AZRA NAHEED MEDICAL COLLEGE
DEPARTMENT OF BIOCHEMISTRY

ASSESSMENT MID TERM
FIRST YEAR MBBS **12.06.2020**

Total marks: **60**
Time Allowed: **2.5 HOURS**

Q No. 1.

a. What are buffers? Enumerate body buffers. Explain the buffering effects on the addition of HCL and NaOH to a buffer system (4)

b. Write down Henderson Haselbalch equation with its significance (3.5)

Q No. 2

a. What is isomerism? Explain D & L, Anomerism and epimerism with examples. (4)

b. What are glycoaminoglycans? Explain importance and composition of hyaluronic acid and chondroitin sulphate (3.5)

Q No. 3

a. Explain the followings with one example from each class set "essential amino-acids, " standard amino acids, "Non essential aminoacids, "Modified amino acids (4)

b. Explain Alfa helix and Beta pleated sheets with reference to structural organization of proteins (3.5)

Q No. 4

a. A neonate died soon after birth due to severe respiratory depression. He was diagnosed as a case of RDS (respiratoy distress syndrome)

i. What deficiency causes this syndrome? (1)
ii. What is the chemical nature of this compound ? (2)
iii. Why death occurred in this neonate? (1)

b. What are eicosanoids? Name cyclic and non-cyclic eicosanoids. Mention physiological functions of prostaglandins and lipoxins (3.5)

Q No. 5

a. Explain the effects of substrate concentration and pH on enzyme activity (4)

b. Differentiate between induce fit model and lock & key model (3.5)

Q No. 6

a. Describe structure, occurrence and important properties of starch, glycogen, & cellulose (4)

b. Draw structure and mention functions of different classes of immunoglobulins (3.5)

Q No. 7

a. What are Lipoproteins? Classify them. Mention composition and functions of high density lipoproteins (HDL) (4)

b. What are steroids? Enumerate names of primary and secondary bile acids with their site of Synthesis. What is the importance of bile acids (3.5)

Q No. 8

Write short notes on the following :

a. Electrophoresis (2.5)
b. Mutarotation (2.5)
c. Plasma proteins (2.5)