Bankura University

ACTIVITY CODE:1903133021

B.Sc. 6th Semester (Honours) Examination, October 2020

Subject: MICROBIOLOGY

Course ID: 62217 Course Code SH/MCB/604/DSE-4

Course Title: Instrumentation and Bio-techniques

Full Marks: 15 marks **Time: 45 mins**

The figures in the margin indicate full marks

Answer all the questions.

UNIT I

1. Answer *any five* of the following questions: (5x1=5)

a) What is chromatography?
b) What is the full form of PAGE?
c) What is the function of stage micrometer?
d) Why is agarose used during gel electrophoresis?
e) What is partition coefficient?
f) Give an example of application of ultracentrifuge.
g) What is the resolving power of microscope?
h) Find out the maximum value of limit of resolution in air for any ordinary light microscope.

UNIT II

2. Answer *any two* of the following questions: (5x2=10)

a) Discuss the working principle of gel filtration chromatography. What are it's applications? (3+2)=5
b) What is isoelectric focusing? Elucidate it's application. (2+3)=5
c) Discuss with suitable diagrams the mechanism of action of an analytical centrifuge. =(5)
d) In gel electrophoresis small molecules generally run faster where as in gel chromatography the movement of molecules is reverse- explain. What is the significance of R_f value? 3+2 = 5
e) Describe the process to separate a protein from a mixture of proteins using gel filtration. =5