

**MODEL QUESTION PAPER – 3**  
**FOR REDUCED SYLLABUS 2020-21**  
**2<sup>ND</sup> YEAR P U C: BIOLOGY (36)**  
**2020-21**

TIME: 3 hours 15 minutes

Max Marks: 70

**GENERAL INSTRUCTIONS:**

- i) This question paper consists of four parts A, B, C and D. Part D consists of two parts, section-I and section-II
- ii) All the parts are compulsory.
- iii) Draw diagrams wherever necessary. Unlabelled diagrams or illustrations do not attract any marks.

**PART-A**

**Answer the following questions in one word or in one sentence each: 10x1=10**

1. 'Wind pollinated flowers have to produce enormous amount of pollen'. Why?
2. What is apomixis?
3. Name the hormone secreted by corpus luteum.
4. What is colostrum?
5. Name any one hormone producing IUD.
6. Write the karyotype of Turner's syndrome.
7. Define transcription.
8. What are multiple alleles?
9. What is elution?
10. Define endemism.

**PART-B**

**Answer any five of the following questions in 3 to 5 sentences each, wherever applicable: 5x2=10**

11. Differentiate between menstrual cycle and oestrus cycle.
12. Mention the two layers of human blastocyst.
13. Name the four types of cells found in the embryo sac of angiosperms.
14. What is incomplete dominance? Give an example.
15. Distinguish between Benign tumour and Malignant tumour.
16. What is innate immunity? Mention any one type of innate immunity barriers.
17. Name the bioactive molecules used as i) Clot buster ii) Blood cholesterol lowering agent.
18. Draw a neat labelled diagram of plasmid pBR322.

**PART-C**

**Answer any five of the following questions in about 40 to 80 words each, wherever applicable: 5x3=15**

19. i) Name the cells that secrete androgens. (1)  
ii) List out the hormones secreted by placenta. (2)
20. Draw a neat labelled diagram of T.S. of young anther.
21. "RNA polymerase in eukaryotes shows division of labour". Substantiate the statement.
22. What is allergy? Name two chemicals released by mast cells during allergic reactions.
23. What is biopiracy? Explain it with reference to basmati rice.
24. Which are the different genes encoding for insecticidal protein that controls cotton bollworm and corn borer?
25. How endoparasites are successfully adapted for parasitic mode of life?
26. "Tropical region has greater biodiversity than temperate region". Justify the statement with three reasons.

**PART-D**

**SECTION-I**

**Answer any four of the following questions in about 200 to 250 words each, wherever applicable: 4x5=20**

27. Explain outbreeding devices that prevent self-pollination.
28. Write the schematic representation of two gene inheritance by considering seed colour and seed shape in pea plants.
29. Draw a neat labelled diagram of sectional view of male reproductive system.
30. i) Why T. H. Morgan selected *Drosophila* for his genetic experiments? 3  
ii) What is pleiotropism? Give an example. 2
31. List out the salient features of double helix model of DNA.
32. Explain the role of microbes in household products.

## SECTION-II

Answer any *three* of the following questions in about 200 to 250 words each, wherever applicable: 3x5=15

33. i) What is infertility? 1  
ii) Explain two barrier methods and two surgical methods that prevent conception. 4
34. Diagrammatically represent the replication of retrovirus.
35. Enumerate any five salient features of genetic code.
36. i) List out the steps of PCR. 3  
ii) Classify the restriction enzymes. Differentiate them on the basis of their action on DNA. 2
37. What is mutualism? Describe with any two suitable examples.

