NCE-003-012209 Seat No. _____

M. Sc. (Sem. II) (CBCS) Examination

April / May - 2017

Biochemistry : BC.CBC-6

(Molecular Biology)

(Old Course)

Faculty Code : 003

Subject Code : 012209

Time : Hours] [Total Marks : **70**

1 Answer briefly any seven of the following questions : **14**

(1) C value paradox

(2) Nucleotide and Nucleoside

(3) Difference between Probes and Primers.

(4) DNA Pol β.

(5) State the significance of COS site bacteriophage

(6) Microsatellites and Minisatellites

(7) Nucleosome

(8) What do you mean by PCR?

(9) What is phagemid ?

(10) Release factor in translation.

2 Answer any two of the following questions : **14**

(1) Explain various types of DNA polymerases in Prokaryotes and Eukaryotes.

(2) Write a detailed note on LAC operon.

(3) What do you mean by PCR-RFLP? Describe in brief, how it is useful in paternity and forensic cases.

3 (1) Write a detailed note on Transcription process in Prokaryotes. **7**

(2) Write a detailed note on Expression vector using suitable example. **7**

OR

3 (1) Write a brief note on Cosmid as vector. **7**

(2) Discuss DNA based molecular methods with example of Malaria. **7**

4 Answer the following questions : **14**

(1) Give details about differences between genomic organizations in Prokaryotes and Eukaryotes.

(2) What do you mean by polymorphism? Discuss diagnosis of sickle cell anemia by RFLP method.

5 Answer the following questions : (any **two**) **14**

(1) Explain the structure of Purines and Pyrimidines in DNA and RNA. Also explain the intermolecular bonding and intermolecular between them.

(2) Discuss the structure of Ribosome with diagram.

(3) Write a brief note on Maxam and Gillbert's method of DNA sequencing.

(4) Write a detailed note on RAPD. What is the main difference between RAPD and SCAR?
