



RJ-02011153

Seat No. _____

First Year B. Physiotherapy Examination

February - 2019

Fundamentals of Electrotherapeutics

(New Course)

Time : **2 Hours**]

[Total Marks : **50**

- Instructions :** (1) Write to the point.
(2) Draw diagrams where necessary.
(3) Figures on right side indicate marks.

1 Write any two : **10×2=20**

- (1) Discuss physiology of pain in detail.
- (2) Discuss about capacitor, including principles, capacity, construction, charging, discharging and uses.
- (3) Write in detail about magnetism. Add special note on characteristics of magnetic lines of forces and molecular theories of magnetism.

2 Write any two : **5×2=10**

- (1) Induction : Self and Mutual
- (2) Transformers
- (3) Electric Shock.

3 Write any five : **2×5=10**

- (1) Resistance in series
- (2) Cosine law
- (3) Electromagnetic spectrum
- (4) Plug and switch
- (5) Diode
- (6) Rheostat

4 Multiple choice questions : 10×1=10

- (1) Which of the following factors will cause electric shock ?
 - (A) Fault such that an exposed part of the apparatus becomes live
 - (B) A person makes live contact with the live part
 - (C) The person is earthed
 - (D) All of above
- (2) To prevent occurrence of eddy currents, _____ is used.
 - (A) An insulator
 - (B) Spherical conductor
 - (C) Laminated conductor
 - (D) None of above
- (3) A choke coil is used to _____
 - (A) Even out variations of intensity of current
 - (B) To prevent flow of high frequency current and allow flow of low frequency current
 - (C) Both (A) and (B)
 - (D) None of above
- (4) The unit of inductance is _____
 - (A) Farad
 - (B) Ampere
 - (C) Volt
 - (D) Henry
- (5) All electromagnetic radiations have _____
 - (A) Same velocity
 - (B) Same wavelength
 - (C) Same frequency
 - (D) All of above
- (6) Select Neurotransmitter responsible for pain
 - (A) Acetylcholine
 - (B) Substance P
 - (C) Dopamine
 - (D) Glutamate
- (7) The dielectric medium usually employed are made up of _____
 - (A) Mica
 - (B) Glass
 - (C) Plastic
 - (D) All of above
- (8) Identify, which is not a part of transistor :
 - (A) Base
 - (B) Emitter
 - (C) Collector
 - (D) None of above
- (9) In design of reflector, following principle is used :
 - (A) Law of reflection
 - (B) Law of refraction
 - (C) Cosine law
 - (D) Grothuss law
- (10) The line perpendicular to long axis of magnet is known as -
 - (A) Magnet meridian
 - (B) Equatorial line
 - (C) Central line
 - (D) None of above