Seat No: _____ Enrollment No: _____

PARUL UNIVERSITY

FACULTY OF PHYSIOTHERAPY

BPT, Examination, December -2017

Year: 2 **Date: 04/12/2017**
Subject Code: 07101206 **Time: 10:00am to 12:00pm**
Subject Name: Biomedical Physics **Total Marks: 35**

Instructions:
1. All questions are mandatory.
2. Figures to the right indicate full marks.
3. Draw Diagram wherever necessary.
4. Write sections – A, sections – B on separate answer sheets.

SECTION - A

Q.1 What is E.M.F? Write in detail about their risk factors on prolonged exposure and explain emission of E.M.F signals. **(15)**

OR

Q.1 What is A.C and D.C currents ? Explain therapeutic continuous and interrupted direct currents and their various wave forms in detail. **(15)**

Q.2 Write Short Notes. (any two) (5 Marks Each) **(10)**
(a) Magnetism
(b) Capacitors
(c) Electro magnetic spectrum

SECTION - B

Q.1 Multiple Choice Question. (1 Mark Each) **(10)**

1. The transistor will conduct only when its emitter base junction is:
(a) Grounded (b) Forward biased
(c) Reverse biased (d) Biased with high potential

2. The direction of the self induced emf:
(a) Is in the same direction of the force producing it (b) Is at right angles to the force producing it
(c) Is an opposite direction to the force producing it (d) None of the above

3. The unit of energy is:
(a) Calorie (b) Newton
(c) Joule (d) Watt

4. An electron is of:
(a) $1/10^{th}$ of a proton's mass (b) $1/1011^{th}$ of a proton's mass
(c) $1/1837^{th}$ of a proton's mass (d) $1/7381^{th}$ of a proton's mass

5. Shunt resistance is used in:
(a) Galvanometer (b) Ammeter
(c) Voltmeter (d) All of the above

6. Functions of transformers are:
(a) To alter voltage (b) To smoothen circuits
(c) To rectify an AC (d) To regulate current intensity

7. The impedance offered by a condenser to the flow of current is called:
(a) Inductive reactance (b) Capacitive reactance
(c) Inductance (d) Resistance

8. The plates of the condenser are normally made of:
(a) Copper (b) Aluminium
(c) Tin (d) All of the above

9. Metal oxide rectifiers are used for:
(a) High voltage currents (b) Law voltage currents
(c) Both high and law voltage currents (d) None of the above

10. The unit of impedance is:
(a) Volt (b) Henry
(c) Mho (d) Ohm