



Biology – Subjective (Part-I)

Q.2. Write short answers in the given space of the following questions.

- ★ What ecological terms are used for air, water and soil?
- ★ What is a hydrospheric ecosystem?
- ★ Write a note on ocean thermal gradient.
- ★ What is difference between deforestation and A-forestation?
- ★ What is the major problem for terrestrial life?
- ★ What is the difference between the excretory system of insects and other animals?
- ★ What is blubber and in which animals is it found?
- ★ Write a note on hylrostatic skeicton in earthworm.
- ★ What are the methods of asexual reproduction?
- ★ What is the advantage of parthenogenesis?
- ★ What are four phases of growth of multicellular plant?
- ★ What are examples of point mutation?
- ★ What are two significant happenings of meiosis?
- ★ How many possible ways are there to get a gene?
- ★ On what the evolutionary change is based mainly?
- ★ What is homology, and homologous structures?
- ★ What is ozone layer?
- ★ What is Meristem culture?
- ★ What is Autonomic nervous system?
- ★ What are the main components of DNA?

Write a note on nervous coordination.

What is the first step in gene transcription?

Define hybridization. What was its use?

What are causes of green house effect?

How meiosis takes place in animals?

What is the function of collenchyma cells?

Whether the secondary xylem causes the increase in stem thickness?

Write a note on hydrostatic skeleton in earthworm.

When tactic movement is positive?

When tactic movement is negative?

Whether auxins play any role in phototropism?

Whether auxins are responsible for positive gravitropism of roots and negative gravitropism of stem?

What do you understand from "Rigor Mortis"?

What is hydroskeleton or hydrostatic skeleton?

What are characteristics of spongy bone?

Write a note on Na^+ and K^+ ions movement.

What is Parkinson's disease (paralysis agitans)?

What is innate releasing mechanism (IRM)?

Differentiate between isomorphic and heteromorphic?

How growth occurs in vascular plants?

Give two example of lateral meristem.

How primary tissue is added in primary growth?

What are five stages of differentiation?

How many different kinds of tRNA molecules human cells contain?

What is the first step in gene transcription?

What are apparent symptoms or effects of Down's syndrome?

What is incomplete or partial dominance?

Write a note on sex-limited trait.

Write a note on Sex influenced trait.

What is Cross over or recombinant frequency?

Differentiate between Monohybrid and dihybrid.

Differentiate between Dominance and epistasis.

Why does the blood group phenotype of a person remain constant through out life?

★ What is Rh-Blood group system?

★ What is a dichromat? What are different types of dichromatic blindness?

★ How genes can be isolated from chromosomes?

★ What is the polymerase chain reaction or PCR?

★ What was the contribution of Wallace in the development of theory of natural selection?

★ Define the theory of natural selection.

★ Different between homologous and analogous organs.

★ What are the three main components of an ecosystem?

★ Write a note on foliose lichen stage.

★ Write a note on commensalism.

★ Give the similarities between the following:

(a) Root nodules and Mycorrhiza

(b) Mutualism and Lichens

(c) Parasitism and commensalism

★ What are uses of gibberellins?

★ Write a note on progesterone.

★ Give two functions of Cytokinins?

★ What is role of Hypothalamus?

★ What is Epilepsy?

★ What is vernalisation?

★ What is discoidal cleavage?

★ What is metastasis?

★ What is nitrification?

★ What are transgenic organisms?

★ Write a note on limnetic zone.

★ What is flame cell?

★ What are pyrogens?

★ What are malpighian tubules?

★ What is cartilage?

★ What is Turgor pressure?

★ What are Hinge Joints?

★ What are tendons?

★ What is Bipedal locomotion?

★ What is anaphase?

★ What are uses of abscisic acid?

★ Give two functions of gibberellins?

★ What are Meisner's corpuscles?

★ What is function of Medulla?

★ Write a note on genital herpes.

★ What is Hensen's node?

★ What are Okazaki fragments?

★ What is linkage?

★ What is nitrogen cycle?

★ What is a cell suspension culture?

★ What is tundra?

★ Who are osmoregulators?

★ What are mesophytes?

★ What is glomerular filtrate?

★ What is nutation?

★ What is turgor movements?

★ What is Osteoporosis?

★ What is muscle fatigue?

★ What is chlorosis?

★ Write a note on metaphase I.

- * Write a note on anaphase I.
- * What is a gene pool?
- * What is population's gene pool?
- * State Hardy-Weinberg theorem.
- * What are nutrient elements?
- * What is deforestation?
- * What is deforestation?
- * What is biome?
- * Define green House effect.
- * What is excretophore?
- * What is an artificial kidney?
- * Write a note on rickets.
- * What are synovial joints?
- * Write a note on gastrin?
- * What is innate behaviour?
- * What is Hensen's node?
- * What is the role of cerebellum?
- * What is the locus a gene?
- * What is product rule?
- * What is called epistasis.
- * Write a note on mutualism.
- * What is nitrification?
- * What biodiversity?
- * Define afforestation.
- * Define Nitrogen fixation.
- * What is Sickle cell anaemia?
- * What is glomerulus?
- * Write a note on skeletal muscle.
- * What are four stages of ecdysis?
- * What is ribosomal RNA?
- * Write a note on habituation.
- * What are oviparous?
- * When transcription is initiated?
- * What is a sex linked trait?

Biology - Subjective (Part-II)

- Enter to Learn, Leave to achieve
- Q.1. (a) Explain the methods of locomotion in fishes, land vertebrates and birds.
 (b) Write short notes on:
 (i) Muscle Fatigue (ii) Tetany
 (c) Explain that how to working of sensory receptors with special reference to
 (d) What is synapse? How nerve impulse is transmitted from one neuron to another?
- Q.2. (a) How does Osmoregulation takes place in plants and animals?
 (b) Describe the process of excretion in earthworm.
 (c) How does excretion takes place in cockroach.
 OR Describe Excretion in Cockroach?
 (d) Describe the urinary system of man.
- Q.3. (a) Define secondary growth? Explain.
 OR What is secondary growth in plants and explain its significance?
 (b) Write detailed note on bone of human skeleton.
 (c) Describe a hing joint and how it is moved by antagonist muscles?
 (d) In detail describe the structure of skeletal muscle fiber.
- Q.4. (a) Classify the human nervous systems.
 (b) Describe some nervous disorders in human.

- (c) Describe the life cycle of seed plants. What is the importance of seed in the life cycle of plants?
- 2.5. (d) What are some common methods of asexual reproduction in animals?
- (a) Describe sexual reproduction in animals. Also give its advantages over asexual reproduction.
- (b) Describe in detail the structure of in man male reproductive system?
- (c) What is Growth? Discuss different phases and conditions for growth in plants.
- (d) What is regeneration? Why it is so effective in some animals and missing in others.
- 2.6. (a) Prove that DNA is a hereditary material.
- (b) How did Hershey and Chase determine which components of bacterial viruses contain the viruses of heredity information.
- (c) What hypothesis did Beadle and Tatum test in their experiments with *Neurospora*?
- (d) Discuss briefly the process of Transcription?
- 2.7. (a) Write a detailed note on genetic code.
- (b) What is role of centriole in animal cell? How this function is carried out in plant cell?
- (c) Differentiate between mitosis with meiosis and describe their importance?
- (d) Define Mendel's Law of Segregation? Explain it with Example?
- 2.8. (a) Define Mendel's Law of Independent Assortment? Explain it with Example.
- (b) Define Multiple Alleles? Describe Multiple Allelic Blood Group System of Man.
- (c) What is Rh Factor? Describe the Genetic Basis of Rh - Blood Group System of Man?
- (d) What is Crossing Over? Define R-combination Frequency and Explain its Significance.
- 2.9. (a) What is the methodology for producing recombinant DNA to be used in gene cloning?
- (b) Write note on genetic engineering of plants.
- (c) State and explain Hardy Weinberg theorem?
- (d) Analyze the Darwin's theory of natural selection as mechanism of evolution?
- 2.10. (a) What is biosphere? What must the biosphere provide for living things? Why a biosphere on moon is absent?
- (b) Write a note on degradation and depletion of resources.
- (c) What is population and pollutant, which type of pollution causes ozone layer depletion, green house effect and acid rain?
- (d) Write a note on water pollution?