Department of Biochemistry and Molecular Biology, SUST

BMB330. Clinical Biochemistry. Full mark: 8. Time: 50 min
3rd year 2nd semester Midtest 1, 2014

1. What are the causes of malfunction of a cell? 0.5
2. Discuss the precautions one should take to reduce the problem of fire in a laboratory. 0.5
3. What is the normality of a solution containing 10g Na2SO4 per litre? (Mol. Wt. is 142). 0.5
4. Write down the name of enzymes involve in the diagnosis of myocardial infarction. Mention the reference value and detection principle for one of these enzymes. 0.5
5. Write down the correct answer: 0.25X6=1.5
   a. Rise or fall in both AST and ALT happen together/ one after another/ separately.
   b. Esterification of bilirubin takes place in liver Canaliculi/ Sinusoids/ Lysosome/ ER
   c. Bilirubin transports through plasma by binding with ligandin/ Albumin/ Globin/ Microsome.
   d. The level of total bilirubin in normal adult's ranges from 0.1 -1.0 mg/dL or 1 – 10 mg/dL or 0.1 – 10 mg/dL.
   e. Congenital dficiencly of the UDPG transferase enzyme cause Gilbert`s disease/ Crigler-najjar syndrome/ Goucher`s disease.
   f. Hemolytic disease of the newborn is most sever when Rh negative mother has an RH positive father/ Rh negative mother has an RH positive fetus/ Rh negative mother has an RH positive fetus.
6. Write True (T) or False (F) against the following statements and write the true statement if you find any false statement- 0.25X10=2.5
   a. Sickle cell anemia is caused by a deletion mutation in hemoglobin gene.
   b. Phenylketonuria is a disease in which tryptophan cannot be produced from phenylalanine.
   c. Type 2 diabetes mellitus is an autoimmune disease.
   d. Life style factors and genetics are the main factors of type 1 diabetes.
   e. Sometimes fructose intolerance is occured for the deficiency of fructokinase aldolase enzyme.
   f. Type 1 galactosemia cause by a mutation in galactokinase 1 gene.
   g. Genetic defects in glucose-6-phosphatase is responsible for Pompe`s disease.
   h. Fabry disease is an autosomal recessive pattern of lipid storage disease.
   i. BMI = weight(kg)/height(m)2 and BMI> 30 = obesity
   j. Alkaptonuria patient`s urine turns a radish color when exposed to air.
7. What are the risk factors for atherosclerosis and obesity? 0.5
8. Write short notes on the following (any two): 0.75X2=1.5

Autosomal recessive inheritance

Thalassemia

Hemophilia