

**2023****M. Sc.****4th Semester Examination****BIOMEDICAL LABORATORY SCIENCE  
AND MANAGEMENT****PAPER : BML-402***Full Marks : 50**Time : 2 hours*

*The figures in the right hand margin indicate marks.  
Candidates are required to give their answers  
in their own words as far as practicable.  
Illustrate the answers wherever necessary.  
Answer from **all** the Groups as directed.*

**( CLINICAL RESEARCH AND BIOINFORMATICS )****GROUP—A**Answer *any* **four** questions from the following :

2×4=8

1. Define preclinical research.

2

( 2 )

2. What do you mean by IPR? 2
3. Define pharmacovigilance. 2
4. Write any four sensors of reproductive toxicity assessment. 2
5. What is the FASTA format? 2
6. Write the full form of RCSB PDB and write one of its application. 2

### GROUP—B

Answer *any four* questions from the following :

4×4=16

7. Discuss the importance of preclinical research for conduction of clinical research. 4
8. Write the job assignment followed in pharmacovigilance. 4

( 3 )

9. State  $LD_{50}$  and  $ED_{50}$  values of a drug in general. What do you mean by pharmacokinetics? 2+2
10. "Drug activity is controlled by nutritional status and hepatic activity of an individual." Justify. 4
11. Discuss the role of DCGI in clinical research. 4
12. Briefly discuss some applications of NCBI in genomics study. 4

### GROUP—C

Answer *any two* questions from the following :

8×2=16

13. Briefly describe the clinical trials 'phase-I' and 'phase-II' in connection with new drug development. 4+4
14. Describe the criteria for IPR of your research output. Write the steps adopted for IPR. 3+5

( 4 )

15. Schematically present the basic steps of PCR primer design using any online tool. 8
16. What is PubChem database. Write the application of bioinformatics in biomedical science. 2+6

[ Internal Assessment : 10 Marks ]

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