SNS COLLEGE OF PHARMACY AND HEALTH SCIENCES

UNIT 3

COURSE NAME: HUMAN ANATOMY AND PHYSIOLOGY-I

TOPIC: HEMOPOIETIC SYSTEM

Sl. No.	Question Type	Question	Bloom's Taxonomy Level	Mapping (Exams/Syllabus)
1	10-Mark	Analyze the composition and functions of blood. Evaluate the role of plasma proteins in maintaining homeostasis, and create a labeled diagram of blood components with their percentages.	Analyzing / Evaluating / Creating	TNMGRMU Unit III composition; GPAT blood functions; PCI body fluids
2	10-Mark	Apply the process of erythropoiesis to explain red blood cell maturation stages. Evaluate factors influencing it (e.g., erythropoietin) and create a flowchart diagram of the developmental sequence from stem cell to mature RBC.	Applying / Evaluating / Creating	PCI hemopoiesis; RRB erythropoiesis; GPAT/NIPER hematopoiesis
3	10-Mark	Differentiate between intrinsic and extrinsic pathways of coagulation. Analyze their integration in hemostasis and evaluate the consequences of deficiencies, with a created schematic diagram of the clotting cascade.	Analyzing / Evaluating / Creating	TNMGRMU coagulation; GPAT mechanisms; NIPER pathophysiology

4	10-Mark	Describe leukopoiesis and its regulation. Apply this to evaluate immune responses in infections, and create a diagram showing granulocyte and agranulocyte lineages.	Applying / Evaluating / Creating	GPAT leukopoiesis; RRB blood cells; TNMGRMU hemopoiesis
5	10-Mark	Evaluate the significance of blood grouping (ABO and Rh systems). Analyze transfusion compatibility and create a compatibility table with diagrams of antigen-antibody reactions.	Analyzing / Evaluating / Creating	PCI blood grouping; TNMGRMU Rh factors; GPAT transfusion
6	10-Mark	Compare different types of anemia (e.g., iron-deficiency vs. megaloblastic). Apply diagnostic criteria and evaluate treatment strategies, including a comparative table.	Analyzing / Applying / Creating	NIPER disorders; GPAT anemias; RRB blood disorders
7	10-Mark	Explain hemoglobin formation and its structure-function relationship. Evaluate disorders like thalassemia and create a diagram of heme-globin synthesis pathway.	Evaluating / Analyzing / Creating	TNMGRMU hemoglobin; PCI formation; GPAT hematinics
8	10-Mark	Analyze the role of the reticuloendothelial system in blood clearance. Evaluate its dysfunction in disorders like splenomegaly, with a labeled diagram of RES organs.	Analyzing / Evaluating / Creating	PCI reticuloendothelial; TNMGRMU disorders; NIPER immune
9	10-Mark	Design an explanation of blood transfusion protocols, evaluating risks like hemolytic	Creating / Evaluating / Applying	GPAT transfusion; RRB significance; TNMGRMU Rh

		reactions. Apply to Rh incompatibility scenarios with a decision flowchart.		
10	10-Mark	Evaluate the impact of anticoagulants and hemostatic agents on clotting. Analyze their clinical applications in thrombosis prevention, with a created mechanism diagram.	Evaluating / Analyzing / Creating	NIPER hemopoietic drugs; GPAT anticoagulants; PCI coagulation
1	5-Mark	Describe the functions of blood and apply them to oxygen transport.	Understanding / Applying	TNMGRMU functions; GPAT blood; PCI composition
2	5-Mark	Explain erythropoiesis stages and apply to anemia development.	Understanding / Applying	PCI hemopoiesis; RRB RBC; GPAT erythropoiesis
3	5-Mark	Classify blood groups with examples, applying to transfusion matching.	Understanding / Applying	TNMGRMU grouping; NIPER Rh; GPAT ABO
4	5-Mark	Describe the coagulation cascade briefly and apply to bleeding disorders.	Understanding / Applying	GPAT mechanisms; RRB clotting; PCI coagulation
5	5-Mark	Explain hemoglobin structure and apply its role in gas exchange.	Understanding / Applying	TNMGRMU formation; GPAT hemoglobin; NIPER biochemistry
6	5-Mark	Describe leukopoiesis and apply to white cell functions.	Understanding / Applying	PCI leukopoiesis; RRB leukocytes; GPAT immune
7	5-Mark	Explain Rh factor significance and apply to hemolytic disease.	Understanding / Applying	TNMGRMU Rh; GPAT transfusion; NIPER disorders

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8	5-Mark	Describe types of anemia and apply diagnostic features.	Understanding / Applying	GPAT anemias; RRB disorders; PCI anemia
9	5-Mark	Explain the reticuloendothelial system's role in phagocytosis.	Understanding / Applying	TNMGRMU RES; PCI blood clearance; NIPER immune
10	5-Mark	Describe blood transfusion significance and apply safety measures.	Understanding / Applying	PCI transfusion; GPAT risks; RRB protocols
1	2-Mark	Recall the main components of blood.	Remembering	TNMGRMU composition; PCI body fluids
2	2-Mark	Define hematopoiesis.	Remembering	GPAT hemopoiesis; NIPER blood formation
3	2-Mark	Name the stages of erythropoiesis.	Remembering	RRB RBC; TNMGRMU Unit III
4	2-Mark	What is the role of erythropoietin?	Understanding	PCI regulation; GPAT factors
5	2-Mark	Recall the ABO blood groups.	Remembering	TNMGRMU grouping; GPAT ABO
6	2-Mark	Define fibrinogen's function in clotting.	Remembering	RRB coagulation; PCI mechanisms
7	2-Mark	Name the Rh factor antigen.	Remembering	GPAT Rh; NIPER transfusion
8	2-Mark	Recall the normal RBC count.	Remembering	TNMGRMU functions; PCI blood
9	2-Mark	What is prothrombin time?	Understanding	GPAT clotting; RRB tests
10	2-Mark	Define anemia.	Remembering	NIPER disorders; GPAT anemias

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11	2-Mark	Name the site of hematopoiesis in adults.	Remembering	PCI hemopoiesis; TNMGRMU bone marrow
12	2-Mark	Recall the function of platelets.	Remembering	RRB blood cells; GPAT hemostasis
13	2-Mark	What is universal donor blood type?	Understanding	TNMGRMU grouping; PCI transfusion
14	2-Mark	Define leukopenia.	Remembering	GPAT disorders; NIPER leukocytes
15	2-Mark	Name the vitamin essential for coagulation.	Remembering	PCI Vitamin K; GPAT hemostatics
16	2-Mark	Recall the reticuloendothelial system's main organ.	Remembering	TNMGRMU RES; RRB spleen
17	2-Mark	What is sickle cell anemia?	Understanding	GPAT anemias; NIPER pathophysiology
18	2-Mark	Define plasma volume.	Remembering	PCI body fluids; TNMGRMU blood
19	2-Mark	Name the clotting factor deficient in hemophilia.	Understanding	GPAT coagulation; RRB disorders
20	2-Mark	Recall the pH of blood.	Remembering	TNMGRMU functions; GPAT homeostasis