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First B.P.Th. (2012) Examination, Winter 2016  
FUNDAMENTALS OF ELPCTRO

Total Duration : Section A + B = 3 Hours

Total Marks 80

SECTION — ~~A~~ SECTION — R

- Instructions :*
- 1) Use blue/black ball point pen only,
  - 2) Do not write anything on the blank part of the question paper. If written anything, such type of act will be considered as an attempt to resort to unfair means.
  - 3) All questions are compulsory.
  - 4) The number to the right indicates full marks.
  - 5) Draw diagrams wherever necessary.
  - 6) Distribution of syllabus in Question Paper is only meant to cover entire syllabus within the stipulated frame. The Question paper pattern is a mere guideline. Questions can be asked from any part of the syllabus into any question paper. Students cannot claim that the Question is out of syllabus. As it is only for the placement sake, the distribution has been done.
  - 7) Use a common answerbook for all Sections.

## SECTION — A SAO, (50 Marks)

1. Short answer question (**any five** out of six) : **(5x3=15)**
  - a) State Ohms Law.
  - b) What is Electromagnetic Induction ?
  - c) Define Latent Heat and give example where concept of Latent Heat is used for practical application in physiotherapy.
  - d) What is a Fuse and how does it work ?
  - e) State contraindications for Hydrocollateral hot pack treatment.
  - f). State factors affecting skin resistance.
2. Short answer question (**any five** out of six) **(5x7=35)**
  - a) Describe Earth Shock with example. What precautions can be taken against it ?
  - b) State and explain Laws of Reflection, Refraction and Absorption.

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- c) Describe types of Infra-red Generators.
- d) What is LASER ? Describe its types and properties.
- e) Describe production of Ultrasound.
- f) Describe Ultraviolet Radiation production in High Pressure Mercury Vapor Burner.

**SECTION — B LA0 (30 Marks)****3 Long answer question (any one out of two) : (1x15=15)**

- a) Describe physiological effects of Cryotherapy. Describe various methods of applying .cryotherapy. (7+8)
- b) Describe physiological effects of Superficial Heat. Describe various methods of applying Paraffin Wax Bath. (7+8)

**4. Long answer question (any one out of two) : (1 x15=15)**

- a) Classify Low Frequency Currents. Describe different wave forms of Faradic current. Draw and label a panel diagram of Diagnostic Electrical Stimulator. (5+5+5)
- b) Describe construction and production of Short Wave Diathermy. Draw and label a panel diagram of Short Wave Diathermy. (10+5)