

## First Professional B.S.M.S Degree Regular Examinations August 2023

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

## (2021 Scheme)

Time: 3 hrs

Max. Marks: 100

- 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

(20x1=20)

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

- Which out of the following is a fructosan  
a) Glycogen                      b) Agar                      c) Inulin                      d) Cellulose
- Group of adjacent nucleotides are joined by  
a) Phosphodiester bond                      b) Peptide bond  
c) Ionic bond                      d) Covalent bond
- Thioredoxin coenzyme for  
a) Ribonucleotide reductase                      b) Transketolase  
c) Thiokinase                      d) Pyruvate carboxylase
- Which one of Vitamin A functions as a steroid hormone  
a) Retinal                      b) Retinol                      c) Provitamin A                      d)  $\beta$  - Carotene
- Total amino acid present in adult hemoglobin  
a) 372 amino acids                      b) 464 amino acids  
c) 574 amino acids                      d) 570 amino acids
- Ubiquinone transfer its electrons to  
a) Complex I                      b) Complex III  
c) Matrix                      d) Cytochrome C
- Normal plasma lactic acid is  
a) 4 - 15 mg / dl                      b) 6 - 20 mg / dl  
c) 10 - 20 mg / dl                      d) 20 - 30 mg / dl
- Carnitine acyl transferase I is inhibited by  
a) Benzoyl CoA                      b) Malonyl CoA  
c) Succinyl CoA                      d) Acetyl CoA
- Urea cycle is linked with  
a) Gluconeogenesis                      b) Glyoxylate cycle  
c) Uronic acid cycle                      d) TCA cycle
- Hypouricemia due to deficiency of  
a) Xanthine oxidase                      b) Xanthine deaminase  
c) AMP deaminase                      d) Nucleotidase
- Daily requirement of fluorine  
a) < 0.5 ppm                      b) > 3 ppm                      c) < 2 ppm                      d) > 5 ppm

(PTO)

- xii. Pheochromocytomas are the tumor of  
 a) Thyroid gland  
 c) Adrenal cortex  
 b) Adrenal medulla  
 d) Anterior pituitary
- xiii. Pancreatic function are assessed by serum enzyme  
 a) Alanine transaminase  
 c) Lactate dehydrogenase  
 b) Aspartate transaminase  
 d) Amylase
- xiv. Atrial natriuretic factor produced in  
 a) Liver  
 b) Lungs  
 c) Kidney  
 d) Heart
- xv. Specific dynamic action carbohydrate  
 a) 25 %  
 b) 20%  
 c) 15 %  
 d) 5 %
- xvi. Replacement of RNA primer by DNA  
 a) DNA polymerase I  
 c) DNA topoisomerase I  
 b) DNA polymerase III  
 d) DNA topoisomerase II
- xvii. Which antibiotic inhibits the initiation of protein synthesis  
 a) Erythromycin  
 c) Ricin  
 b) Streptomycin  
 d) Tetracycline
- xviii. Cytochrome P450 found high concentration in  
 a) Microsomes of liver  
 c) Adrenal cortex  
 b) Posterior pituitary  
 d) Large intestine
- xix. The long term complication of uncontrolled diabetes includes  
 a) Atherosclerosis  
 c) Nephropathy  
 b) Retinopathy  
 d) All of the above
- xx. Zidovudine (or) AZT structural analog of  
 a) Deoxy adenosine  
 c) Deoxy thymidine  
 b) Deoxy guanosine  
 d) Deoxy uridine

**Short Answer Questions**

(8x5=40)

2. Mucopolysaccharide
3. Digestion and absorption of protein
4. Electron transport chain
5. Metabolism of HDL
6. Basal metabolic rate
7. Explain the mechanism of detoxification.
8. Gastric function test
9. Replication of DNA

**Long Answer Questions**

(4x10=40)

10. Explain Gluconeogenesis in detail
11. Explain Vitamin B<sub>12</sub> - food source, RDA, biochemical function and deficiency manifestation
12. Discuss formation, transport, Bio chemical function and metabolic fate of thyroid hormone.
13. Liver function test - in detail

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