



PW-02011153

Seat No. _____

First Year B. Physiotherapy Examination

July - 2018

**Fundamentals of Electrotherapeutics
(Old Course)**

Time : 2 Hours]

[Total Marks : 50

- Instructions :** (1) Answer should be brief and to the point.
(2) Figures to the right indicate marks.
(3) Illustrate answer with suitable diagrams.

- 1 Long Essay : (Any Two) : 2×10=20**
1. Explain in detail electromagnetic radiation.
2. What static electricity ? Explain theories of electricity, and production of electric charge.
3. Explain in detail, electromagnetic induction.
- 2 Short Essay : (Any Two) 2×5=10**
1. Electrical skin resistance.
2. Rectification of AC
3. Rheostat
- 3 Write in short : (Any Five) 5×2=10**
1. Earth shock
2. Types of plugs & switches
3. Ohms Law
4. Smoothing Circuit
5. Eddy currents
6. Electromagnetic spectrum
- 4 Multiple Choice Questions: (Answer All) 10×1=10**
1. The Unit of capacitance is
(A) Henry ,
(B) Farad
(C) Ohm
(D) Joules

2. Water absorbs
 - (A) IR Rays
 - (B) Visible Rays
 - (C) UV Rays
 - (D) All the above
3. Power is the rate of doing work, which is equal to
 - (A) $EMF / Current$
 - (B) $EMF - Current$
 - (C) $EMF + Current$
 - (D) $EMF \times Current$
4. This law states that, for Electromagnetic waves to have an effect on the tissues, they must be absorbed.
 - (A) Snell's Law
 - (B) Inverse Square Law
 - (C) Cosine Law
 - (D) Grothus Law
5. A specific amount of energy is. required to change the solid form of a particular substance into a liquid, or the liquid into a gas. This energy is called,
 - (A) EMF
 - (B) Electric field
 - (C) Latent heat
 - (D) Radiation
6. Greater the charge, _____ the potential of a charged object.
 - (A) lesser
 - (B) greater
 - (C) zero
 - (D) None of the above
7. A potentiometer is also called
 - (A) Series rheostat
 - (B) Triode valve
 - (C) Shunt rheostat
 - (D) Diode valve
8. Emission of electrons from hot filament is by the process of
 - (A) Radiation
 - (B) Thermionic Emission
 - (C) Current Flow
 - (D) Ionization

9. Henry is the unit of
- (A) inductance
 - (B) capacitance
 - (C) heat
 - (D) length
10. If secondary coil has more turns than the primary coil, it is an example of
- (A) Even ratio transformer .
 - (B) Stepped down transformer
 - (C) Stepped up transformer
 - (D) None of the above
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