BACHELOR OF SCIENCE (CARDIOVASCULAR TECHNOLOGY) (CBCS - 2020 COURSE)
B. Sc. (Cardiovascular Technology) Sem - III : WINTER :- 2021

SUBJECT: MEDICAL ELECTRONICS, BIOPHYSICS USE TO CARDIAC TECHNOLOGY

Day : Thursday | Time : 10:00 AM-12:00 PM
Date 17-02-2022 | **W-23348-2021** | Max. Marks: 60

N.B.

1) There are three sections as
   Section – A = Objective Type questions - 20 marks.
   Section – B = Long Answer questions - 20 marks.
   Section – C = Short Answer questions - 20 marks.
2) Section A is given in **SEPARATE** sheet and has to be answered on 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 FOUR** questions have to be answered.
5) You have to make √ such kind of mark in the box of the appropriate answers.

Seat No. : _____

SECTION - A

M.C.Q's **(20)**

1. Defibrillation was invented by prevost and Batelli. They discovered that electric shocks could convert VF to sinus rhythm in?
   a) Cat
   b) Mice
   c) Dog
   d) Rabbit

2. Stochastic effect which is true?
   a) Radiation exposure can also induce delayed effect such as malignancies.
   b) Increase in severity with increasing absorbed dose in affected individuals. Owing to damage to increasing No. of cells and tissues.
   c) Organ atrophy is example
   d) Decrease in sperm consent is example.

3. Cardinal rules of radiation protection are all except
   a) Time
   b) Distance
   c) Shielding
   d) Lead apron

4. Which is not radiation PPE (Personal protective equipment)?
   a) Lead goggle
   b) Shin guard
   c) Gonadal shield
   d) Z kit

5. The abbreviation TLD stands for?
   a) Thermo lumineslent dosimeter
   b) Total lung dosimeter
   c) Total liver dosimeter
   d) Thermoelectric luminescent Dosimeter

PTO

6. The energy that supplies the electric shock for cardioversion and defibrillation is measured in.
   a) Joules b) Kilowatts
   b) Volts d) Horsepower

7. Abnormal Systolic BP difference between upper & lower limbs is more than:

   a)5mmHg b)10 mmHg
   c) 15mmHg d) 20mmHg.

8. Blood pressure is pressure exerted by blood against:-

   a) Artery walls
   b) Brain
   c) Stomach
   d) Kidneys

9. Which of the following methods is used bedside for BP measurement in infants?
   a) Auscultatory
   b) Flush
   c) Percussion
   d) None of the above

10. Blood pressure is measured in terms of:-
    a) mm
    b) Hg
    c) cmHg
    d) mmHg

Total marks obtained : _____ **Signature of Invigilator : _____**

Signature of Examiner : _____

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4) Answer to both the sections should be written in **SAME** answer book.

SECTION – B

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

1) Define sudden cardiac death. Mention common causes of sudden cardiac death. Add a note on complications & precautions while conducting defibrillation.

2) Describe the Radiation Hazards & write briefly an use of Radiopharmaceuticals in Cardiology.

3) Basic Cardiac life support & advanced cardiac life support.

4) Describe normal ECG.

SECTION – C

Short answer (Attempt **ANY FOUR)** **(20)**

1) Pulse oximetry usefulness of oximetry.

2) CD Recording.

3) Basic principle of ultrasound.

4) Mode Echocardiography.

5) Transducers.

6) Difference between PWD & CWD.

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