

**PG CBCS**  
**M.Sc. Semester-I Examination 2021**  
**MEDICAL LABORATORY TECHNOLOGY (MLT)**  
**PAPER: MLT 102**  
**(HAEMATOLOGY & SEROLOGY)**

**Full Marks: 40****Time: 2 Hours****Answer any FOUR questions of the following:****4X10=40**

1. How does the site of erythropoiesis change starting from early foetus to different gestational phase? Discuss about the phase of erythropoiesis where haemoglobin formation takes place. Illustrate the role of erythropoietin in the regulation of erythropoiesis. (2+4+4)
2. Describe the ethology, clinical features and detail laboratory identifications for iron deficiency anaemia. (3+3+4)
3. Describe with fig the different morphological abnormalities in red cells with its clinical significance. Discuss pathophysiology of sideroblastic anaemia. (6+4)
4. Discuss the role of red cell indices in the detection of anaemia. Discuss about a test where you would be able to differentiate neonatal blood to maternal blood. Define pernicious anaemia. (4+4+2)
5. What is titer value? How will you determine the titer value of in the CRP test? State the principle and application of RPR test. (2+3+5)
6. Describe the importance of WIDAL test? Describe the principle of Mantoux test? How will you draw the inference from the Mantoux test? (4+3+3)
7. Describe the pathophysiology, clinical features, complication and laboratory findings of sickle cell anaemia. (3+2+2+3)
8. Discuss about the algorithm of HIV tests. Which proteins and peptides are targeted in the detection of HIV via Western blot? How do you interpret the result of Western blot for HIV detection? (5+2+3)
9. What do you mean by plasma cell myeloma?, discuss the causes, clinical features and laboratory investigation for plasma cell myeloma. (2+3+2+3)
10. Define myelodysplastic syndrome (MDS), mention the pathophysiology and laboratory findings for MDS. What is Philadelphia chromosome? (2+3+3+2)