

151-NR

M.D. DEGREE EXAMINATION – APRIL, 2013

BIOCHEMISTRY

Paper-IV : Clinical Biochemistry

Time: 3 Hours

Max. Marks:100

Note: Answer all questions

All questions carry equal marks

WRITE SHORT ESSAYS ON THE FOLLOWING:

1. A 35 year old woman was admitted in the hospital with history of recurrent pain in the abdomen, developed jaundice 2 days later. Past history revealed that the pain often aggravated after in take of fatty food. Routine urine examination showed the presence of bile pigments and bile salts, but urobilinogen was absent.
 - a) What is the probable diagnosis?
 - b) Give reasons for the excretion of bile pigments and bile salts in urine.
 - c) Justify which other biochemical tests should be done in this patient to confirm the diagnosis.
2. Classify tumor markers. What is an ideal tumor marker? Discuss the role of molecular markers for cancer diagnosis
3. A 55 year old man who is a known smoker developed worsening cough with thick sputum and was admitted to hospital with difficulty in breathing. He was drowsy and cyanosed. His arterial blood gas analysis was as follows:
 $\text{pH} = 7.2$, $\text{pCO}_2 = 70\text{ mm Hg}$, $\text{HCO}_3 = 26\text{ mmol/L}$, $\text{PO}_2 = 50\text{ mm Hg}$
 - a) What is the probable acid-base disturbance? Mention the probable causes of the same
 - b) Explain how the primary defect can be compensated in the body.
4. Discuss the analytical errors commonly encountered in the Clinical Biochemistry lab.
5. Write briefly on:
 - a) Homocystinuria
 - b) EQAS
6. Explain the various biochemical and calculated methods of determining glomerular filtration rate.

Contd...2