

FINAL EXAM
DECEMBER 2016

NATIONAL BOARD OF EXAMINATIONS

BIOCHEMISTRY**PAPER – I**

BIO/D/16/03/I

Time : 3 hours

Max. Marks : 100

Important instructions:

- Attempt all questions in order.
- Each question carries 10 marks.
- Read the question carefully and answer to the point neatly and legibly.
- Do not leave any blank pages between two answers.
- Indicate the question number correctly for the answer in the margin space.
- Answer all the parts of a single question together.
- Start the answer to a question on a fresh page or leave adequate space between two answers.
- Draw table/diagrams/flowcharts wherever appropriate.

Write short notes on:

1. Write the step(s) with the reaction(s) used in the in-vitro synthesis of a peptide having sequence 'ala-cys-glu'. 10
2. a) Classify glycerolipids. 1+(3+3+3)
b) Structure, functions and clinical significance of glycerolipids.
3. a) List five heteropolysaccharides. 2.5+(2.5+5)
b) Mention their structures and diseases associated with their defective metabolism.
4. a) Define prenatal fetal screening of diseases. 2+2+6
b) List biochemical test(s) performed for fetal screening.
c) Mention how those tests are interpreted?
5. a) How are glomerular, tubular and endocrine functions of kidney assessed by biochemical investigation(s)? 6+4
b) How is adequacy of hemodialysis assessed by laboratory tests?
6. Define and write the use(s) of: 2.5x4
a) Abzymes.
b) Isoform of enzymes.
c) Isoenzymes.
d) Ribozymes.
7. List the Westgard rejection rules. Add a note on 'external quality control'. 7+3
8. a) How is reference range of a laboratory parameter established? 5+5
b) Define diagnostic window of laboratory parameter. Compare diagnostic window of CK-MB and myoglobin for acute myocardial infarction.
9. a) Define 'null hypothesis'. 2+5+3
b) List the test(s) of comparison used to reject null hypothesis.
c) What does 'p value' signify?
10. a) How is correlation analysis performed for a nonparametric data? 6+4
b) Compare and contrast 'correlation analysis' with 'regression analysis'.
