

Model Question Paper

For Kashmir Division 2010 Regular Exam Only

Roll No.....

Subject

Biology

Maximum Marks --- 60

Time Allowed – 3 Hours (Fifteen Minutes Extra to read the question paper)

Do questions from Part A or Part B or from both Part A and B Part of maximum 60 marks as per your preparation.

(Use Separate sheet for Botany and Zoology Questions)

Part A (Botany)

(Long Answer Type Questions)

1. Give an account of the structure of Typical Stomata. How does it differ from Water Stoma ?

Or

Describe the root pressure theory of Ascent of Sap. Why has it been rejected ? 5

2. Graphically describe the Pentose phosphate pathway of Respiration. Give its importance.

Or

Discuss the mechanism of Biological nitrogen fixation. 5

3. Describe the various events taking place after the entry of Pollen tube in the Embryo sac.

Or

Describe in detail the various steps involved in the Seed Germination. 5

4. List the various Terrestrial biomes and describe one of them.

Or

Describe the mechanism of Succession in detail. 5

P. T. O.

(2)

5. Describe the role of Hybridization in Crop improvement.

Or

Describe the main sources of Biofertilizers and their importance.

5

(Short Answer Type Questions)

6. Briefly discuss the functions and deficiency symptoms of Potassium and Nitrogen. 3
7. Explain, why Photosynthesis is considered the important process in the Biosphere. 3
8. Commercial applications of Auxins. 3
9. Explain the 10% law. 3
10. List the effects of Ozone layer depletion. 3
11. What do you understand by the term Biowar ? 3
12. Briefly explain the advantages and disadvantages of Genetically modified Food. 3

(Very Short Answer Type Questions)

13. The following very short answer type questions of two marks, each may be answered in a few words or a few sentences or as may be required.
- (a) Explain the significance of Respiratory quotient. 2
- (b) Differentiate between Sequential and Synchronous senescence. 2
- (c) How does the Gaseous and Sedimentary Biogeocycles differ ? 2
- (d) Name the disease and its causal organism against which Bordeaux mixture was used for first time. What is the composition of Bordeaux mixture ? 2

(Objective Type Questions)

14. Choose the correct/most appropriate answer and write it in your Answer-book :

(i) All the enzymes of Krebs cycle are located in the mitochondrial matrix, except

- A. Citrate synthetase
- B. Succinate dehydrogenase
- C. Malate dehydrogenase
- D. Succinyl thiokinase.

1

(ii) Water absorption through roots can be increased by

- A. increased transpiration
- B. increased rate of photosynthesis
- C. decreased transpiration
- D. decreased absorption of Ions.

1

(iii) Law of Tolerance was put forwarded by

1

(iv) Flag trees are formed due to

- A. Lodging
- B. Erosion and deperition
- C. Unidirectional wind
- D. Salt spray.

1

P. T. O.

(4)

(v) Black rust of Wheat is caused by

- A. *Ustilago tritici*
- B. *Ustilago graminis tritici*
- C. *Puccinia graminis tritici*
- D. *Ustilago hordii*.

1

(vi) Mycorrhiza helps in

- A. Nitrogen fixation
- B. Killing insects
- C. Enhance absorption of nutrients and water from soil
- D. Providing assistance against stress.

1

Part B (Zoology)

(Long Answer Type Questions)

1. Discuss the digestion of fats in the human Alimentary canal.

Or

Discuss the common respiratory disorders in human beings.

2. Draw a neat and clean labelled sketch of vertical section of human eye.

Or

Draw a neat and clean labelled sketch of Alimentary canal of Cockroach.

3. Describe the formation of three germ layers in a mammalian embryo.

Or

What are the characteristic cellular and extracellular changes occurring in our body due to ageing ?

4. What are the consequences of over-population ?

Or

What kind of damage to the Brain lead to mental illness ?

P. T. O.

74
41
33

✓

14 + 2 + 3
40
34

(2)

5. Give an account of disorder of immune system.

Or

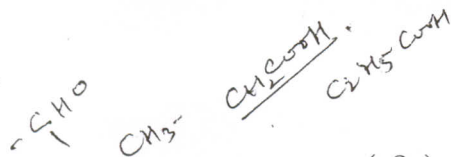
Name the causative agents of AIDS. How is the disease transmitted ? Give various symptoms of the disease. 5

(Short Answer Type Questions)

6. Describe the structure of human stomach. 3
7. Where do ultrafiltration, reabsorption and secretion occur in Nephron ? 3
8. Give the role of Testosterone. Mention its source also. 3
9. Define the term Growth and Regeneration. 3
10. What are three major threat categories of Species ? Describe with examples. 3
11. Explain, how drug addiction begins. 3
12. What is Biotechnology ? Why has it become important lately ? 3

(Very Short Answer Type Questions)

13. The following very short answer type questions of two marks, each may be answered in a few words or few sentences or as may be required.
- (a) Give the location of S-A node and A-V node. 2
- (b) What is Arthritis ? How is it caused ? 2
- (c) Why should killing animals be regarded unethical ? 2
- (d) What is Tobacco ? Name its two harmful components with their effects. 2



(3)

(Objective Type Questions)

14. Choose the correct/most appropriate answer and write it in your Answer-book :

(i) Digestion of both Starch and Proteins is carried out by

- A. Gastric juice
- B. Gastric lipase
- C. Pancreatic juice
- D. Ptyalin.

1

(ii) Ventricular systole is stimulated by

- A. S-A node
- B. A-V valve
- C. A-V node
- D. A-V aparture.

1

(iii) Ageing is caused by disappearance of

- A. Thyroid
- B. Parathyroids
- C. Thymus

(v) In human beings the eggs are

- A. Microlecithal
- B. Macrolecithal
- C. Mesolecithal
- D. Alecithal ✓

(vi) Which of the following is not a derivative of opium ?

- A. Cocaine ✓
- B. Heroine
- C. Morphine
- D. Codeine.