



# JAIN COLLEGE

463/465, 18th Main Road, SS Royal, 80 Feet Road, Rajarajeshwari Nagar,  
Bangalore - 560 098

Date:

**SUBJECT: BIOLOGY**

**II PUC  
MOCK-I**

**Timings Allowed: 3 Hrs 15 Minutes**

**Total Marks: 70**

## **GENERAL INSTRUCTIONS:**

- **ALL PARTS ARE COMPULSORY.**
- **MENTION CORRECT MAIN AND QUESTION NUMBERS.**
- **DRAW DIAGRAMS WHEREVER NECESSARY. UNLABELLED DIAGRAMS DO NOT ATTRACT ANY MARKS.**

## **PART-A**

**I. Answer the following in one word or one sentence each: 10X1=10**

1. What is ovulation?
2. Name the physical & Physiological connection between maternal body & embryo(foetus)
3. What is allergy?
4. What is adaptive radiation?
5. Mention the bacterium responsible for the large holes in "Swiss Cheese"
6. Define Natality.
7. What is totipotency?
8. Mention the cell involved in cell mediated immunity
9. What is global warming?
10. Give an example of sedimentary cycle?

## **Part-B**

**II. Answer any five of the following questions in 3-5 sentences each: 5X2=10**

1. What is test cross? Mention its significance
2. Differentiate between active immunity and passive immunity
3. What are homologous organs mention any two examples
4. Draw a neat labelled diagram of antibody
5. What is predation? Give an example.
6. List out any four effects of loss of bio-diversity
7. Differentiate between menstrual cycle and Oestrus cycle
8. Mention any two measures to improve the quality and quantity of milk production.

## **Part-C**

**III. Answer any five in 40-80 words each: 5X3=15**

1. Briefly explain the types of endosperms
2. Mention the causes and effects of Turner's syndrome
3. Mention the different steps of process of recombinant DNA technology
4. i. Draw ideal pyramid of Biomass  
ii. Mention the unit  
iii. Define food web

5. Explain any three major abiotic features influencing the life of organisms
6. What is bio magnification? Name two well-studied toxic substances causing this phenomenon
7. Draw a labelled diagram of Miller's experiment
8. List any three types of barriers with an example

**Part-D(Section I)**

**IV. Answer any four:**

**4X5=20**

1. What is double fertilization? Describe fertilized embryosaac with a neat labelled diagram.
2. What is oogenesis? Explain the process of oogenesis.
3. State di-hybrid cross? Write schematic representation of di-hybrid cross.
4. List the salient features of human genome project.
5. Mention the steps involved in DNA finger printing.
6. Describe the lac operon concept with labelled sketch.

**Section-II**

**V. Answer any three:**

**3X5=15**

1. Explain different stages involved in sewage treatment
2.
  - i. Discuss the moest technique of animal breeding
  - ii. Differentiate between inbreeding and outbreeding
3.
  - i. State "Gauss competitive exclusion principle"
  - ii. Symbiosis is a method of population interaction. Explain with examples.
4. Write diagrammatic representation of recombinant DNA technology
5. Draw a neat labelled diagram of human sperm
6. With reference to flower colour of 4'O' clock plant explain incomplete dominance

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