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SEAT No. _____

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SARDAR PATEL UNIVERSITY
EXTERNAL EXAMINATION- APRIL-2019
BIOCHEMISTRY. Vsemester

Paper Code No. US05CBCH06

DATE: 12/04/19

Total marks: 70

Time: 10:0am -1:0pm

12/04/2019
Friday

Q.-1. Multiple choice Questions:

10

- 1) Monochromator available in Spectrocolorimeter is known as -----
a) Barrier layer cell b) Prism c) Filter d) Photo voltaic cell
- 2) ----- is made up of quartz.
a) Photocell b) monochromator c) lens d) cuvette
- 3) Zonal rotors are used for -----
a) Remove contamination b) Remove ribosome c) Harvesting cell d) separate cells
- 4) Two acrylamide molecules linked by a -----
a) bis-acrylamide b) methylene group c) galactose d) 3, 6-anhydrogalactose
- 5) In vertical rotor sedimentation takes place across the _____ of the tube.
a) Centre b) Bottom c) Diameter d) Top
- 6) Equilibrium that has taken place between stationary & mobile phase is known as
a) Partition Co-efficient b) Distribution Co-efficient
c) Theoretical plates d) Effective Distribution Co-efficient
- 7) Cation and anion exchangers are used for the separation of -----
a) Protein b) DNA c) RNA d) Nucleotides
- 8) Molarity of phosphate buffer is important for release of -----
a) DNA b) Protein c) Hydrophobic region d) Isoelectric P^H
- 9) Rayleigh interfere system is-----
a) An optical system b) A mechanical system c) A mechanical system d) all above
- 10) Very high resolution and faster separation is achieved by
a) GLC b) HPLC c) HLC d) HIC

(1)

(P.T.O.)

Q.2. Answer in short. (Two mark each-Attempt any ten)

20

- 1) Write on- element of colorimeter.
- 2) Explain - laws for colorimetric analysis.
- 3) Write on monochromators for I.R. region.
- 4) Define RCF.
- 5) Write on ultracentrifuge and write its application.
- 6) Define sedimentation velocity.
- 7) How - polymerization for acrylamide gel by N' N' – methylene bisacrylamide occurs.
- 8) Explain preparation of samples before loading in SDS gel.
- 9) Write on - Characteristics of Gel Beads.
- 10) Why pumping system is known as Heart of HPLC.
- 11) What are Anion Exchanger?
- 12) List the detectors used in GLC.

LONG QUESTIONS

40

- Q.3 A] Explain types of monochromators for colorimeter. 5
B] List application of spectrometer 5
- OR
- Q.3 A] Draw diagram & explain Photo emissive tube in detail 4
B] Discuss IR is as an advanced method in developing science. 6
- Q.4 A] Explain Ultracentrifuge with diagram and working. 6
B] Classify –centrifuge Rotors and explain r-max ,r-min for each type 4
- OR
- Q.4 A] What is centrifugation? Explain the factors affecting speed of centrifuge 6
B] Explain -continuous rotor and Zonal rotor. 4
- Q.5 A] Write principle and technique for gel chromatography. 5
B] Write note on Ion Exchange chromatography. 5
- OR
- Q.5A] explain principle and diagrammatic representation for on GLC. 4
B] Explain applications of various chromatographic techniques 6
- Q.6 Describe- principle and method of SDS-Page with a diagram to separate protein and discuss role of SDS in purification. 10
- OR
- Q.6 Explain principle and basic method for the separation of bio molecules on the basis of their PI 10