



JAIN COLLEGE

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

Date: 2019/20

SUBJECT: BIOLOGY

SECOND PRE-UNIVERSITY Mock-2 Preparatory Examination

Timings Allowed: 3 Hrs 15mins

Total Marks: 70

INSTRUCTIONS:

- All parts are compulsory, Answer all the questions.
- Mention correct main and question numbers.
- Draw diagrams wherever necessary. Unlabelled diagrams do not attract any marks.

Part-A

I ANSWER ALL THE QUESTIONS IN ONE WORD OR ONE SENTENCE EACH: 10X1=10

- Name the cells of the testes which secrete androgens
- Name the layers of the uterus that exhibit strong contraction during parturition
- Define Somaclones
- Name the type of antibodies produced during allergy
- What are Euryhaline organisms?
- Define Endemism
- What is global warming?
- Give an example of sedimentary cycle
- Define transcription
- Name the fungus that produce cyclosporin-A

Part-B

II ANSWER ANY FIVE OF THE FOLLOWING IN ABOUT 2-5 SENTENCES EACH: 5X2=10

- What is corpus luteum? Mention its function
- What are alien species invasions? Explain with a suitable example.
- Draw a neat labelled diagram of gel electro phoresis slab
- Write any four functions of an ecosystems
- Distinguish between deforestation and reforestation
- Differentiate between Geitonogamy and Xenogamy
- List any four methods of HIV transmission
- Define Apiculture. List any two economic importance of it

Part-C

III ANSWER ANY FIVE OF THE FOLLOWING IN ABOUT 5-8 SENTENCES EACH: 5X3=15

- Answer
 - Differentiate between external and internal fertilization
 - Name the plant which produce flowers once in twelve years
- Explain the steps of PCR techniques
- Answer
 - Define allergy
 - Differentiate between active immunity and passive immunity
- Draw a neat labeled diagram of the sectional view of human memory gland
- Explain the event oogenesis with schematic representation
- What is infertility? Give reasons for female infertility

7. Mention three causes for bio-diversity loss
8. Write a note on Haemophilia

Part-D

IV SECTION A:

ANSWER ANY FOUR OF THE FOLLOWING IN ABOUT 100-200 WORDS EACH:

4X5=20

1. What is incomplete dominance? Explain it with reference to flower colour in snapdragon
2. Answer
 - a. Draw a neat labelled diagram of Miller's experiment
 - b. Mention two assumptions of Oparin and Haldane w.r.t origin of life
3. Explain the salient features of double helix structure of DNA
4. Describe the lac operon concept of Jacob & Monod.
5. Describe the role and microbes in sewage treatment plant.
6. Write a brief account of electrostatic precipitator with a neat labelled diagram.

Part-E

IV SECTION B:

ANSWER ANY THREE OF THE FOLLOWING IN ABOUT 100-200 WORDS EACH:

3X5=20

1. Explain codominance in human blood groups. Give reason why ABO blood grouping is a good example for multiple alleles.
2. Describe the participation of people in the conservation of forests in India using the following examples
 - a. Bishnoi community incident
 - b. Chipko movement as example
 - c. Add a note on Joint forest management
3. Answer
 - a. What do you mean by "Biopiracy". Give an example?
 - b. Name the interaction of the following
 - i. Mycorrhiza living on the roots of higher plants
 - ii. Koel laying her eggs in crows nest.
 - iii. Clown fish living among the tentacles of sea anemone
4. Mention the steps involved in DNA finger printing
5. Draw a neat labelled diagram of Human sperm