

Date: 05-12-2013

Instructions:

1. Answer to the points. 2. Figure to the right indicates marks. 3. Use separate answer books for each section. 4. Draw diagrams wherever necessary. 5. Write legibly.

Section 1

1. Write short notes on: (any two)

- a. PCR, technique its advantages and medical application
- b. Blotting techniques and its application
- c. Recombinant DNA technology

(10)

2. Write Short notes on (any three)

- a. Replication of DNA
- b. Salient features of genetic code
- c. Post translational modifications of proteins
- d. DNA repair mechanism
- e. Mutations

(9)

3. Write Short notes on (any two)

- a. Balanced Diet
- b. Protein energy malnutrition (PEM)
- c. Metabolic adaptations during prolonged starvation

(6)

Section 2

4. Write Short notes on (any two)

- a. Formation of ammonia and its fate
- b. Function and regulation of serum calcium
- c. Plasma proteins and their clinical significance

(10)

5. Write Short notes on (any three) out of five)

- a. Role of B-complex vitamins as coenzymes
- b. One carbon metabolism
- c. Role of PRPP in salvage pathway
- d. Hyperuricemia and Gout
- e. Folic acid

(9)

6. Read the case report and answer the following questions. A 60 yr old male presented with epigastric pain radiating to back for 3 months. Weight loss for three months, dark

urine and clay colored stool for one week. Icterus present on investigation: Serum bilirubin Patient report Normal value Total 12 mg/dl 0.4-4 mg/dl Direct 15 mg/dl 0.1-0.4 mg/dl Indirect 0.5 mg/dl 0.22-0.7 mg/dl Urine bilirubin Positive Negative Serum ALT, AST and alkaline phosphate report awaited. Radiological investigations revealed presence of tumor in head of pancreas and dilated biliary canaliculi and duct.

- a. What kind of Jaundice from?
- b. What do you understand by direct and indirect bilirubin?
- c. What is Van den Bergh reaction and what is its significance in differential diagnosis of Jaundice?
- d. Will bile salt be present in urine of this patient?
- e. Which test can be performed to detect the presence of bile salts in urine?
- f. What will be the status of serum of, serum AST ALT and alkaline phosphate in this patient?

(6)
