

SC

SEAT No. _____

No. of Printed Pages : 2

[A-18]

SARDAR PATEL UNIVERSITY
EXTERNAL EXAMINATION(N.C.) (2010 Batch)
BIOCHEMISTRY IV SEMESTER (six unit course)
 Biophysical Biochemistry
 DATE: 12/4/18 TIME: 10.0am-1.0pm MARKS:70

- Q-1 Multiple Choice Questions: (1 mark each) 10**
- 1) Bicarbonate buffer system is directly linked up with-----
 a) Kidney b) blood c) heart d) brain
 - 2) ----- is observed in Primary alkalosis
 a) HCO₃ excess b) H₂CO₃ deficit
 c) H₂CO₃ excess d) HCO₃ deficit
 - 3) ----- is a unit for measurement of radio activity
 a) neutron b) half life c) proton d) curi
 - 4) Thin Layer Chromatography preparation requires -----
 a) silicon b) silica sulphadex
 c) silica G d) sulphadex G
 - 5) ----- is used to visualize amino acid by paper chromatography.
 a) ninhydrin b) acetone c) iodine d) acetic acid
 - 6) ----- is used to make transparent cellulose strips.
 a) HCl b) buffer c) paraffin wax d) liquid paraffin
 - 7) Thickness of SDS gel is depend upon-----
 a) amount of gel powder b) thickness of comb
 c) thickness of spacer d) time for gelatinization
 - 8) Radioisotope I₁₃₁ is used to investigate function of-----
 a) Kidney b) blood c) heart d) brain
 - 9) ----- is environmental toxic metal.
 a) pb b) CO₂ c) CN d) O₂
 - 10) Frequency distribution represents-----
 a) voltage b) graph c) numerical figure d) symbol

- Q.2 Answer any six (2 mark each) 12**
- 1 What do you mean by buffer system?
 - 2 Explain-metabolic acidosis.
 - 3 What is electrophoresis.list its applications.
 - 4 What are factors affecting on electrophoresis.
 - 5 Write on unit of radio isotopes.
 - 6 Define- half life time of isotopes
 - 7 Explain principle for column chromatography.
 - 8 Enlist application for TLC.

[P.T.O.]



- Q.3 A] Draw a diagram for glass electrode and explain its working 4
B] Explain- properties of water 4
Or
A] Classify and give an account on body system 4
B] Discuss –composition and working of calomelelectrode 4
- Q.4 A] Write note on effect of toxicants on human 4
B] Enlist metal toxicants and their sources. 4
Or
A] Classify and give examples for carcinogens. 4
B] Write an account on- normal and abnormal cell growth 4
- Q.5 A] Discuss –types of radio decay 4
B] Explain- importance of radioisotopes in medical investigation. 4
Or
A] Write an account on process of autoradiography 4
B] Write on disadvantages radioisotopes 4
- Q.6 A] Write principle and application of paper chromatography 4
B] Discuss principle and method to separate of amino acid by radial chromatography. 4
Or
A] Explain- principle and application for column chromatography 4
B] Differentiate between ion exchange and thin layer chromatography 4
- Q.7 A] Give principle and application for PAGE. 4
B] Write an account on types of gel used for electrophoresis 4
Or
A] Draw a diagram for horizontal electrophoresis 4
B] Which are factors affecting on electrophoretic process. 4
- Q.8 A] Give note on arsenic toxicity 4
B] Write formula to calculate mean, median and mode 4
Or
Calculate S.D if blood cholesterol (mg%) of the patients admitted to the hospital has , 8
Following reported value.
- 140,180,200,195,210,160,220,185,215,190