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PG (CBCS)
M.Sc. Semester- III Examination, 2023
MEDICAL LABORATORY TECHNOLOGY
PAPER: MLT 303C
(HAEMOGLOBINOPATHIES-I)

Full Marks: 40 **Time: 2 Hours**

The figures in the right-hand margin indicate full marks.
Candidates are required to give their answers in their own words as far as practicable.

GROUP-A

1. Answer any **FOUR** of the following questions: 2×4=8

a) What is aplastic anaemia?
b) What is Perls' reaction?
c) What precaution should you take during the preparation of peripheral blood smear?
d) What is sulfhemoglobin?
e) What is Normocytic Normochromic Anaemia?
f) What is Schilling test?

GROUP-B

2. Answer any **FOUR** of the following questions: 4×4=16

a) What is Bart's hemoglobin? Mention its clinical significance. 2+2
b) Why P_{50} value of HbF is lower than P_{50} value of HbA? What is tactoid formation? 2+2
c) What is ring sideroblast? Write the etiological facts behind this type of anemia. 1+3
d) Write the significance of HbA1a, HbA1b, and HbA1c.
e) How iron cycle function in our body?
f) What is Sickle Cell Trait? Explain the pathophysiology behind it. 2+2

GROUP-C

3. Answer any **TWO** of the following questions: 8×2=16

a) Mention the symptoms, risk factors, and treatments of different types of polycythemia. 2+3+3
b) Discuss the etiology, clinical features, laboratory investigation of Megaloblastic anemia. 3+2+3
c) Explain the role and mechanism of absorption, fate, and transport of iron in our body. 3+5

P.T.O

d) Describe the primary, secondary, tertiary and quarternary structure of hemoglobin in details along with diagram. How does the transition of hemoglobin chain occur during prenatal and postnatal life? 5+3

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