

MGM INSTITUTE OF HEALTH SCIENCES, NAVI MUMBAI
I B.P.T UNIVERSITY EXAMINATION, JULY - 2015

Subject – Electrotherapy -I

Maximum Marks: 80

Duration – 3 Hours

(Section A = 10 Minutes)

INSTRUCTIONS:

1. Attempt all questions
2. Maximum marks are indicated in the right
3. Illustrate the answers with suitable diagrams wherever necessary
4. Please surrender your SWITCHED OFF cell phones at entry point to the Examination Hall
5. Mobile phones, pagers, blue tooth or any other such communication devices are not allowed in the Examination premises and in all adjacent area

SECTION –A

Q.1. Short Answer Question (Any FIVE)

25 Marks

- A. Describe shock and its types
- B. Describe fuse. What is the role of fuse in an electrical circuit?
- C. Describe the modes of heat transfer?
- D. Describe the construction of paraffin wax bath.
- E. Describe switch and color coding of electrical supply.
- F. Define resistance and types of arrangement of resistance in a circuit.

Q.2. Long Answer Question (Any ONE)

15 Marks

- A. Write in details about all the physiological effects of heat application. Describe method of application of contrast bath.
- B. What are physiological effects and therapeutic uses of Cryotherapy? What are the different methods of application of same?

SECTION – B

Q.1. Short Answer Question (Any FIVE)

25 Marks

- A. What are the dangers and precautions of Actinotherapy?
- B. Types of LASER.
- C. Describe method of application of Hydrocollator packs.
- D. Write in details about indications and contraindications of LASER.
- E. Describe all the laws governing electromagnetic radiation.
- F. Describe properties of magnet.

Q.2. Long Answer Question (Any ONE)

15 Marks

- A. Define Infra Red Radiation (IRR). Describe in details about IRR production. What are indications and contraindications of same?
- B. Describe in details about Ultraviolet Rays production. Describe the physiological effects and therapeutic uses of same.

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SECTION –A

Q.1. Short Answer Question (Any FIVE)

25 Marks

- A. Define Earth and electric Shock. Write any 3 precautions to be taken in Electrotherapy department to avoid it.
- B. Electro magnetic spectrum.
- C. State law of reflection, refraction and absorption.
- D. Explain magnetic effect of electric current.
- E. Therapeutic effects of whirlpool bath.
- F. Grid system

Q.2. Long Answer Question (Any ONE)

15 Marks

- A. Write in detail about the therapeutic effects of paraffin wax bath. Describe various methods of application of it with precautions.
- B. What are the physiological, therapeutic effects of hydrocollator packs application? Add a note on its contraindications.

SECTION – B

Q.1. Short Answer Question (Any FIVE)

25 Marks

- A. Method of application of cryotherapy
- B. Testdose calculation of UVR.
- C. Properties of LASER.
- D. Contraindications for cryotherapy.
- E. Dangers and precautions of IRR
- F. Any two theories of electricity.

Q.2. Long Answer Question (Any ONE)

15 Marks

- A. Describe types of Ultraviolet radiations. Explain its physiological effects and its methods of application.
- B. Describe the production, physiological effects and indications of LASER.

MGM INSTITUTE OF HEALTH SCIENCES, NAVI MUMBAI
I BPT UNIVERSITY SUPPLEMENTARY EXAMINATION, DECEMBER - 2016

Subject – Electrotherapy -I

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Duration – 3 Hours
(Section A = 10 Minutes)

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SECTION – A

Q.1. Short Answer Question (Any FIVE)

25 Marks

- A. Write about power plugs.
- B. Write about Transformers.
- C. Differentiate between the luminous and non-luminous infra-red generators.
- D. Production of LASER
- E. Piezo electric effect
- F. Write about sinusoid wave and its attributes with the help of a diagram

Q.2. Long Answer Question (Any ONE)

15 Marks

- A. Write the construction of hydro collar unit. Explain about therapeutic uses of hot packs.
Write the contraindication for hot packs.
- B. Explain the production of SWD with a circuit diagram. Draw and label the front panel of SWD and explain the purpose of each knob.

SECTION – B

Q.1. Short Answer Question (Any FIVE)

25 Marks

- A. Methods of PWB application
- B. Technique for testing ultrasound output
- C. Production of ultrasonic waves in physiotherapy
- D. Kromayer lamp
- E. Modified types of DC current
- F. Write about the basic properties of electromagnetic radiations.

Q.2. Long Answer Question (Any ONE)

15 Marks

- A. Physiological effects of Cryotherapy. Different methods of cryotherapy applications. List down the contraindications of Cryotherapy
- B. Discuss the production of interferential Therapy. Discuss the Rotating Vector system in IFT.
Write about pre modulated IFT.

MGM INSTITUTE OF HEALTH SCIENCES, NAVI MUMBAI
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SECTION –A

Q.1. Short Answer Question (Any FIVE)

25 Marks

- A. Write about properties of LASER.
- B. Write a note on theories of electricity.
- C. Write about Lewis Hunting reaction.
- D. Properties of electromagnetic radiation
- E. Define electric shock. Write precautions to avoid it.
- F. Write indications and contraindication of Cryotherapy.

Q.2. Long Answer Question (Any ONE)

15 Marks

- A. Write principle of paraffin wax therapy. Describe the methods of applications and physiological effects of PWB and write its merits over moist heat.
- B. Describe in detail IRR, its types, production, techniques and method of application. Explain dangers and precautions.

SECTION – B

Q.1. Short Answer Question (Any FIVE)

25 Marks

- A. Define Magnetic lines of forces and enumerate its properties
- B. Write a note with reason on preparation of patient before giving any heating modality.
- C. Describe Electromagnetic induction and its types.
- D. Write about molecular theory of magnetism.
- E. Describe construction of cartridge fuse and write its importance in circuit
- F. Draw and explain circuit diagram of SWD machine.

Q.2. Long Answer Question (Any ONE)

15 Marks

- A. Describe in detail Laser, its types, production, techniques and methods for application.
- B. Explain in detail the production of ultraviolet radiation lamp and describe its types. Describe the construction of kromayer lamp.

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(Section A = 10 Minutes)

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SECTION –A

Q.1. Short Answer Question (Any FIVE)

25 Marks

- A. Write about Fuses
- B. Write about Transistors?
- C. Effects of high frequency current on tissues?
- D. Principles of laser?
- E. Standing waves in ultrasound?
- F. Write about types of plugs and switches?

Q.2. Long Answer Question (Any ONE)

15 Marks

- A. Physiological effects of superficial heat with neat diagrams and write indications and contraindications.
- B. Explain production of S.W.D with circuit diagram; therapeutic and physiological effects?

SECTION – B

Q.1. Short Answer Question (Any FIVE)

25 Marks

- A. Laws of governing Radiation? Explain any one?
- B. Define shock? Give its Types and Causes
- C. Acousting streaming in ultrasound?
- D. Hydrocollatrol packs Indication and contraindications?
- E. Physiological and therapeutic effects of I.R.R
- F. Physiological and therapeutic effects of U.V.R?

Q.2. Long Answer Question (Any ONE)

15 Marks

- A. Define UVR. Write its types and production. Give Indications and contraindications
- B. Define cryotherapy? Lewis hunting reaction? Physiological and therapeutic effects.

MGM INSTITUTE OF HEALTH SCIENCES, NAVI MUMBAI
I BPT UNIVERSITY EXAMINATION, JULY - 2018

Subject – Electrotherapy -I

Maximum Marks: 80
Duration – 3 Hours
(Section A = 10 Minutes)

INSTRUCTIONS:

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SECTION –A

Q.1. Short Answer Question (Any FIVE)

25 Marks

- A. Differentiate between the faradic and Galvanic current
- B. Write about the different methods of heat transmission with one example each
- C. Define electric shock and enumerate three safety precautions for electric shock
- D. Describe non-thermal effects of ultrasound therapy
- E. Explain clover leaf and vector mechanism with diagram
- F. Technique of Cryotherapy application

Q.2. Long Answer Question (Any ONE)

15 Marks

- A. Describe production of ultrasound waves? Draw the panel diagram of US machine. Write in brief the physiological and therapeutic effects of US. 5+2+8
- B. What is specific Heat? What are the physiological and therapeutic effects of superficial heat? What are the indications and contraindications of thermotherapy? 3+6+6

SECTION – B

Q.1. Short Answer Question (Any FIVE)

25 Marks

- A. Construction of luminous and non-luminous IR
- B. Describe construction and uses of Contrast bath
- C. Define TENS. Explain different types of TENS with diagrams
- D. Describe construction, working and function of transformer
- E. Laws of Radiation
- F. Describe different types of electrodes of short wave diathermy (SWD) and draw panel diagram of SWD

Q.2. Long Answer Question (Any ONE)

15 Marks

- A. Properties of LASER. Principles of production of LASER. Mentions types of laser generators. 5+5+5
- B. Describe construction of Paraffin Wax Bath (PWB) unit? Mention different types of application of PWB. Write in brief the Physiological effects of PWB. 5+5+5

MGM INSTITUTE OF HEALTH SCIENCES, NAVI MUMBAI
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SECTION –A

Q.1. Short Answer Question (Any FIVE)

25 Marks

- A. Explain theories of electricity
- B. Types of transformers
- C. Write about dangers in IRR therapy
- D. What is capacity of condenser? Write the various factors affecting it.
- E. Write a note on electromagnetic induction
- F. Write about pain gate theory

Q.2. Long Answer Question (Any ONE)

15 Marks

- A. Explain a) Physical principles
b) Physiologic effects and
c) Technique of application
of cryotherapy (5+5+5)
- B. Explain the physiological and therapeutic effects of Paraffin Wax Bath. Add a note on its precautions, contraindications. Write any one method of its application. (5+5+5)

SECTION – B

Q.1. Short Answer Question (Any FIVE)

25 Marks

- A. Types of UV lamps
- B. Write about rheostat and its types
- C. Modes of transfer of heat energy
- D. Write about contrast bath
- E. Electrical skin resistance and methods to reduce it
- F. Write about electromagnetic spectrum

Q.2. Long Answer Question (Any ONE)

15 Marks

- A. Write in detail about types and classification of LASER. Write about principles and technique of application of LASER. What are the dangers, precautions and contraindications of using therapeutic laser. (5+5+5)
- B. Explain the physiological and therapeutic effects of hydrocollator packs. Add a note on its precautions and contraindications. Explain method of application. (5+5+5)