

**VINAYAKA MISSION'S RESEARCH FOUNDATION  
(DEEMED TO BE UNIVERSITY), SALEM**

**M.D. DEGREE EXAMINATION - April 2019**

**BIOCHEMISTRY**

**PAPER IV : RECENT ADVANCES IN BIOCHEMISTRY AND  
MOLECULAR BIOLOGY**

Time: Three hours

Maximum: 100 marks

**Answer ALL questions**

**SECTION - A**

**I. Essay:** (1 x 20 = 20)

1. Discuss in detail about transcription and its regulation. Add a note on post transcriptional modification.

**II. Write short notes on:** (5 x 6 = 30)

2. DNA repair mechanisms
3. Micro array
4. Oncogenes
5. Free radicals
6. Omega fatty acids.

**SECTION - B**

**I. Essay:** (1 x 20 = 20)

7. Write in detail about various types of tumour markers.

**II. Write short notes on:** (5 x 6 = 30)

8. Cell cycle and its regulation.
9. Antibody diversity.
10. Polyamines.
11. Applications of stem cells in clinical medicine.
12. Lysosomal storage disorders.

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