SUBJECT CODE: 11BI/PC/MB24

M. Sc. DEGREE EXAMINATION, APRIL 2014
BIOINFORMATICS
SECOND SEMESTER

COURSE   : CORE
PAPER   : MOLECULAR BIOLOGY
TIME   : 3 HOURS   MAX. MARKS: 100

SECTION – A

ANSWER ALL QUESTIONS   **(20 X 1=20)**

1. Define cDNA.

2. What are Transposons?

3. What are Eukaryotes?

4. Define a Gene.

5. Write a note on Genome.

6. What are Antisense strand of DNA?

7. Define Genetic Code.

8. What are Chloroplasts?

9. What are Exons?

10. Define Meiosis.

11. Draw the structure of purine bases.

12. What is a Nucleotide?

13. What is Transcription?

14. Give two examples for prokaryotes.

15. What are Heat shock genes?

16. Name two steroid hormones.

17. What are nucleic acids?

18. What happens in the Anaphase of mitosis.

19. What are organelles?

20. Mention any two important functions of mRNA.

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SECTION – B

ANSWER ANY FOUR QUESTIONS. EACH ANSWER SHOULD NOT EXCEED 500 WORDS. All ANSWERS CARRY EQUAL MARKS. DRAW DIAGRAMS WHEREVER NECESSARY   (4 X 10 = 40)

21. What are regulatory proteins? What are their functions?

22. Briefly explain the post transcriptional regulation in prokaryotes.

23. Write a note on: a) genomic DNA, b) DNA replication.

24. Elaborate on the repetitive sequences of Eukaryotes.

25. Illustrate the organisation and functions of mitochondrial genome.

26. Write the steps involved in cell cycle regulation.

27. Explain the characteristics and genetic basis of cancer.

SECTION – C

ANSWER ANY TWO QUESTIONS. EACH ANSWER SHOULD NOT EXCEED1200 WORDS. All ANSWERS CARRY EQUAL MARKS. DRAW DIAGRAMS WHEREVER NECESSARY   (2 X 20 = 40)

28. Enumerate the steps in meiosis.

29. Write a note on the transcriptional and translational regulation in eukaryotes

30. "Vertebrate immune system is controlled genetically". Explain the Antibody

    Assembly.

31. Write a short note on the protein Synthesis-Translation.

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