

**BACHELOR OF SCIENCE (RADIOLOGY & IMAGING TECHNOLOGY) (CBCS-2019  
COURSE)**

**B.Sc. (R&IM) Sem-I : WINTER :- 2021**

**SUBJECT: PHYSIOLOGY**

**Day : Friday**

**Date 18-02-2022**

**W-21581-2021**

**Time : 10:00 AM-12:00 PM**

**Max. Marks: 40**

**N.B.**

- 1) There are **THREE** section 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 **SEPARATE** sheet and has to be answered on **SAME** sheet. This sheet should be completed within **first 20 minutes** of starting of the examination. The sheet with **section A** will be collected by Supervisor at the end of 20 minutes.
- 3) You have to make  $\surd$  such kind of mark in the box of the appropriate answers.
- 4) There is no negative marking.

Seat No. : \_\_\_\_\_

**SECTION – A**

**Q.1** Characteristic feature of active transport is \_\_\_\_\_.

- does not require energy
- requires energy
- it is a downhill process
- substances move along concentration gradient

**Q.2** Normal platelet count is \_\_\_\_\_.

- 4000-11000 / mm<sup>3</sup>
- 1.5 lac – 4 lac / mm<sup>3</sup>
- 6 lac – 7 lac / mm<sup>3</sup>
- 1-2 %

**Q.3** Neutrophilia occurs in

- allergic conditions
- acute bacterial infections
- chronic bacterial infections
- parasitic infections

**Q.4** If Red Blood Cells are suspended in hypertonic saline, then;

- Red Blood Cells will shrink
- Red Blood Cells will swell
- No change in shape of Red Blood Cells
- None of the above

**PTO**

**Q.5** Decrease in White Blood Cell count is known as \_\_\_\_\_.

- leucocytosis
- leucopenia
- leukemia
- thrombocytopenia

**Q.6** All are plasma proteins, except

- fibrinogen
- albumin
- globulin
- actin

**Q.7** Immediate source of energy for contraction of muscle is \_\_\_\_\_.

- ATP
- Glucose
- Glycogen
- Fatty acids

**Q.8** Pacemaker of human heart is \_\_\_\_\_.

- Sinoatrial node
- Atrioventricular node
- Bundle of His
- Purkinje fibers

**Q.9** Action potential for quiet inspiration is generated by \_\_\_\_\_.

- Dorsal respiratory group of neurons
- Ventral respiratory group of neurons
- Apneustic center
- Pneumotaxic center

**Q.10** Cause of first heart sound is \_\_\_\_\_.

- Opening of Atrioventricular valves
- Closure of Atrioventricular valves
- Opening of Semilunar valves
- Closure of Semilunar valves

Total Marks obtained : \_\_\_\_\_

Signature of Invigilator

Signature of Examiner

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- 1) There are **THREE** section 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 answer questions and **ANY TWO** questions have to be answered.
  - 3) Section C has Six short answer questions and **ANY FIVE** questions have to be answered.
  - 4) Section B and C should be written in **SAME** answer sheet.
  - 5) Draw neat diagram wherever necessary.
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**SECTION – B**

**Long answer questions (attempt ANY TWO) (20)**

- 1) Draw a diagram of Neuromuscular junction. Describe steps in transmission of impulse across Neuromuscular junction.
- 2) Define cardiac output. Describe various factors that determine cardiac output.
- 3) Define hypoxia. Enumerate its types. Describe effects of hypoxic hypoxia.
- 4) Draw and label dorsal column tracts. Enumerate functions of dorsal column tracts.

**SECTION – C**

**Short answer questions (attempt ANY FIVE) (10)**

- 1) List functions of surfactant.
- 2) State functions of platelets.
- 3) Enumerate functions of saliva.
- 4) List various plasma proteins in blood.
- 5) Define glomerular filtration rate.
- 6) List actions of estrogens.

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