Q.P. Code: 137005

First Professional B.S.M.S Degree Supplementary Examinations January 2024

(SIDUG-UV) – Uyir Vedhiyiyal (Bio Chemistry)

## (2021 Scheme)

## Time: 3 hrs

- Answer all questions to the point neatly and legibly
   Do not leave any blank pages between answers • Indicate the question number correctly for the answer in the margin space
- Answer all parts of a single question together Leave sufficient space between answers
- Draw table/diagrams/flow charts wherever necessary
- 1. Multiple Choice Questions

The Answers to MCQ questions (Q.No. i to Q.No. xx) shall be written continuously on the first two writing sheets (ie Page No. 3 & 4) only

| i.    | The amino acid found in protein structure   |                                    |  |               |  |  |  |
|-------|---|------------------------------------|--|---------------|--|--|--|
|       | a) Arginine   | b) Proline                         | c) Histidine                             | d) Lysine     |  |  |  |
| ii.   | Lactulose, a synthetic disaccharide is employed to lower elevated plasma ammonium |                                    |  |               |  |  |  |
|       | levels  |                                    |  |               |  |  |  |
|       | a) Acute pancreatitis<br>c) Nephropathy   |                                    | b) Hepatic encephalopathy                |               |  |  |  |
|       |   |                                    | d) Myocardial infraction                 |               |  |  |  |
| iii.  | N - formyl methion  | formyl methionine is initiator for |  |               |  |  |  |
|       | a) Protein synthesis  |                                    | b) Fatty acid synthesis                  |               |  |  |  |
|       | c) Vitamin synthesis  |                                    | d) Carbohydrate synthesis                |               |  |  |  |
| iv.   | Name the compou   | nd with the greatest               | d with the greatest standard free energy |               |  |  |  |
|       | a) ATP  |                                    | b) Phosphocreatine                       |               |  |  |  |
|       | c) Cyclic AMP   |                                    | d) Phosphoenol pyruvate                  |               |  |  |  |
| ۷.    | Crigler - Najjar syndrome type I due to defect in                                 |                                    |  |               |  |  |  |
|       | a) UDP - glucuronyl transferase   |                                    | b) Bilirubin glucuronyl transferase      |               |  |  |  |
|       | c) Heme oxygenas  |                                    | d) Biliverdin reductase                  |               |  |  |  |
| vi.   | One out of the follo  | owing an inhibitor of              | complex I in ETC                         |               |  |  |  |
|       | a) BAL  | b) H <sub>2</sub> S                | ,  | d) Cynaide    |  |  |  |
| vii.  | NADPH used in the synthesis of certain amino acid by enzyme                       |                                    |  |               |  |  |  |
|       | a) Aspartate transaminase   |                                    | b) Alanine transaminase                  |               |  |  |  |
|       | c) Glutamate dehydrogenase  |                                    | d) Methionine transferase                |               |  |  |  |
| viii. | Total number of ATP produced by oxidation of palmitic acid                        |                                    |  |               |  |  |  |
|       | a) 106  | b) 100                             | c) 105                                   | d) 107        |  |  |  |
| ix.   | Carbomyl phosphate synthasel is   |                                    |  |               |  |  |  |
|       | a) Cytosol enzyme   |                                    | b) Mitochondrial enzyme                  |               |  |  |  |
|       | c) Lysosmal enzyme  |                                    | d) Ribosomal enzyme                      |               |  |  |  |
| Х.    | Daily excretion of Uric acid  |                                    |  |               |  |  |  |
|       | a) 200 - 300mg  | b) 300- 400mg                      | c) 500- 700mg                            | d) 700- 900mg |  |  |  |

d) Cirrhosis

- 0) 000- 1 Hyponatremia is condition xi. a) Cushing syndrome b) Addison's disease
  - c) Multiple sclerosis

(PTO)

Reg. No.....

(20x1=20)

Max. Marks: 100

| xii.  | Cholecystokinin                                  | contains               |  |                                |          |  |  |  |
|---|--|------------------------|--|--------------------------------|----------|--|--|--|
|   | a) 17 amino acids                                |                        | •                                      | b) 27 amino acids              |          |  |  |  |
|   | c) 38 amino acio                                 |                        | d) 33amino acids                       |                                |          |  |  |  |
| xiii.   | Bromosulphthale                                  |                        |  |                                |          |  |  |  |
|   | a) Synthetic fun                                 | ction of liver         | <ul> <li>b) Metabolic funct</li> </ul> |                                |          |  |  |  |
|   | <ul><li>c) Excretory function of liver</li></ul> |                        | , .                                    | d) Enzymatic function of liver |          |  |  |  |
| xiv.  |  | produced in the body   |  |                                |          |  |  |  |
|   | a) 300 ml  | b) 450 ml              | c) 400 ml                              | d) 700 ml                      |          |  |  |  |
| XV.   |  | hesis a protein calleo |  |                                |          |  |  |  |
|   | a) Histone                                       | b) Protamines          | c) Lectins                             | d) Leptin                      |          |  |  |  |
| xvi.  | <b>o i</b>                                       |                        |  |                                |          |  |  |  |
|   | a) Mercaptopyri                                  |                        | b) Thymidine                           |                                |          |  |  |  |
|   | c) 5- fluorouracil                               |                        | d) Fluorocytidine                      |                                |          |  |  |  |
| xvii.   |  | s protein synthesis    |  |                                |          |  |  |  |
|   | a) UAA   | b) UAG                 | c) UGA                                 | d) All of the above            | )        |  |  |  |
| xviii.  |  | action mainly occurs   |  |                                |          |  |  |  |
|   | a) Kidney  | b) Liver               | c) Intestine                           | d) Lungs                       |          |  |  |  |
| xix.  | Normal concentra                                 |                        |  |                                |          |  |  |  |
|   | a) 10 - 15%                                      | b) 6 - 8.2%            | c) 4 - 5.6 %                           | d) 3 - 4.5 %                   |          |  |  |  |
| XX.   |  | to check the carcino   | genecity of chemicals                  | -                              |          |  |  |  |
|   | a) ELISA   |                        | b) PCR                                 |                                |          |  |  |  |
| · ·   |  |                        | d) Western blottin                     | g technique                    |          |  |  |  |
| Short   | t Answer Questio                                 | ns                     |  |                                | (8x5=40) |  |  |  |
| 2. W  | 2. Watson & Cricks structure of DNA              |                        |  |                                |          |  |  |  |
| 3. M  | echanism of absor                                | ption of Lipids        |  |                                |          |  |  |  |
| 4. De   | 4. Degradation of purine nucleotides             |                        |  |                                |          |  |  |  |
| 5. Be   | eta oxidation of fat                             | ty acid                |  |                                |          |  |  |  |
| 6. Vi   | 6. Vitamin C                                     |                        |  |                                |          |  |  |  |
| 7. St   | 7. Structure of HIV                              |                        |  |                                |          |  |  |  |
| 8. Th   | . Thyroid function test                          |                        |  |                                |          |  |  |  |
| 9. Polymerase chain reaction - Principle, technique                                     |  |                        |  |                                |          |  |  |  |
| Long Answer Questions (4x10=40)   |  |                        |  |                                |          |  |  |  |
| 10. Describe the process of glycolysis and their energetics                             |  |                        |  |                                |          |  |  |  |
| 11. Describe Iron - food source, RDA, biochemical function and deficiency manifestation |  |                        |  |                                |          |  |  |  |
| 12. Describe adrenal cortical hormones  |  |                        |  |                                |          |  |  |  |
| 13.Explain Renal function test  |  |                        |  |                                |          |  |  |  |
|   |  |                        |  |                                |          |  |  |  |

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