

**Q.P. Code: 137005**

**Reg. No.....**

**First Professional B.S.M.S Degree Supplementary Examinations October 2025**

**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 responses for 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**

- The Glycosaminoglycan that serves as an anticoagulant
  - Hyaluronic acid
  - Dermatan sulfate
  - Heparin
  - Chondroitin sulphate
- The cyclic fatty acid employed in the treatment of leprosy
  - Lauric acid
  - Stearic acid
  - Chaulmoogric acid
  - Caprylic acid
- Anti-egg white injury factor is
  - Pyridoxine
  - Biotin
  - Thiamin
  - Liponic acid
- The imino group containing amino acid:
  - Homoserine
  - Serine
  - Methionine
  - Proline
- The functions of plasma albumin are
  - Osmosis
  - Transport
  - Immunity
  - both a and b
- Deficiency of Vitamin A causes
  - Xerophthalmia
  - Hypoprothrombinemia
  - Megaloblastic anemia
  - Pernicious anemia
- All of the following compounds are intermediates of TCA cycle except
  - Malate
  - Pyruvate
  - Oxaloacetate
  - Fumarate
- A lipoprotein inversely related to the incidence of coronary atherosclerosis is
  - VLDL
  - IDL
  - LDL
  - HDL
- Insulin is made up of
  - A single polypeptide chain having 51 amino acid residues
  - A single polypeptide chain having 84 amino acid residues
  - A-chain having 21 and B-chain having 30 amino acid residues
  - A-chain having 30 and B-chain having 21 amino acid residues
- Our body can get pentoses from
  - Glycolytic pathway
  - Uronic acid pathway
  - TCA cycle
  - HMP shunt
- Marasmus occurs from deficient intake of
  - Essential amino acids
  - Essential fatty acids
  - Calories
  - Zinc
- Ammonia is detoxified in the human liver as
  - Creatinine
  - Uric acid
  - Urea
  - Ammonium ion

**(PTO)**

- xiii. ----- vitamin deficiency shows elevated level of alkaline phosphatase in plasma  
 a) Vitamin C                      b) Vitamin A                      c) Vitamin K                      d) Vitamin D
- xiv. All of the following are detoxifying agents except:  
 a) Glycine                      b) Glutathione                      c) Glucuronic acid                      d) Glycogen
- xv. Non sense codon bring about.  
 a) Amino acid activation                      b) Initiation of protein synthesis  
 c) Termination of protein synthesis                      d) Elongation of polypeptide chains
- xvi. Which hormone predominantly produced in response to fight, fright and flight.  
 a) Thyroxine                      b) Aldosterone                      c) Epinephrine                      d) ADH
- xvii. Tumor markers of cancer include all of the following except  
 a) Alpha fetoprotein                      b) Carcinoembryonic antigen  
 c) 6-Mercaptopurine                      d) Prostate specific antigen
- xviii. Apolipoprotein B-48 is present in  
 a) Chylomicrons                      b) VLDL                      c) LDL                      d) HDL
- xix. The extra cellular cation present in maximum concentration is.  
 a) Magnesium                      b) Potassium                      c) Sodium                      d) Calcium
- xx. Absence of urobilinogen in urine in:  
 a) Obstructive jaundice                      b) Hemolytic jaundice  
 c) Hepatic jaundice                      d) All of the above

### Short Answer Questions

(8x5=40)

2. Write short notes on non reducing disaccharides.
3. Explain the role of bile salts in the digestion and absorption of dietary lipids.
4. Define BMR, what are the factors that affect BMR.
5. Write briefly on the biochemical action of prostaglandins.
6. Explain about Glycogen storage diseases.
7. How Creatinine clearance test is done. What is its clinical significance.
8. Explain the steps in PCR and add any two applications.
9. Write short notes on initiation of translation.

### Long Answer Questions

(4x10=40)

10. Explain the steps on beta Oxidation of Palmitic acid and give its Energetics.
11. Enumerate liver function tests and describe in details any two with clinical significance.
12. Write briefly on the biochemical functions and disorders of estrogens.
13. Discuss the functions and deficiency disorders associated with Vitamin A.

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