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MW-02011153

Seat No. _____

First Year B. P. T. Examination

January – 2018

Fundamentals of Electrotherapeutics

Time : **2** Hours] [Total Marks : **50**

Instructions : (1) Write legibly.
(2) Draw diagram where necessary.
(3) Figures to the right indicate marks.

1 Answer any **two** from the following : **20**

(1) Write in detail about electric shock, its types, severity, effects, and treatment. How can we avoid electric shock during electrotherapy treatment ?

(2) Describe Pain pathways.

(3) Describe P and N type semiconductors.

2 Answer any **two** from the following : **10**

(1) Find out the equivalent resistance in series resistance circuit.

(2) Electromagnetic spectrum

(3) Properties of magnet.

3 Answer any **five** from the following : **10**

(1) Cosine law

(2) Types of magnet

(3) Inverse square law

(4) Ohm's law

(5) Capacitive reactance

(6) Piezoelectric effect

4 Multiple Choice Questions : **10**

(1) Which of the following is not an electric conductor?

(a) Aluminium (b) Ceramic

(c) Copper (d) Silver

(2) Slow pain is carried by –

(a) A fibres (b) B fibres

(c) C fibres (d) D fibres

(3) Which of these device blocks high frequency current?

(a) Capacitor (b) Rectifier

(c) Transformer (d) Choke coil

(4) Number of pulses passing through any fixed point is known as –

(a) Waveforms (b) Frequency

(c) Pulse duration (d) Intensity

(5) "Transistors are made up of –

(a) Capacitors (b) Semiconductors

(c) Insulators (d) Resistors

(6) The fuse must be connected _____ to protect the circuit.

(a) In parallel (b) With capacitor

(c) In series (d) With transformer

(7) Which of the following is function of the skin?

(a) To protect against water loss.

(b) As a first line of defence against infection.

(c) Body's temperature regulation.

(d) All of the above

(8) Loss of pain sensations is known as –

(a) Anaesthesia (b) Analgesia

(c) Hyperasthesia (d) Paresthesia

(9) Unit of potential difference is –

(a) Volt (b) Coulomb

(c) Watt (d) None of the above

(10) The dielectric medium in capacitors can be made up of –

(a) Glass (b) Air

(c) Ceramic (d) All of the above
