KAKATIYA UNIVERSITY

B.Sc III Year

Botany- Paper III

(Cell biology, Genetics, Ecology and Biodiversity)

Model question paper – Theory

Time : 3 hours Max. Marks : 100

SECTION – A

(Instructions to the question PAPER SETTER : Set **TWO** questions from **Each Unit** of the given syllabus)

Define or explain **ALL** of the following (8x2 =16 Marks)

1.
2.
3.
4.
5.
6.
7.
8.

SECTION – B

(Instructions to the question PAPER SETTER : Set **TWO** questions from **Each Unit** of the given syllabus)

Write short answers for **ALL** of the following (4 x 6 = 24 Marks)

9. (a) **UNIT - I**

(OR)

(b)

10. (a) **UNIT - II**

(OR)

(b)

11. (a) **UNIT - III**

(OR)

(b)

12. (a) **UNIT - IV**

(OR)

(b)

SECTION – C

(Instructions to the question PAPER SETTER : Set **TWO** questions from **Each Unit** of the given syllabus)

Write detailed answers for **ALL** of the following (4 x 15 = 60 Marks)

13. (a) **UNIT - I**

(OR)

(b)

14. (a) **UNIT - II**

(OR)

(b)

15. (a) **UNIT - III**

(OR)

(b)

16. (a) **UNIT - IV**

(OR)

(b)

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Time : 3 hours Max. Marks : 100

SECTION – A

Define or explain **ALL** of the following (8x2 =16 Marks)

1. Nucleotide
2. Heterochromatin
3. Law of seggregation
4. Aneupolid
5. Food chain
6. Hydrosere
7. UNEP
8. Hot spot

SECTION – B

Write short answers for **ALL** of the following (4 x 6 = 24 Marks)

9. (a) Cell cycle

(OR)

(b) Lambrush chromosome

10. (a) Epistasis

(OR)

(b) Transition

11. (a) Ecosystem

(OR)

(b) Ecad

12. (a) Red data book

(OR)

(b) Endemism

SECTION – C

Write detailed answers for **ALL** of the following (4 x 15 = 60 Marks)

13. (a) Describe replication of DNA

(OR)

(b) Describe different stages in mitosis

14. (a) What are molecular basis of mutations

(OR)

(b) Write the structure of pBR - 322 plasmid

15. (a) Discuss the energy flow in ecosystem

(OR)

(b) What are biogeochemical cycles? Explain N_2 cycle.

16. (a) Discuss the principle of conservation.

(OR)

(b) Explain the role of NBPGR in the conservation of biodiversity.

Practical – III : Cell Biology, Genetics, Ecology and Biodiversity
Practical Syllabus
MODEL QUESTION PAPER

Time : 3 Hrs **Maximum : 50 Marks**

I. Major Experiment (ONE) **: 15 Marks**

II. Minor Experiment (ONE) **: 10 Marks**

III. Scientific Observations (ONE) **: 5 Marks**

IV. Critical notes on spotters of scientific interest (FIVE) **(5×2): 10 Marks**

V. Plant Collection from Botanical Tour **: 5 Marks**

VI. Record **: 5 Marks**