

CAREERS 360

JKBOSE CLASS 12th

BIOLOGY

MODEL QUESTION PAPER

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

Model Paper

BIOLOGY (12th)

Section A (Zoology)

Max. Marks: 35

Time 1 :30 hrs

Instruction:

SECTION A

Long Answer Type Questions:

1. Reproduction generally involves two parents. Does it occur uniparentally. How?

OR

Assisted reproductive techniques bring hope to infertile couples. Explain How.

5Marks

2. Describe Darwins theory of Natural Selection.

OR

Sex is generally determined by chromosomes of an organism .Does environment also determines sex. Illustrate with examples.

5 Marks

SECTION B

Short Answer Type Questions:

3. What changes occur in the uterus of a human female if the ovum does not receive a sperm? **3 Marks**

4. What phenotypic symptoms are produced in an individual due to trisomy of 21st chromosome? **3 Marks**

5. Match the entries under section A with the choice given under B and C. **3Marks**

A

B

C

a. <i>Blood and mucus with faeces abdominal pain</i>	<i>W. bancrofti</i>	<i>Anopheles</i>
b. Periodic fever followed by sweating, shivering	<i>E. histolytica</i>	worm
c. Excessive swelling due to blockade of lymph vessels feet and legs	Plasmodium	protozoa

6. How Genetic engineering helps in producing pest resistant crops? **3 Marks**

SECTION C

Short Answer Type Questions:

7. Draw a labeled sketch of human sperm? **2 Marks**

8. Mention two differences between analogous and homologous organs. **2 Marks**

9. Mention two applications of cloning. **2 Marks**

10. How does DNA fingerprinting helps in detecting a criminal. **2 Marks**

SECTION D

Objective Type Questions:

11. Explain ZIFT. **1 Mark**

12. Write the scientific name of Silk moth. **1 Mark**

13. Name the antibody present in Colostrum. **1 Mark**

14. Human genome is said to have approximately -----base pairs. **1 Mark**

15. Give one example of point mutation. **1 Mark**

Section B (Botany)

Max. Marks: 35

Time 1:30 hrs

SECTION A

Long Answer Type Questions:

1. How does dominance differ from incomplete dominance? Illustrate with suitable example.

OR

Hershey and Chase conducted an experiment on T₂ Phage using radioisotopes.

5 Marks

What were there observations and conclusions?

2. Define an ecosystem. Write an account of energy flow in an ecosystem.

OR

Major pollutants of air are CO₂, SO₂ and NO₂. What are their sources and harmful effects on human beings and plants? **5 Marks**

SECTION B

Short Answer Type Questions:

- 3.** Vegetative propagation does not lead to variations. Why? **3 Marks**
- 4.** What are GM crops? Give two disadvantages of GM crops? **3 Marks**
- 5.** Biofertilizers are better than Chemical fertilizers. Justify? **3 Marks**
- 6.** What is ecological succession? Distinguish between primary and secondary succession. **3 Marks**

SECTION C

Short Answer Type Questions:

- 7.** Why cross pollination cannot occur in cleistogamous flowers. **2 Marks**
- 8.** What do you mean by degeneracy of genetic code? **2 Marks**
- 9.** How many phosphorus atoms are there in a DNA double helix having 10,000base pairs? **2 Marks**
- 10.** An orchid plant grows on the branch of a mango tree. Give the interaction between the two. **2 Marks**

SECTION D

Objective Type Questions:

- 11.** Define apomixis? **1 Marks**
- 12.** How many cells are there in a typical angiospermic embryo sac? **1 Marks**
- 13.** Define totipotency? **1 Marks**
- 14.** Which type of ecological interaction is represented in lichens? **1 Marks**
- 15.** What are schiophytes? **1 Marks**