

U.G. 4th Semester Examination - 2021
Molecular Biology & Biotechnology
[HONOURS]
Course Code : MBBT-402-P-CCR-9
(Immunology)
[PRACTICAL]

Full Marks : 20

Time : 2 Hours

The figures in the right-hand margin indicate marks.

1. Perform any **one** of the experiments from the following: 10×1=10
- a) Write the principle, materials and method of total leukocyte count. How do you calculate total leukocyte number of the supplied blood sample? Assume a data for calculation. Draw the clinical significance of your result.
 - b) Discuss the principle, materials and methods of total RBC count of supplied blood sample. Calculate the value of RBC of the blood sample assuming a data. RBC count of a person is 4.6 million/ μ l of blood. Give your opinion regarding this data.

- c) The report of differential count of leukocyte of a blood sample is given below:
- I) Neutrophil-2500-8000 per mm^3 of blood.
 - II) Eosinophil-150-750 per mm^3 of blood.
 - III) Basophil – 28-100 per mm^3 of blood.
 - IV) Monocyte- 100-700 per mm^3 of blood.
 - V) Lymphocytes-1000-4000 per mm^3 of blood.

Interpret the above data with proper justification and mention the clinical significance. Write principle, required materials for the measurement of differential leukocyte count. Draw the diagram of various leukocytes.

- d) Determine hemagglutination property of the supplied blood sample. Write the principle, materials and, method of the process and observation assuming a data. Draw the inference of the same with a clinical significance.
- e) Detect antigen-antibody complex formation by double diffusion method with the supplied specific antibody and antigen. Write the principle, materials, method and possible observations. Draw the inference of the same.

f) State the working principle, materials and method of isolation of serum from the supplied blood sample. Write observation assuming a data and draw the inference.

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| 2. | Laboratory note book | 5 |
| 3. | Viva Voce. | 5 |
