

BLDE (DEEMED TO BE UNIVERSITY)
Master of Science in Microbiology/ Biotechnology

[Time: 3 Hours]

[Max. Marks: 80]

I SEMESTER
PAPER – III (Cell Biology and Genetics)
QP CODE: 7613/7813

Your answer should be specific to the questions asked.
Write Question No. in left side of margin.

Long Question (Any – 3)

10 X 3 = 30 Marks

1. Describe the structure and functions of nucleus in eukaryotic cells.
2. Explain regulation of cell cycle with reference to cyclins and cyclin dependent kinases.
3. Discuss chromosomal theory of inheritance.
4. Explain mechanisms of sex determination and sex linkage

Short Essays: (Any – 7)

5 X 7 = 35 Marks

5. Explain structure of prokaryotic and eukaryotic cells.
6. Describe lysosomes and their functions.
7. Write a note on ribosomes.
8. Explain telomeres and role of telomerase.
9. Discuss Mendelian monohybrid and dihybrid crosses.
10. Explain polytene chromosomes.
11. Write short essay on genetic balance theory.
12. Explain dosage compensation

Short Answers: (Any – 5)

3 X 5 = 15 Marks

13. Define chromosome.
14. What is centromere?
15. Define gene.
16. What is aneuploidy?
17. What is meiosis?
18. Define pleiotropy.