

M. SC. BIOINFORMATICS SEM.-III (2013 COURSE)
(CHOICE BASED CREDIT SYSTEMS) : WINTER - 2017
SUBJECT: ELECTIVE – IV: b) COMMERCIAL BIOINFORMATICS

Day : **Friday**
Date : **03/11/2017**

Time: **02.00 PM TO 05.00 PM**
Max. Marks. **60**

W-2017-1020

N.B.:

- 1) **Q.1 and Q.5 are COMPULSORY.** Out of the remaining, attempt **ANY TWO** from each sections.
- 2) All question carries **EQUAL** marks.
- 3) Answer to both the sections should be solved in **SEPARATE** answer books.

SECTION –I

- Q.1** Define: (10)
- | | | |
|--------------|----------------------|-----------------|
| i) ADMET | ii) Transcriptomics | iii) Proteomics |
| iv) Genomics | v) Pharmacokinetics. | |
- Q.2** Write short notes on **ANY TWO** of the following: (10)
- a) Genomics in medicine
 - b) Microarray data analysis
 - c) Genome Assembly
- Q.3** Answer **ANY TWO** of the following: (10)
- a) What is pharmaco-genomics? Enlist its applications.
 - b) Explain the applications of proteomics in medicine.
 - c) Explain the process of drug discovery.
- Q.4** What is patenting and data generating from patent literature for commercial benefits? Explain any two patent databases in brief. (10)
- OR**
- Explain IPR in bioinformatics.

SECTION- II

- Q.5** Explain the principals of five NGS technologies. (10)
- Q.6** Write short notes **ANY TWO** of the following: (10)
- a) Epigenetics
 - b) Advanced Glyco-biology
 - c) Systems Biology
- Q.7** Answer in brief **ANY TWO** of the following: (10)
- a) What are the applications of bioinformatics in agriculture?
 - b) How metagenomics evolve? Enlist the basic flow chart of its methodology.
 - c) What is big data analytics? Explain its importance in today's era.
- Q.8** Explain in detail NGS pipeline to find DNA variations. Explain any two methods in brief with its applications and drawbacks. (10)
- OR**
- Write in detail about any five companies working in the field of bioinformatics in India.

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