

**THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY**

**[DM 0823]**

**AUGUST 2023**

**Sub. Code :1401**

**D.M. – CLINICAL HAEMATOLOGY**

**PAPER I – BASIC SCIENCES - STRUCTURE AND FUNCTION OF THE  
HEMOPOIETIC SYSTEM MOLECLULAR BIOLOGY AND  
GENETIC ASPECTS OF HEMOPOIESIS**

*Q.P. Code: 161401*

**Time: Three Hours**

**Maximum: 100 Marks**

**I. Elaborate on:**

**(2 x 15 = 30)**

1. Ribosome Biogenesis Disorder (RBD):
  - a) Structure and function of ribosome
  - b) Pathogenesis of RBD
  - c) Describe clinical features of two ribosome biogenesis disorder.
  
2. Positron emission tomography – computerized tomography (PET-CT) scan in Hodgkin's lymphoma (HD):
  - a) Principle of PET-CT scans
  - b) Role in staging and response assessment in HD and
  - c) Role of Total metabolic tumour volume in prognosis of HD.

**II. Write notes on:**

**(10 x 7 = 70)**

1. Telomeres: Role in disease and cancer.
2. Janus kinase.
3. Bi-specific T cell engager.
4. Waterfall plot.
5. Tumour lysis syndrome.
6. TMPRSS6 (Matriptase-2).
7. COVID-19 and coagulation.
8. KIR genotyping.
9. Enteric microbiota in GVHD.
10. Alternate complement pathway and its regulators.

\*\*\*\*\*