

**The Jammu and Kashmir State Board of School Education  
Academic Division New Campus Bemina Srinagar**

**BIOLOGY**

**PAPER A**

*Model Question Paper*

**Time 2:30 hrs**

**Max. Marks:60**

**Section A**

**(Long answer type)**

**5 marks each**

1. Describe the process of absorption of water in plants?

Or

Discuss the process of Biological nitrogen fixation in plants?.

2. Define carbon fixation in plants. How did calvin contribute in photosynthesis, Discuss the three phases of clavin cycle?.

Or

Briefly explain the Pentose Posphate Pathway?

3. Name the synthetic auxins . What is the role of auxins in agricultural industry

Or

Describe the development of male gametphyte in an angiosperm.

4. Describe the process of sucesion on a bare rock

Or

What are ecological pyramids ? Mention their various types.

5. Discuss the role of plant breeding in increasing food production.

Or

Discuss the biological methods for the control of insects/pests?

**Section B ( Short Answer type Questions)**

**3 marks each**

6. How is alcoholic fermentation different from Lactic acid fermentation?  
7. Draw a labeled diagram of the cross section of chlorophyll as seen under electron microscope?  
8. How do plants adapt in saline environment and oligotrophic soils.  
9. Explain three biotic components of an internal ecosystem.  
10. Give the advantages of using plant tissue culture of propagation  
11. What are the different types involved in the development of hybrid variety?  
12. What is selection? Name two methods of selection?

**Section C (Very Short Answer Type Questions )**

**2 marks each**

13. Why do plants need potassium  
14. What is vernalization ? What is its practical importance?  
15. What is soil erosion? How it can be checked?  
16. Name different forms of water present in soil?  
17. Write down use of gamma ray, X-ray, microwave and radio waves.

**Section D (objective type)**

**1 mark each**

18. Water potential of pure water and its solution is
- Zero and Zero
  - Zero and infinity
  - Zero and more than Zero
  - Zero and less than zero
19. Die back is due to deficiency of
- Cu
  - Zn
  - B
  - Mg
20. The use of colchicines is involved in the production of
- Stomatal variation
  - Haploids
  - Polyploids
  - Hybrids
21. Structure involved in genetic engineering is
- Plasmid
  - Plastid
  - Codon
  - Scissors
22. Pollination by insects is called-----
23. The major source of urban air pollutant is
- thermal power plants
  - vehicles
  - industries
  - households

Model Question paper for class 12th  
new pattern.

Subject: Biology

Time: 2 1/2 Hours.

Paper: B (Zoology)  
Max-Marks: 60

Section A

Long Answer type Questions with internal and Parallel Choice.

Questions No 1

~~Q1~~ Describe in brief the role of enzymes and hormones in digestion?  
(OR)

Draw a neat and labelled diagram of Alimentary Canal of Cockroach? (no description is needed). 05 Marks

~~Q2~~

~~Q2~~ Define a joint. Classify various joints?  
(OR)

Describe the meninges of Brain? Add a note on Sensory receptors. 05 Marks

~~Q3~~

~~Q3~~ Define Gametogenesis? Explain the steps involved in spermatogenesis with the help of diagrammatic representation.  
(OR)

Describe the development of Zygote upto three germinal layers. 05 Marks

~~Q4~~

~~Q4~~ Define population. Explain the factors affecting the human population growth? (OR)

Name the causative agents of AIDS? How is the disease transmitted? Give various symptoms of the disease. 05 Marks

~~Q5~~

~~Q5~~ Explain the common problems of Adolescence? Add a note on drug addiction.  
(OR)

Name modern techniques in disease diagnosis? Explain ELISA and ESR. 05 Marks

## Section B

### Short Answer Type Questions

26. How does gaseous exchange takes place in Earthworm? 03 Marks
27. Draw a neat and labelled diagram of L.S of Kidney? (no description is needed). 03 Marks
28. Differentiate between Red and white muscles? 03 Marks
- Q9. Write a short note on Placenta. 03 Marks
- Q10. What do you know about 'Biosphere Reserve'. 03 Marks
- Q11. Briefly explain recent advances in Vaccines. 03 Marks
- Q12. Explain the term "Organ transplantation". 03 Marks

## Section C

### Very short Answer type Questions

- Q13. Define Absorption and Assimilation. 02 Mark.
- Q14. What is Arteriosclerosis and Atheroma. 02 Mark.
- Q15. What do you mean by "Environmental Ethics". 02 Mark.
- Q16. Define Interferon and Immuno-Modulation. 02 Mark.

## Section - D

### OBJECTIVE Type

- Q17. i. Humans can synthesize:
- (A) Vitamin A and D only.
  - (B) Vitamin C and B.
  - (C) Only vitamin B<sub>1</sub>.
  - (D) All of these. (Choose the correct answer) \_\_\_\_\_ 01 Mark

(ii) Heart of Cockroach is present in the \_\_\_\_\_ Sinus. — 01 Mark

(iii) Both Spermatozoa and Ova originate from Primordial germ cell. (Fill up).

(iv) Which of the following show low regenerative ability. (Say yes or no) — 01 Mark

(A) Annelids

(B) Arthropods

(C) Nematodes

(D) All of these \_\_\_\_\_ (Choose the correct answer) \_\_\_\_\_ 01 Mark

V. Opiate narcotics/Hallucinogens. (Say which one can alter person's thoughts, feelings and Perceptions.

vi. The simplest type of ECG monitor is a?

(A) Cardiograph

(B) Oscilloscope