Chapter- 6.
THE CIRCULATORY SYSTEM

Section A (One-mark questions)

Question 1) _____ system is a transport system that moves substances throughout the body with the help of blood
(a) skeletal
(b) circulatory
(c) respiratory
(d) excretory

Question 2) Human circulatory system consists of
(a) heart
(b) blood
(c) blood vessels
(d) all

Question 3) _____ is a red coloured fluid connective tissue
(a) lymph
(b) blood
(c) bone
(d) ligament

Question 4) _____ are the cellular part of blood
(a) plasma
(b) albumin
(c) corpuscles
(d) none of these

Question 5) There are _____ types of cells in human blood
(a) 3
(b) 2
(c) 4
(d) 5

Question 6) _____ protect the body from diseases by killing the diseases causing germs.
(a) RBC
(b) WBC
(c) platelets
(d) all

Question 7) _____ help in the wound healing by clotting the blood
(a) RBC
(b) platelets
(c) WBC
(d) all 2

Question 8) The platelets release an enzyme called _____ at the site of wound
(a) Prothrombin
(b) fibrinogen
(c) thromboplastin
(d) fibrin

Question 9) _____ forms a fine thread like mesh that traps red blood cells to form the clot over the wound
(a) fibrin
(b) thrombin
(c) prothrombin
(d) fibrinogen

Question 10) The blood groups are differentiated on the basis of _____ present in the blood.
(a) plasma
(b) corpuscles
(c) antigen and antibodies
(d) Rh factor

Question 11) The antigens are found on the surface of _____
(a) RBCs
(b) WBC
(c) platelets
(d) plasma

Question 12) There are _____ types of blood groups
(a) 2
(b) 3
(c) 4
(d) 5

Question 13) The blood group A has antigen A on its RBCs and antibody _____. (
a) A
(b) B
(c) AB
(d) None

Question 14) The blood group _____ is called universal donor
(a) A
(b) B
(c) AB
(d) O

Question 15) _____ blood group is known as universal acceptor
(a) A
(b) B
(c) AB
(d) O

Question 16) _____ artery carries deoxygenated blood
(a) pulmonary artery
(b) aorta
(c) both a and b
(d) none

Question 17) _____ are terminal branches of an artery and join to form a vein
(a) artery
(b) vein
(c) capillary
(d) all

Question 18) _____ carry oxygenated blood to body parts
(a) artery
(b) vein
(c) capillary
(d) none

Question 19) The blood vessels without valves (a) artery
(b) vein
(c) capillary
(d) all

Question 20) The heart is surrounded by a membrane called
(a) peritoneum
(b) pericardium
(c) meninges
(d) septum

Question 21) The space between the two layers is filled with fluid called
(a) cerebro spinal fluid
(b) pericardial fluid
(c) amniotic fluid

(d) all

Question 22) The human heat consists of _____ chambers
(a) 2
(b) 3
(c) 4
(d) 5

Question 23) _____ are the upper chambers of heart
(a) auricles
(b) ventricles
(c) tricuspid
(d) bicuspid

Question 24) _____ receives impure blood
(a) right auricle
(b) left auricle
(c) right ventricle
(d) left ventricle

Question 25) _____ supply blood to heart muscles
(a) Aorta (
b) pulmonary artery
(c) coronary artery
(d) artery

VERY SHORT ANSWER TYPE.

1. Given below are certain structures, write their chief functional activity.
(a) Blood platelets…….
(b) Neutrophils ……..
(c) Erythrocytes ……..
(d) Lymphocytes …….
(e) Bone marrow …….

2. Name the following:

(a) Any one vein which starts from an organ and ends in another organ besides the heart.

(b) The kind of blood vessels which have no muscular walls.

(c) Any artery which carries impure (deoxygenated) blood.

(d) The kind of blood cells which can squeeze out through the walls of one category of blood vessels.

(e) The smallest common blood vessels formed by the union of capillaries.

(f) The category of blood vessels which start from capillaries and end in capillaries.

(g) The phase of the cardiac cycle in which the auricles contract.

(h) The valve present in between the chambers on the right side of the human heart.
Solution:-

(i) The phase of the cardiac cycle in which the ventricles get filled with blood from the atrium.

(j) The fluid found between the membranes of the heart.

4. Complete the following statements by filling in the blanks from the choices given in the brackets.
(a) The blood vessel that begins and ends in capillaries is the _____. (hepatic artery, hepatic portal vein, hepatic vein)

(b) A blood vessel which has small lumen and thick wall is _____. (capillary, lymphatic duct, artery, venule)

(c) The valve which prevents the back flow of blood in the veins and lymph vessels _____.(mitral valve, tricuspid valve, semilunar valve)

(d) An anticoagulant present in the blood is _____.(heparin, hirudin, thromboplastin, calcium)

Section B (Two marks questions)

Question 1.

1. Differentiate between the following pair of terms:

(a) Pulmonary artery and pulmonary vein.

(b) Vena cava and aorta.

(c) Platelets and WBC.

(d) RBC and WBC

Question 2.

Give any three differences between an artery and a vein:

Question 3.

What is double circulation?

Question 4.

In which organ of our body does blood get oxygenated?

Question 5.

Which side of the heart (left or right) contains oxygenated blood?

Question 6.

What is the role of haemoglobin in the blood?

Question 7.

Name the disease in which the number of platelets reduces to 25,000 30,000 per cubic mm of blood. State its major symptoms.

Section C (Three marks questions)

Question 8.

During surgical operations or during accidents, the patient may be given blood from outside to save his life. What is the technical name of the process? Briefly explain the precautions to be taken in the process.

Question 9.

Name the three kinds of blood vessels found in human beings. With the help of suitable diagrams, differentiate between them.

Question 10.

State briefly the difference between white blood cells and the red blood cells.

Question 11.

What is the term for the sequence of events that occur during one heartbeat?

Identify and describe the interior and exterior parts of the human heart.

Question 12.

Compare the structure and function of arteries, capillaries, and veins.

Section D (Five marks questions)

Question 1.

How does the human circulatory system work?

Question 2.

What are the three types of circulation?

Question 3.

Is the human circulatory system open or closed?

Question 4.

What is the advantage of a closed circulatory system?

Question 5.

Name any four heart-related conditions that occur commonly in humans. Briefly explain the cause and symptoms of each of them.