

M. Sc. DEGREE EXAMINATION, NOVEMBER 2018  
BIOINFORMATICS  
FIRST SEMESTER

COURSE : ELECTIVE

PAPER : CELL BIOLOGY AND GENETICS

TIME : 3 HOURS

MAX. MARKS: 100

SECTION – A

I. ANSWER ALL THE QUESTIONS

(20 x 1 = 20)

- |                  |                        |
|------------------|------------------------|
| 1. Prions        | 11. Polyribosomes      |
| 2. Nucleoid      | 12. Actin filaments    |
| 3. Telomeres     | 13. Interphase         |
| 4. Lysosomes     | 14. Nucleotides        |
| 5. Histones      | 15. <i>Drosophila</i>  |
| 6. Peptidoglycon | 16. ABO blood grouping |
| 7. Capsid        | 17. Plasmodesmata      |
| 8. Glycoprotein  | 18. SRY gene           |
| 9. Stroma        | 19. Centimorgan        |
| 10. Cristae      | 20. Barr body          |

SECTION – B

II. ANSWER ANY FOUR QUESTIONS

(4x10=40)

21. List out the differences between prokaryotes and eukaryotes.
22. Write an account of the five sub stages of prophase-I of meiosis- I.
23. Briefly explain the structure of nuclear envelop and pore complex.
24. Describe the process of mRNA post translational modification.
25. Describe structure and role of microtubules.
26. Give a brief account on Rh factor inheritance and significance.
27. Briefly write notes on Klinefelter and Turners' syndromes.

**SECTION – C**

**III. ANSWER ANY TWO QUESTIONS**

**(2x20=40)**

28. Give an account of different types of endoplasmic reticulum and its functions.
29. Explain the structure and composition of plasma membrane and add note on its function.
30. Explain the various stages in mitosis with a neat labeled diagram.
31. Describe the sex linked inheritance in human with suitable examples.

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