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**PG CBCS**  
**M.SC. Semester-III Examination 2021**  
**MEDICAL LABORATORY TECHNOLOGY**  
**PAPER: MLT 303C**  
**(HAEMOGLOBINOPATHIES –I)**

**Full Marks: 40****Time: 2 Hours****Answer any FOUR questions of the following:****10X4=40**

1. Describe the synthesis and fate of haemoglobin. Write the examples of abnormal haemoglobins. (4+4)+2
2. Explain the iron absorption and transport mechanism in human. Mention the role of hepcidin in iron absorption. (4+3)+3
3. Explain the pathophysiology, clinical features and laboratory alteration in megaloblastic anaemia. 4+3+3
4. Discuss the different causes of haemolytic anaemia; mention the pathophysiology of Paroxysmal nocturnal hemoglobinuria. 6+4
5. Mention the types, causes and pathophysiology of polycythaemia. 2+4+4
6. Explain the etiology, pathogenesis and laboratory alteration in aplastic anaemia. 3+4+3
7. Explain the mechanism of development of anaemia among liver disease and kidney failure patients. What are Pappenheimer bodies? 4+4+2
8. Mention the principle, procedure and importance of osmotic fragility test. 3+5+2
9. Describe the pathophysiology and laboratory findings of alpha and beta thalassemia. 6+4
10. Explain the etiology, clinical and morphological features of pernicious anaemia. 4+3+3

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