

(3 Hours)

(Total Marks : 75

- N.B.:**
- 1) All questions are compulsory.
 - 2) Figures to the right indicate full marks.
 - 3) Draw neat labelled diagrams wherever necessary.

Q.1. Answer the following-choose the correct options. **20**

- 1) An unspecialized stem cell become brain cell during fetal development. This is an example of -
A) Differentiation B) Organisation C) Homeostasis
- 2) Which of the following is form of intracellular signaling.
A) Contact dependent B) Paracrine C) Both A & B
- 3) Collagen fibers are present on -
A) Skin B) Arteries C) Liver
- 4) Myelin sheath composed of oligodendrites is present in -
A) Peripheral Nervous System B) Central Nervous System
C) Both A & B
- 5) The layer of epidermis that contain stem cells undergoing mitosis is the
A) Stratum corneum B) Stratum lucidum C) Stratum basale
- 6) Melanin is produced by which of following cells?
A) Merkel cells B) Melanocyte C) Langerhans cells
- 7) The neurotransmitter released at neuromuscular junction is,
A) Adrenaline B) Acetylcholine C) Glutamate
- 8) Scapula and clavicle make up the
A) Pelvic girdle B) Pectoral girdle C) Axial skeleton
- 9) How much is average life span of Red Blood Cells (RBC's)?
A) 120 days B) 180 days C) 60 days
- 10) Which of following cells secretes histaminase?
A) Basophil B) Eosinophil C) Neutrophil
- 11) Which of the following organ does purification of blood?
A) Spleen B) Lymph node C) Thymus

- 12) Which of the following is not a primary lymphatic organ?
A) Red bone marrow B) Thymus C) Pulmonary capillary
- 13) cells of adrenal medulla secrete Acetyl Choline
A) Cortical Cell B) Germinal Cell C) Chromaffin cells
- 14) Which division of nervous system is also called as thoracolumbar division?
A) Sympathetic B) Parasympathetic C) Somatic
- 15) Which papilla is the largest papilla?
A) Vallate B) Filiform C) Fungiform
- 16) Which of the Following photoreceptors are responsible for coloured vision.
A) Rods B) Cones C) Pyramidal
- 17) QRS wave indicate.
A) The atria are depolarizing
B) Ventricles are depolarizing while atria repolarize
C) The ventricles are repolarizing.
- 18) Cardiac output is determine by :
A) Heart rate minus stroke volume
B) Heart rate divided by stroke volume
C) Heart rate multiplied by stroke volume.
- 19) Back-flow of blood from arteries to ventricle is prevented by
A) Lymphatic valve B) Atrial valve C) Semilunar valve
- 20) The pace maker of the heart is -
A) Sinoatrial node B) Atrioventricular node C) Bundle of His

Q.2. Answer **any two** of the following.

20

- 1) Write a note on appendicular skeleton.
- 2) Write note on parasympathetic division of autonomic nervous system.
- 3) Explain the structure and functions of arteries and veins.

Q.3.

Answer **any seven** of the following.

35

- 1) What is endoplasmic reticulum? Write difference between smooth and rough endoplasmic reticulum.
 - 2) Write short note on extracellular matrix of connective tissue.
 - 3) Draw neat labelled diagram showing organization of skeletal muscle.
 - 4) Explain structure of sarcomere with the help of neat labelled diagram.
 - 5) Explain the process of hematopoiesis.
 - 6) Write short note on functions of platelets including their contribution in clotting pathway.
 - 7) Write short note on Lymphatic circulation.
 - 8) Explain the physiology of hearing in detail.
 - 9) Write short note on role of chemoreceptor and baroreceptor in regulation of blood pressure.
-