

ENGLISH

[TIME ALLOWED—3 HOURS]

(MARKS—100)

BIOCHEMISTRY AND LABORATORY MANAGEMENT (THEORY-III)**Marks**

1. (a) Fill in the blanks (any *five*) :— 5
- (i) Electrolytes are estimated by using
 (a) Colorimeter (b) Flame photometer.
 - (ii) In liver disorders increase.
 (a) SGOT (b) SGPT.
 - (iii) is used for separation of serum from blood.
 (a) Centrifuge (b) Autoclave.
 - (iv) In alkali burn is used.
 (a) 5% Na₂CO₃ (b) 5%CH₃COOH
 - (v) Green filter wavelength is
 (a) 510-570 nm (b) 630-750 nm.
 - (vi) Decrease in hemoglobin causes
 (a) Anemia (b) Polycythemia.
- (b) State *True* or *False* (any *five*) :— 5
- (i) Normal level of total proteins in 6-8 gm%.
 - (ii) Laboratory supervisor is in charge of clinical laboratory.
 - (iii) Prism is used in spectrophotometer.
 - (iv) CPK-MB increases in cardiac problem.
 - (v) Triglycerides are true fats.
 - (vi) ELISA is used to detect HIV.
- (c) State Long form (any *five*) :— 5
- (i) RIA (ii) NPN (iii) LDL
 - (iv) AIDS (v) QC (vi) QA.
- (d) Match the following pairs :— 5
- | Group 'A' | Group 'B' |
|------------------|-------------------|
| (i) Proteins | (a) Colorimeter |
| (ii) Lipid | (b) Amino acids |
| (iii) Widal test | (c) Inulin |
| (iv) Cuvette | (d) Phospholipids |
| (v) Carbohydrate | (e) Serology. |

| | Marks |
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| 2. Attempt any <i>two</i> of the following :— | 16 |
| (a) What are properties of monosaccharides ? | |
| (b) Explain principle of ELISA and RIA. | |
| (c) Describe QC in Microbiology. | |
| (d) What are contents of First aid kit ? What are their uses ? | |
| 3. Attempt any <i>two</i> of the following :— | 16 |
| (a) Describe code of Ethics for a laboratory technician. | |
| (b) Describe structure of an atom. | |
| (c) Classify lipids. Write a note on phospholipids. | |
| (d) What is significance of maintaining laboratory records ? | |
| 4. Answer in brief (any <i>two</i>) :— | 16 |
| (a) What is First Aid ? What first aid is given in case of fainting and bleeding from wound by infected object ? | |
| (b) Describe principle and significance of fluorimetry and spectrophotometry. | |
| (c) What precautions are taken while handling specimens in laboratory ? | |
| (d) How a pathological laboratory is organized ? | |
| 5. Write short notes (any <i>four</i>) :— | 16 |
| (a) Applications of electrophoresis and chromatography. | |
| (b) Volumetric and nonvolumetric glassware. | |
| (c) Flame photometer—principle and applications. | |
| (d) Collection, Storage, Transportation and Disposal of urine sample. | |
| (e) Give principle of— | |
| (i) Serum proteins | |
| (ii) Serum alkaline phosphatase. | |
| 6. Attempt any <i>two</i> of the following :— | 16 |
| (a) Describe principle and advantages of semiautoanalyzer. | |
| (b) How laboratory records are maintained ? | |
| (c) What different safety measures are to be followed in clinical laboratory ? | |
| (d) How quality control chart is prepared ? | |
