

BACHELOR OF SCIENCE (CARDIOVASCULAR TECHNOLOGY) (CBCS - 2020 COURSE)
B. Sc. (Cardiovascular Technology) Sem - I : WINTER- 2022
SUBJECT : PHYSIOLOGY

Day : Wednesday

Time : 10:00 AM-12:00 PM

Date : 18-01-2023

W-23321-2022

Max. Marks : 10

N.B.

- 1) There are **THREE** sections as
Section – A – Objective Type Questions - 10 marks
Section – B – Long Answer Questions - 20 marks
Section – C – Short Answer Questions - 10 marks
- 2) Section A is given in **SEPARATE** sheet and has to be answered on the same sheet. This sheet should be completed with the first 20 minutes of starting of the examination. This sheet with Section A only will be collected by Supervisor.
- 3) Section B has four long questions and **ANY TWO** questions have to be answered.
- 4) Section C has six short questions and **ANY FIVE** questions have to be answered.
- 5) You have to make such kind of mark in the box of the appropriate answer.

Seat No. _____

SECTION – A

MCQs

(10)

- 1) Long refractory period is a property shown by
 - a) Cardiac muscle
 - b) Skeletal muscle
 - c) Single unit muscle
 - d) Smooth muscle
- 2) All of the following are plasma proteins except
 - a) Albumin
 - b) Globulin
 - c) Fibrinogen
 - d) Myoglobin
- 3) Which of the following is not a phase of action potential ?
 - a) Depolarisation
 - b) Repolarisation
 - c) Hyperpolarisation
 - d) Resting membrane potential
- 4) Which of the following is muscle of inspiration ?
 - a) Internal intercostal
 - b) External intercostal
 - c) Latissimus dorsi
 - d) Muscles of anterior abdominal wall

P.T.O.

- 5) Normal rate of respiration per minute is
- a) 4 -8
 - b) 12 – 20
 - c) 21 – 28
 - d) 30 – 35
- 6) QRS complex in electrocardiogram is due to
- a) Atrial depolarisation
 - b) Atrial repolarisation
 - c) Ventricular depolarisation
 - d) Ventricular repolarisation
- 7) Long term mechanism for regulation of blood pressure is
- a) Baroreceptor reflex
 - b) Chemoreceptor reflex
 - c) CNS ischaemic response
 - d) Renin-Angiotensin-Aldosterone mechanism
- 8) Surface tension lowering agent present in alveoli is
- a) Histamine
 - b) Serotonin
 - c) Surfactant
 - d) Immunoglobulin A
- 9) Resting membrane potential in skeletal muscle is
- a) - 60 mV
 - b) - 90 mV
 - c) - 40 mV
 - d) - 150 mV
- 10) Normal cardiac output in healthy adults is
- a) 3 L/min
 - b) 5 L/min
 - c) 10 L/min
 - d) 15 L/min

Total Marks Obtained _____

Signature of Invigilator _____

Signature of Examiner _____

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Section – A – Objective Type Questions - 10 marks
Section – B – Long Answer Questions - 20 marks
Section – C – Short Answer Questions - 10 marks
- 2) Section B has four long questions and **ANY TWO** questions have to be answered.
- 3) Section C has six short questions and **ANY FIVE** questions have to be answered.
- 4) Answer to both the section should be written in the **SAME** answer book.

SECTION – B

Long Answer (Attempt **ANY TWO**) **(20)**

- 1) Define blood pressure. Enumerate various mechanisms involved in regulation of blood pressure. Describe baroreceptor mechanism in detail.
- 2) How are the white blood cells classified? Describe structure & functions of various white blood cells.
- 3) With the help of diagram, describe various volumes & capacities of lungs.
- 4) Define glomerular filtration rate. Discuss various factors affecting it

SECTION – C

Short Answer (Attempt **ANY FIVE**) **(10)**

- 1) Enumerate transport mechanisms across cell membrane.
- 2) State mechanisms of hemostasis.
- 3) List the functions of surfactant.
- 4) List the sensations carried by spinothalamic tracts.
- 5) State functions of saliva.
- 6) List functions of cerebellum.

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