

**BACHELOR OF SCIENCE (RADIOLOGY & IMAGING TECHNOLOGY)(CBCS-2019 COURSE)**  
**B.Sc. (R&IM) Sem-I : WINTER- 2022**  
**SUBJECT : PHYSIOLOGY**

Day : Wednesday

Time : 10:00 AM-12:00 PM

Date : 18-01-2023

**W-21581-2022**

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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- 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 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.
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**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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