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Summer-2013 Examination  
First BPTH 2012

63115

Total Duration: Section A + B + C = 3 Hours  
Fundamentals of Electro Therapy - V

Section B and C Marks: 60

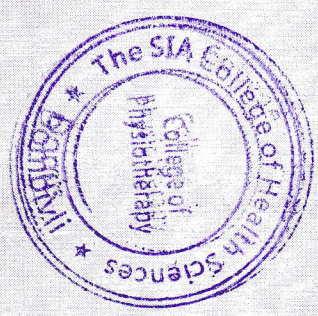
- Instruction
- 1) Use blue/black ball point pen only.
  - 2) Do not write anything on the blank portion of the question paper. If written anything, such type of act will be considered as an attempt to resort to unfair means.
  - 3) All questions are compulsory.
  - 4) The number to the right indicates full marks.
  - 5) Draw diagrams wherever necessary.

Section-B

30 Marks  
(5x3=15)

2. Answer the following (any five out of six):

- a) Thermionic Valves.
- b) Types of Transformers. ✓
- c) Principle of Interferential therapy. ✓
- d) Ohms law.
- e) Characteristics of LASER..
- f) Earth shock. ✓



3. Answer the following (any three out of four):

(3x5=15)

- a) Define Magnetism, Types of magnets, Molecular theory of Magnetism. (1+2+2)
- b) Electrical skin resistance. ✓
- c) Contrast bath.
- d) Types of electrodes used in low frequency current. ✓

Section-C

30 Marks

4. Write in detail physiological effects of superficial heat? Enumerate methods of application of paraffin wax bath therapy and describe any one in detail? Two indications and contraindications.

(1x15=15)

(5+2+5+3)

(1x15=15)

5. Long answer question:

- a) Describe production of short wave diathermy. Draw and label the circuit diagram for production of short wave diathermy. (9+6) ✓

OR

- b) Write down the classification of low frequency currents. Write different wave forms of interrupted galvanic current. Draw and label a panel diagram of a Multistimulator? (5+5+5) ✓





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First B.P.Th. 2012 Examination, Summer 2014  
**FUNDAMENTALS OF ELECTRO THERAPY – V**

63115

Total Duration : Section A + B + C = 3 Hours

Section B & C Marks : 60

SECTION – B & SECTION – C

- Instructions :**
- 1) Use **blue/black** ball point pen only.
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  - 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 paper's 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 answer book for **all** Sections.

SECTION – B

(30 Marks)

2. Answer the following (any five out of six) :

(5x3=15)

- a) Lenz's law.
- b) Write full form of LASER & its Properties.
- c) Triode valve.
- d) Pulse amplitude.
- e) Fuse.
- f) Define Specific Heat.



3. Answer the following (any three out of four) :

(3x5=15)

- a) Physiological effects of heat.
- b) Classification of currents.
- c) Methods of Testing of shortwave diathermy.
- d) Contraindications of Cryotherapy.



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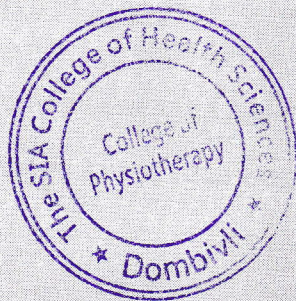
SECTION - C

(30 Marks)

4. Define heat. Describe the physiological and therapeutic effects of whirlpool bath. Write the method of application of whirlpool bath. (1×15=15)
5. a) Describe the construction of UVR lamp. Describe the production of UVR. Add a note on Tridymite formation. (1×15=15)

OR

5. b) Draw a neat labelled panel diagram of SWD. Write in detail the construction and production of SWD. (1×15=15)





First B.P.TH. (2012) Examination, Summer 2015  
FUNDAMENTALS OF ELECTRO THERAPY - V

63115

Total Duration : Section A + B = 3 Hours

Total Marks : 80

SECTION - A & SECTION - B

- Instructions :**
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  - 7) **Use** a common answer book for **all** Sections.

SECTION - A  
(SAQ)

(50 Marks)

1. Short answer question (any five out of six) :

(5x3=)

- a) Define specific heat.
- b) Explain Thermionic valves.
- c) Define Latent heat.
- d) Define grothus law.
- e) Define coupling media.
- f) Describe characteristics of laser.

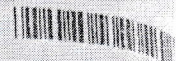


2. Short answer question (any five out of six) :

(5x3=)

- a) Explain different laws governing radiation.
- b) Explain the surging and pulse width modulation of faradic type current.





- c) Discuss physiological effects and methods of application of hydro-collator packs.
- d) Discuss luminous and non luminous generators in IRR.
- e) Discuss various field risk factors on prolong exposure to Electro magnetic field.
- f) Discuss duration, frequency and waveforms of interrupted galvanic current.

SECTION – B  
(LAQ)

(30 Mar

3. Long answer question (any one out of two) :

(1×15:

- a) Write down the physiological effects of cryotherapy. Explain methods of application of cryotherapy. Also, write down the contraindications of cryotherapy. (5+
- b) Explain in detail about paraffin wax bath. Write down the various methods of application of paraffin wax bath. Add a note on its contraindications. (5-

4. Long answer question (any one out of two) :

(1×1:

- a) Describe the production of U.V.R. Draw its panel diagram. Also, write about its testing of apparatus. (8
- b) Draw a neat labelled diagram showing production of S.W.D and explain it in detail. Also, add a note on effects of high frequency currents on tissue.





First B.P.Th. (2012) Examination, Summer 2016  
FUNDAMENTALS OF ELECTROTHERAPY

63115

Total Duration : Section A + B = 3 Hours

Total Marks : 80

SECTION – A & SECTION – B

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  - 3) **All** questions are **compulsory**.
  - 4) The number to the **right** indicates **full** marks.
  - 5) Draw diagrams **wherever** necessary.
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  - 7) Use a common answer book for **all** Sections.

SECTION – A SAQ (50 Marks)

1. Short answer question (any five out of six) : (5×3=15)
  - a) Cosine Law.
  - b) Contrast Bath.
  - c) Capacitance.
  - d) Joule's Law.
  - e) Amplitude modulation in interferential therapy.
  - f) Precautions for application of thermotherapy.
2. Short answer question (any five out of six) : (5×7=35)
  - a) Classification of currents.
  - b) Define TENS. Write down its types.
  - c) Sources of infrared radiations.
  - d) Modes of heat transfer.
  - e) Whirlpool bath.
  - f) What are the types of LASER ? Write its properties.





## SECTION - B LAQ (30 Marks)

3. Long answer question (**any one** out of two) : (1x15)
- What is cryotherapy ? Write down various methods and the techniques of application.
  - Explain the production of UVR with a labelled diagram. Add a note on tridymite formation.
4. Long answer question (**any one** out of two) : (1x15)
- Draw a panel diagram of therapeutic ultra sound and explain its production. Add a note on coupling media.
  - Draw a circuit diagram of Short Wave Diathermy. Write down the physiological effects and dangers of Short Wave Diathermy.

Draw circuit diagram of SWD and explain its effects and dangers.





First B.P.T.H. (2012) Examination, Summer 2017  
FUNDAMENTALS OF ELECTRO THERAPY

Library  
63115

Duration : Section A + B = 3 Hours

Total Marks : 80

SECTION – A and SECTION – B

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  - 7) **Use** a common answerbook for **all** Sections.

SECTION – A SAQ (50 Marks)

1. Short answer question (**any five** out of six) : (5×3=15)
  - a) State Ohms Law.
  - b) Define capacitance and state its unit.
  - c) State Cosine law.
  - d) State construction of triode valves.
  - e) Define Resting membrane potential.
  - f) Write the production of luminous Infra-red Radiation lamp.
2. Short answer question (**any five** out of six) : (5×7=35)
  - a) State the importance of earthing. Add a note on earth shock.
  - b) State the factors affecting skin resistance. Describe methods to reduce skin resistance.
  - c) Differentiate between Faradic current and Galvanic current.
  - d) Enlist the functions of Transformers. Describe the types of Transformers.
  - e) Describe methods of applications of Paraffin Wax Bath.
  - f) Describe construction and working of High Pressure Mercury Vapor Burner lamp.



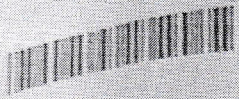


## SECTION – B LAQ (30 Marks)

3. Long answer question (any one out of two) : (1×15=15)
- a) Define specific heat. Describe therapeutic effects of Cryotherapy. Describe various methods of applications of Cryotherapy. (2+6+7)
- b) Describe various methods of heat transfer. Describe physiological effects of Hydrocolator pack. Describe the construction of Hydrocolator pack. (3+7+5)
4. Long answer question (any one out of two) : (1×15=15)
- a) Describe the production of Ultra Sound. Draw a panel diagram of Ultra Sound. (10+5)
- b) State the therapeutic frequency and wave length of short wave diathermy. Describe the production of Short Wave Diathermy. Draw panel diagram of Short Wave Diathermy. (2+8+5)







First B.P.Th. (2012) Examination, Summer 2018  
FUNDAMENTALS OF ELECTRO THERAPY

63115

Total Duration : Section A + B = 3 Hours

Total Marks : 80

SECTION – A & SECTION – B

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  - 7) **Use** a common answerbook for **all** Sections.

SECTION – A (50 Marks)

(SAQ)

1. Short answer question (any five out of six) :
- a) Describe methods to reduce skin resistance.
  - b) Eddy currents.
  - c) Ohms law.
  - d) What is earthing ? Explain its importance.
  - e) Write construction of Whirl Pool bath.
  - f) Write three uses of rheostat in electrotherapy equipment.

(5×3=





63115



2. Short answer question (any five out of six) :

(5x7=35)

- a) Define electric shock. Write in details about precautions and treatment following shock.
- b) Describe physiological effects of Cryotherapy with uses.
- c) Draw panel diagram and write testing of Electrical Muscle Stimulator.
- d) Describe production of Interferential (IF) current. Draw a neat labelled panel diagram of the IFT unit.
- e) Explain luminous and non-luminous IR generators.
- f) Describe laws governing radiation.

SECTION – B (30 Marks)  
(LAQ)

3. Long answer question (any one out of two) :

(1x15=15)

- a) Describe contrast bath and explain its physiological and therapeutic effects. Write a note on technique of application. (10+5)
- b) Describe production of Short Wave Diathermy (SWD). Draw panel diagram of SWD and describe testing of SWD. (7+5+3)

4. Long answer question (any one out of two) :

(1x15=15)

- a) Describe the construction of UVR lamp. Describe the production of UVR. Add a note on Tridymite formation. (5+7+3)

- b) Describe the construction, working and functions of transformer. (5+5+5)





## Department of Electrotherapy

### I BPTTh Question Bank 2018-19

#### Short Question Answer

(3 Marks)

#### Basic Physics & Shock

- 1) Define Specific heat
- 2) Define latent heat
- 3) Earth shock
- 4) Earthing & its importance

#### Electrical Skin Resistance

1. Electric skin resistance Methods to reduce skin resistance

#### Cryotherapy

1. Indications & Contra- indication
2. Lewis Hunting Reactio

#### Whirlpool & contrast Bath

1. Precaution to application of thermotherapy
2. Construction of whirlpool Bath.

#### Short Question Answer

(7 Marks)

#### Basic Physics & Shock

1. Modes of heat transfer
2. Importance of Earthing & add note on Earth Shock
3. Define electric shock- Explain in detail about precautions & treatments of shock.

#### UVR

1. Construction & Working of high Pressure Mercury Vapour lamp/ kromayer lamp with diagram.

#### Electrical Skin Resistance



**1 ESR-Factors affecting skin resistance & Methods of reducing ESR.**

### **Cryotherapy**

- 1 Physiological effects & uses
2. Indications & contraindication in details

### **Whirlpool & contrast Bath**

- 1 Whirlpool Bath
2. Contrast Bath

### **Long Question Answer**

**(15 marks)**

### **UVR**

1. Construction & Prod. Of UVR lamp. Add note on Tridymite formation.
2. Prod. Of UVR- Panel diagram- Testing of apparatus.
3. Kromayer lamp- panel diagram.

### **Cryotherapy**

- 1 Physiological effects & uses, methods of application & Indication & contra-ind
2. What is cryotherapy ? Method & technique of application

### **Whirlpool & contrast Bath**

1. Define heat Physiological & Therapeutic effects of whirlpool bath. Method of application.
2. Define contrast bath-Physiological & therapeutic effects & technique of application.