



**HDJ-M20176**

Seat No. \_\_\_\_\_

**First Year M. B. B. S. Examination**

**November / December – 2017**

**Biochemistry : Paper - II**

Time : Hours]

[Total Marks : 50

**SECTION – I**

**1 State True or False with Justification : (Any Six) 1×6=6**

- (a) Taq polymerase is used in PCR.
- (b) All types of Porphyrias are associated with Photosensitivity.
- (c) Increase Homocysteine level is associated with increased risk of Coronary Artery Disease.
- (d) Hyperglycemia is Common in Chronic Alcoholics.
- (e) LDL is also known as Bad Cholesterol.
- (f) Short Chain Fatty Acids cannot be oxidized in Carnitine Deficiency.
- (g) Hexokinase acts only on Glucose.

**2 (A) Read the following case Report and Answer the questions : 5**

A 60 years old male presented with complaint of epigastric pain radiating to back for three months, weight loss for two months, dark urine and clay colored stools for one week. on blood investigation – Total Bilirubin 12 mg%, Direct Bilirubin 11.5%, Indirect Bilirubin 0.5 mg%. Radiological investigations revealed presence of tumor in head of pancreas and dilated biliary canaliculi and duct.

- (1) What is your probable diagnosis?
- (2) Which serum enzymes will be raised in this patient and why?
- (3) What will be the status of bilirubin and bile salts in urine and stools of this patient?

- (4) Where and how indirect bilirubin is converted into direct bilirubin?
- (5) What do you mean by direct and indirect bilirubin?

- (B) Discuss the following : **3+2=5**
- (1) Classification and Effects of Mutation
  - (2) One Carbon Metabolism

- 3** Write Short Notes : (Any **Three**) **3×3=9**
- (1) Catabolism of Heme
  - (2) Free Radical Scavenger Mechanisms
  - (3) Renal Function Tests
  - (4) Tumor Markers.

## SECTION – II

- 4** Give your comments with biochemical justification : **1×6=6**  
(Any **Six**)
- (a) Benedict's test is useful in Differential Diagnosis of Ketosis.
  - (b) Urea Cycle and TCA Cycle are interlinked with each other.
  - (c) Oneogen and Oncogene are different.
  - (d) Glucose is given to relieve an acute attack of Porphyria.
  - (e) Wobbling Phenomenon reduces the possibilities of Mutations.
  - (f) Measurement of Glycated Hemoglobin is useful for long term control of blood glucose.
  - (g) Pyruvate Occupies an Important Junction Point in Various Metabolic Pathways.
- 5** Discuss the following : (Any **Two**) **5×2=10**
- (1) Digestion & Absorption of Lipids. Fatty Liver and Lipotropic Factors
  - (2) Inborn error of Metabolism associated with Aromatic Amino Acids.

- (3) Substrates for Gluconeogenesis. Significance of BPG Shunt Pathway.

**6** Write Short notes : (Any **Three**) **3×3=9**

- (1) Acute and Chronic Complications of Diabetes Mellitus
  - (2) Metabolic Functions of Glycine
  - (3) Post Translational Modifications
  - (4) Regulation of Cholesterol Synthesis.
-