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RY-003-001622 Seat No. _____

B. Sc. (Sem. VI) (CBCS) Examination

March - 2019

BT - 602 : Analytical Technique in Biotechnology

(Old Course)

Faculty Code : 003

Subject Code : 001622

Time : $2\frac{1}{2}$ Hours] [Total Marks : **70**

1 Answer the following questions in one word : 20

(1) The number of proton is also known as _____

(2) Write the name of immobilization method.

(3) Which synthetic polymer is used as carrier?

(4) Which detection method is used of radioactivity?

(5) Give the full form of SDS-PAGE.

(6) Which supporting media is used in PAGE?

(7) In 2D PAGE second stage is _____

(8) Sedimentation coefficient is expressed as _____

(9) Which scientist gave the relation $n\lambda = 2d \sin\theta$?

(10) Give the full form of NMR spectroscopy.

(11) The UV-visible spectrophotometer works on the principle of _____

(12) In reverse phase chromatography stationary phase is _____

(13) In FPLC _____ molecule are separated.

(14) In GLC column temperature is _____

(15) Give the full form of ECG and MRI.

(16) PET used to observe _____ process.

(17) Fundamental concept of nano technology is _____ and _____

(18) Give the full form of CAT.

(19) Which chromatographic separation based on size?

(20) Becquerel is unit of _____

2 (A) Write any **three** out of six : **6**

(1) Define immobilization.

(2) State Beer Lambert law.

(3) Give the two application of FPLC.

(4) Write properties of solvent.

(5) Draw the basic diagram of biosensor.

(6) Define nanotechnology.

(B) Write any **three** out of six : **9**

(1) Explain auto radiography.

(2) Explain any one immobilization technique.

(3) Write a note on zonal centrifuge.

(4) Give the principle and application of IR.

(5) Explain retention time and selectivity.

(6) Give the application and principle of biosensor.

(C) Write any **two** out of five : **10**

(1) Explain isoelectrofocusing.

(2) Give the principle and instrumentation of NMR.

(3) Write a note on GLC.

(4) Write a note on CAT.

(5) Explain application of nanotechnology.

3 (A) Write any **three** out of six : **6**

(1) Define sedimentation.

(2) Define column efficiency.

(3) Explain refraction and diffraction.

(4) What is principle of auto radiography?

(5) What is n/p ratio? Give its importance.

(6) Application of planner chromatography

(B) Write any **three** out of six : **9**

(1) Write a note on PET.

(2) Write the difference between HPLC and GLC.

(3) Write down the properties of supporting phase.

(4) Application and principle of x-ray diffraction.

(5) Write a note on capillary electrophoresis.

(6) What is radioactive decay? Discuss in short about type of radioactive decay.

(C) Write any **two** out of five : **10**

(1) Explain principle and basic component of centrifuge.

(2) Define spectroscopy and explain atomic emission spectroscopy.

(3) Write a note on affinity chromatography.

(4) Explain fundamental concept of nanotechnology.

(5) Write a note on MRI.
