oxytocin
8	Which type of light favours elongation of cells in plants?	Yellow	Green	Red	Blue
9	Particular array of chromosomes that an individual possess is called:	Genome	Genotype	Phenotype	Karyotype
10	Programmed and organized process of cell death is called:	Apoptosis	Necrosis	metastasis	Metamorphosis
11	Duplication of chromosomes occur during the phase of cell cycle:	G_1-phase	S-phase	G_2-phase	G_0-phase
12	The cross which is used to find homozygous or heterozygous nature of genotype:	Reciprocal cross	Monohybrid cross	Dihybrid cross	Test cross
13	Adult transgenic tobacco plant glowed when sprayed with substrate:	Luciferin	Luciferol	Luciferase	Luciferous
14	Archaeobacteria can tolerate temperature up to:	50°C	70°C	100°C	120°C
15	Moderate grazing is very helpful to maintain ecosystem:	Grassland	Desert	Tundra	Forest
16	Drifting or floating microscopic organisms are called:	Phytoplanktons	Zooplanktons	Planktons	Photons
17	Establishment of new forests where no forests existed before is called:	Forestation	Reforestation	Deforestation	Afforestation

FSD

Intermediate Part Second (New Scheme) Roll No. _____

BIOLOGY (Subjective) GROUP - II

Time: 02:40 Hours Marks: 68

SECTION – I

2. **Write short answers to any EIGHT parts.** 16
   (i) Define osmoregulation and thermoregulation.
   (ii) How loss of water is prevented in insects and terrestrial vertebrates?
   (iii) Define heat shock proteins at which temperature they work.
   (iv) Define phototactic and chemotactic movements.
   (v) Write few lines on disease Rickets.
   (vi) Define unguligrades. Write its two examples.
   (vii) Give two uses of biofilters.
   (viii) How gene therapy in Cancer patients be done?
   (ix) How productivity of an aquatic ecosystem can be determined?
   (x) Define Savanna and Prairies.
   (xi) Write two modifications of environment.
   (xii) Define pollution. Write only names of its four kinds.

3. **Write short answers to any EIGHT parts.** 16
   (i) What is habituation? Give an example.
   (ii) Characterize Pacinian Corpuscles.
   (iii) Write two uses of 2,4 dichloro phenoxy acetic acid.
   (iv) What is vernalization? Give an importance.
   (v) What is follicle atresia?
   (vi) Give some disadvantages of cloning.
   (vii) Define crossing over. Give its importance.
   (viii) What are multifactorial traits? Give an example.
   (ix) Differentiate between autosomes and sex chromosomes.
   (x) Differentiate between micronutrients and macronutrients.
   (xi) Define predation. Give its importance.
   (xii) Define primary succession.

4. **Write short answers to any SIX parts.** 12
   (i) Define term gerontology and teratology.
   (ii) What is gray crescent?
   (iii) State "The Chromosomal Theory of Inheritance".
   (iv) What is the difference between heterochromatin and euchromatin?
   (v) Differentiate between template and coding strands.
   (vi) What changes occur in dividing cell during diplotene?
   (vii) How does cell death help in multicellular development?
   (viii) What are vestigial organs? Give an example.
   (ix) What do you mean by endosymbiont hypothesis?

SECTION – II

Attempt any THREE questions. Each question carries 08 marks.

5. (a) Describe the structure of nephron of human kidney. 04
   (b) Define succession. Discuss succession on land. 04

6. (a) Discuss sliding filament model of muscle contraction. 04
   (b) Write a note on transformation. 04

7. (a) Define nerve impulse. How is it initiated? 04
   (b) Write a note on importance of forests. 04

8. (a) What are phytochromes? Discuss their role in photoperiodism. 04
   (b) Define test cross. Discuss its both cases with example. 04

9. (a) Explain the role of nucleus in development. 04
   (b) Explain the evidences of evolution from embryology and molecular biology. 04