

August 2011

[KZ 6260]

Sub. Code : 6260

**BACHELOR OF PHYSIOTHERAPY EXAMINATION**

**THIRD YEAR**

**Paper II – ELECTROTHERAPY II (HF)**

***Q.P. Code : 746260***

**Time : Three hours**

**Maximum : 100 marks**

**ANSWER ALL QUESTIONS**

**I. LONG ESSAYS**

**(2X20=40)**

1. Define Ultra violet radiation . Explain the various types of generators and its production.
2. Define Ultra sound. Explain the Treatment parameters and Physiological effects of ultrasound.

**II. SHORT NOTES**

**(8X5=40)**

1. Pulsed short wave diathermy
2. Types and properties of laser
3. Laws governing radiation
4. Hydro collator pack
5. Applicator of microwave diathermy
6. Condenser field method
7. Infrared generators
8. Methods of application of cryotherapy

**III. SHORT ANSWERS**

**(10X2=20)**

1. Eddy current
2. Magnetron
3. Drugs used in phonophoresis
4. Structure of skin
5. Theraktin tunnel
6. Erythema
7. Dangers of shortwave diathermy
8. Definition of LASER
9. Physical properties of wax
10. Contraindication of cryotherapy

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[LA 6260]

February 2012

Sub. Code: 6260

**BACHELOR OF PHYSIOTHERAPY EXAMINATION**

**THIRD YEAR**

**Paper II – ELECTROTHERAPY II (HF)**

*Q.P. Code : 746260*

**Time : Three hours**

**Maximum : 100 marks**

**Answer ALL questions**

**I. Elaborate on:**

**(2X20=40)**

1. Write about the non luminous and luminous generators of IRR, its therapeutic and physiological effects.
2. Define cryotherapy. Explain the methods of application and its therapeutic effects.

**II. Write notes on:**

**(8X5=40)**

1. Spacing.
2. Laws of reflection and refraction.
3. PUVA therapy.
4. Reverse piezo electric effect.
5. Contrast bath.
6. Kromayer lamp.
7. Cable method of Short wave diathermy.
8. Microwave Diathermy.

**III. Short Answers:**

**(10X2=20)**

1. How is the distance between the Ultra violet lamp and patient calculated?
2. Degrees of erythema.
3. X-rays and Gamma rays.
4. Radiant energy.
5. Convection.
6. Calories.
7. Coupling Media.
8. Cavitation and its types.
9. Properties of Laser.
10. Basic principle in treating sprains.

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[LB 6260]

AUGUST 2012

Sub. Code: 6260

THIRD YEAR BPT YEAR

Paper II – ELECTROTHERAPY II (HF)

Q.P. Code : 746260

Time : Three hours

Maximum : 100 marks

(180 Min) Answer ALL questions in the same order.

I. Elaborate on:

Pages Time Marks  
(Max.)(Max.)(Max.)

- |  |    |    |    |
|--|----|----|----|
| 1. Describe short wave Diathermy, its construction, working, methods of application, physiological and therapeutic effects.  | 19 | 33 | 20 |
| 2. Define oscillation. What is capacitance and inductance? Give an example of an oscillating system. How does energy transfer between two circuits take place? Define nodes and antinodes with examples. | 19 | 33 | 20 |

II. Write notes on:

- |   |   |   |   |
|---|---|---|---|
| 1. Lewis hunting reaction.                    | 3 | 8 | 5 |
| 2. Physiological effects of heat.             | 3 | 8 | 5 |
| 3. Laser.                                     | 3 | 8 | 5 |
| 4. Construction and principles of Ultrasound. | 3 | 8 | 5 |
| 5. Hydro collator packs.                      | 3 | 8 | 5 |
| 6. Dosage in ultraviolet rays.                | 3 | 8 | 5 |
| 7. Techniques of cryotherapy.                 | 3 | 8 | 5 |
| 8. Microwave diathermy.                       | 3 | 8 | 5 |

III. Short Answers:

- |  |   |   |   |
|--|---|---|---|
| 1. Micro Massage.                                | 1 | 5 | 2 |
| 2. Wavelength and frequency of Ultrasound.       | 1 | 5 | 2 |
| 3. Why shouldn't a tumor be treated with heat.   | 1 | 5 | 2 |
| 4. Describe an electric shock.                   | 1 | 5 | 2 |
| 5. How is energy density calculated in laser.    | 1 | 5 | 2 |
| 6. Tennis elbow and Golfer's elbow.              | 1 | 5 | 2 |
| 7. Paraffin wax bath.                            | 1 | 5 | 2 |
| 8. Heliotherapy –Define.                         | 1 | 5 | 2 |
| 9. Coupling Media.                               | 1 | 5 | 2 |
| 10. Duration of treatment for plantar fasciitis. | 1 | 5 | 2 |

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[LC 6260]

**FEBRUARY 2013**  
**THIRD YEAR BPT EXAM**  
**Paper II – ELECTROTHERAPY II (HF)**  
*Q.P. Code : 746260*

Sub. Code: 6260

**Time : Three hours**  
**(180 Min)**

**Maximum : 100 marks**

**I. ELABORATE ON:**

**(2X20=40)**

1. Mechanism of Ultrasound production and methods and application for different conditions with therapeutic parameters.
2. Production of Infra red radiation and its application methods and precautions during treatment

**II SHORT NOTES:**

**(8X5 = 40)**

1. Biological changes due to cryotherapy
2. Indications and contra indications of Shortwave diathermy
3. Transmission of Ultrasound by various coupling media.
4. Mercury vapour lamp
5. Photosensitization
6. Hubbard tank
7. Uses and contraindications of cryotherapy
8. Electromagnetic induction

**III SHORT ANSWER:**

**(10X2 = 20)**

1. Moist heat
2. Erythema
3. Cold laser
4. Cavitation
5. Near field/ Far field
6. Microwave diathermy
7. Eddy currents
8. Refraction
9. Inverse square law
10. Mono polar technique of Short wave diathermy

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[LD 6260]

AUGUST 2013

Sub. Code: 6260

**THIRD YEAR BPT EXAM**

**PAPER II – ELECTROTHERAPY – II (HF)**

*Q.P. Code : 746260*

**Time: Three Hours**

**Maximum: 100 marks**

**I. Elaborate on:**

**(2X20=40)**

1. Explain the physical effects of heat and the laws governing radiations.
2. Describe the properties of laser. Explain the principles of application of low level laser and physical and therapeutic effects of laser.

**II. Write Notes on:**

**(8X5=40)**

1. Techniques of application in phonophoresis.
2. Electrode placement in Condenser field method in short wave diathermy.
3. Physiological effect and therapeutic effect of ultraviolet radiation.
4. Whirlpool bath
5. Dangers with infrared radiations.
6. Biological effects of pulsed shortwave diathermy.
7. Dip method in paraffin wax application
8. Cold spray

**III. Short Answers:**

**(10X2=20)**

1. Cavitation
2. Convection and radiation
3. Electrostatic field
4. Desquamation
5. Piezo-electric effect
6. Cryokinetics
7. Electric shock
8. Coupling medium
9. Thermostat
10. RICE

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[LE 6260]

FEBRUARY 2014

Sub. Code: 6260

THIRD YEAR BPT EXAM

PAPER II – ELECTROTHERAPY – II (HF)

*Q.P. Code : 746260*

**Time: Three Hours**

**Maximum: 100 marks**

**I. Elaborate on:**

**(2X20=40)**

1. Describe production of microwave diathermy, its technique of application and dangers.
2. Indications, contraindications and dangers of Ultraviolet radiation (UVR).

**II. Write Notes on:**

**(8X5=40)**

1. PUVA regimen
2. Contrast bath
3. Phonophoresis
4. Physiological effects of cryotherapy
5. Production of ultrasound
6. Paraffin wax bath
7. Therapeutic uses of Infrared radiation
8. Electrode positioning in capacitor field method

**III. Short Answers:**

**(10X2=20)**

1. Conduction
2. List out the techniques of application of LASER
3. How do you prevent the damage to Magnetron
4. Which is converted into vitamin D in skin by Ultraviolet radiation
5. Cosine law
6. Depth of penetration of ultrasound therapy
7. Wavelength of Infrared radiation
8. Define frequency
9. Cryostretch
10. Hydrocollator pack

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[LF 6260]

AUGUST 2014

Sub. Code: 6260

**THIRD YEAR BPT EXAM  
PAPER II – ELECTROTHERAPY – II (HF)**

*Q.P. Code : 746260*

**Time: Three Hours**

**Maximum: 100 marks**

**I. Elaborate on:**

**(2X20=40)**

1. Define Micro Wave Diathermy. Explain the production, applicators, therapeutic effects and contra indication of MWD.
2. Define moist heat. Explain the apparatus, technique, indication, contra indication and advantages of hydrocollator pack.

**II. Write Notes on:**

**(8X5=40)**

1. Physical effects and transmission of heat.
2. Contrast bath.
3. Therapeutic Effects of ultrasound.
4. Properties and technique of LASER.
5. Pulsed shortwave diathermy.
6. Hubbard tank.
7. Physiological effects of UVR.
8. Generators of IRR.

**III. Short Answer:**

**(10X2=20)**

1. Vapocoolant spray.
2. Power density of laser.
3. Buoyancy.
4. Actinotherapy.
5. Inverse square law.
6. Transducer.
7. Ionization.
8. Ice burn.
9. UVR new dose calculation formula.
10. Variable condenser.

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[LG 6260]

FEBRUARY 2015

Sub. Code: 6260

**THIRD YEAR BPT EXAMINATION  
PAPER II – ELECTROTHERAPY – II (HF)**

*Q.P. Code : 746260*

**Time: Three hours**

**Maximum: 100 marks**

**I. Elaborate on:**

**(2 x 20 = 40)**

1. Explain in detail about the technique of application of “Laser” and its effects in pain relief, wound healing and in musculoskeletal condition.
2. Define heat and explain in detail about physical effects and transmission of heat. Add a note on apparatus, indications and contra indications, technique of application of liquid paraffin wax bath.

**II. Write notes on:**

**(8 x 5 = 40)**

1. Electro magnetic spectrum
2. Modality of treatment and dosage for psoriasis
3. Therapeutic effects of short wave diathermy
4. Techniques of application of ultra sound
5. Physiological effects of ultra violet radiation
6. Dangers and contra indications for cryotherapy
7. Luminous generators
8. Contrast bath

**III. Short answers on:**

**(10 x 2 = 20)**

1. Method of application of SWD
2. Magnetron
3. Oscillator circuit
4. Photo sensitization
5. Triode valve
6. Latent heat of fusion
7. Parameters of ultrasound
8. Eddy currents
9. Plantar warts
10. Thermostat

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[LH 6260]

AUGUST 2015

Sub. Code: 6260

**B.P.T. DEGREE EXAMINATION**

**THIRD YEAR**

**PAPER II – ELECTROTHERAPY – II (HF)**

*Q.P. Code: 746260*

**Time : Three Hours**

**Maximum : 100 marks**

**Answer ALL questions**

**I. Elaborate on:**

**(2 x 20 = 40)**

1. Explain the production of short wave diathermy with circuit diagram and explain about physiological and therapeutic effects of short wave diathermy.
2. Describe the production of Infrared Radiation. Mention about its type of generators and it's working. Explain about the techniques of the treatment.

**II. Write notes on:**

**(8 x 5 = 40)**

1. Production of microwave diathermy.
2. Excitatory cold.
3. Kromayer lamp.
4. Whirlpool bath.
5. Heat transmission.
6. Laser and its properties.
7. Indications and contra indications of ultra violet radiations.
8. Ultra sound – thermal and non-thermal effects.

**III. Short Answers on:**

**(10 x 2 = 20)**

1. Triode valve.
2. Phonophoresis.
3. Damping of oscillations.
4. Lasing medium.
5. Piezo-electric effect.
6. Desquamation.
7. Any four methods of application of paraffin wax.
8. Ice towel method.
9. Coupling medium.
10. Eddy currents.

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[LI 6260]

FEBRUARY 2016

Sub. Code: 6260

**THIRD YEAR BPT EXAMINATION  
PAPER II – ELECTROTHERAPY – II (HF)**

*Q.P. Code : 746260*

**Time: Three hours**

**Maximum: 100 Marks**

**I. Elaborate on:**

**(2 x 20 = 40)**

1. Indications, contraindications and dangers of Ultraviolet Radiation (UVR).
2. Describe physiological effects of Ultrasound Therapy, its techniques of application and contraindications.

**II. Write notes on:**

**(8 x 5 = 40)**

1. Difference between nonluminous and luminous generators of IRR.
2. Hydrocollator pack.
3. Transmission of heat.
4. UVR for Skin wounds.
5. Contraindications of Cryotherapy.
6. Physical Properties of LASER.
7. Dangers of Micro Wave Diathermy (MWD).
8. Therapeutic uses of Short Wave Diathermy (SWD).

**III. Short answers on:**

**(10 x 2 = 20)**

1. Depth of penetration of Ultrasound Therapy.
2. Define frequency.
3. Dangers of Infrared radiation.
4. Physical properties of wax.
5. Wavelength of lasers.
6. Cryokinetics.
7. Conduction.
8. Puva apparatus.
9. Duty cycle.
10. Wavelength of Ultraviolet rays B (UVB).

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[LJ 6260]

AUGUST 2016

Sub. Code: 6260

**THIRD YEAR BPT EXAMINATION  
PAPER II – ELECTROTHERAPY – II (HF)**

*Q.P. Code : 746260*

**Time: Three hours**

**Maximum: 100 Marks**

**I. Elaborate on:**

**(2 x 20 = 40)**

1. Define oscillatory current. Describe in detail about production, physiological and therapeutic effects of SWD.
2. Classify UVR. Explain in detail about different types of lamps used to produce UVR in physiotherapy department.

**II. Write notes on:**

**(8 x 5 = 40)**

1. Techniques of application of SWD.
2. Techniques of application of ultrasound therapy.
3. Couplants and its uses.
4. Construction and working of MWD.
5. Luminous and non-luminous generator.
6. Treatment and dosage for Acne Vulgaris.
7. Contrast bath.
8. Paraffin wax bath.

**III. Short answers on:**

**(10 x 2 = 20)**

1. Lewis hunting reaction.
2. Electrostatic field.
3. Reverse piezo electric effect.
4. Nodes and antinodes.
5. Cavitation.
6. Pigmentation.
7. Super luminous diode laser.
8. Quick ice.
9. Classification of LASERS.
10. Mark: Space Ratio.

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[LK 6260]

FEBRUARY 2017

Sub. Code: 6260

**BPT DEGREE EXAMINATION  
THIRD YEAR  
PAPER II – ELECTROTHERAPY – II (HF)**

*Q.P. Code : 746260*

**Time: Three hours**

**Maximum: 100 Marks**

**I. Elaborate on:**

**(2 x 20 = 40)**

1. Define Microwave Diathermy. Explain in detail about the indication, contraindication, production, physiological, therapeutic effects and its danger.
2. Describe in detail about principles and techniques of application of Cryotherapy. Add a brief note on indications and contra indications of Cryotherapy.

**II. Write notes on:**

**(8 x 5 = 40)**

1. Spacing in SWD.
2. Laws governing radiation.
3. Magnetron.
4. Treatment parameters of ultrasound.
5. Alpine sun lamp.
6. Ruby laser.
7. Circuit diagram production of SWD and its label.
8. Filters used in UVR.

**III. Short answers on:**

**(10 x 2 = 20)**

1. Test dose.
2. Photosensitizers.
3. Patient circuit.
4. Define Inductothermy.
5. Drugs used in Phonophoresis.
6. Attenuation.
7. Parameters of pulsed Shortwave Diathermy.
8. Frequency and wavelength of SWD.
9. Latent heat fusion.
10. Tridymite formation.

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[LL 6260]

AUGUST 2017

Sub. Code: 6260

**BPT DEGREE EXAMINATION  
THIRD YEAR  
PAPER II – ELECTROTHERAPY – II (HF)**

*Q.P. Code : 746260*

**Time: Three hours**

**Maximum: 100 Marks**

**I. Elaborate on:**

**(2 x 20 = 40)**

1. Write in detail various methods of Short Wave Diathermy application.
2. Write in detail the production of Laser and its therapeutic effects.

**II. Write notes on:**

**(8 x 5 = 40)**

1. Contrast bath.
2. Hydro collatorpack.
3. Hubbard tank.
4. Contra indications for ultra violet rays.
5. Calculation of dosage in ultra violet treatment.
6. Theraktin tunnel.
7. Drugs used in phonophoresis.
8. Pulsed mode of ultra sound.

**III. Short answers on:**

**(10 x 2 = 20)**

1. Ultrasonic field.
2. Diode valve.
3. Indications of wax therapy.
4. Tuning in Short Wave Diathermy.
5. Indication for contrast bath.
6. Cryo cuff.
7. Pressure sore.
8. Alopecia areata.
9. Sensitizers.
10. PUVA regimen.

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[LM 6260]

FEBRUARY 2018

Sub. Code: 6260

**BPT DEGREE EXAMINATION  
THIRD YEAR  
PAPER II – ELECTROTHERAPY – II (HF)**

*Q.P. Code : 746260*

**Time: Three hours**

**Maximum: 100 Marks**

**I. Elaborate on:**

**(2 x 20 = 40)**

1. Discuss in detail about production of ultrasound and explain its various physiological & therapeutic effects of ultrasound. Add a note on Phonophoresis.
2. Define Laser. Describe briefly about properties of Laser. Write in detail about physiological and therapeutic effects of Laser.

**II. Write notes on:**

**(8 x 5 = 40)**

1. Management of low back pain.
2. Pulsed SWD and its application.
3. Physiological effects of heat.
4. Therapeutic effects and uses of cryotherapy.
5. Properties of HF current.
6. Cross fire method in SWD.
7. Vapocoolant spray.
8. Emitters and its types.

**III. Short answers on:**

**(10 x 2 = 20)**

1. PUVA regimen.
2. Minimal erythmal dose.
3. Inverse square law.
4. Indications for UVR.
5. Techniques of application of UST.
6. Indication and contraindications of moist heat packs.
7. Convection.
8. Cryokinetics.
9. Physical properties of paraffin wax.
10. Laws governing radiation.

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THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[LN 6260]

AUGUST 2018

Sub. Code: 6260

**BPT DEGREE EXAMINATION  
THIRD YEAR  
PAPER II – ELECTROTHERAPY – II (HF)**

*Q.P. Code : 746260*

**Time: Three hours**

**Maximum: 100 Marks**

**I. Elaborate on:**

**(2 x 20 = 40)**

1. Define Ultra Violet Radiation. Explain the various types of generators and its production.
2. Define Cryotherapy. Explain the methods of application and its therapeutic effects.

**II. Write notes on:**

**(8 x 5 = 40)**

1. Contraindications of Laser.
2. PUVA Apparatus.
3. Sensitizers.
4. Cable method for SWD.
5. Contrast Bath.
6. Physiological Effects of Heat.
7. Microwave Diathermy.
8. Phonophoresis.

**III. Short answers on:**

**(10 x 2 = 20)**

1. Coupling Media.
2. Thermostat.
3. Types of HF current.
4. Treatment duration of Tennis Elbow.
5. Pulsed diathermy.
6. Electromagnetic spectrum.
7. Gamma rays.
8. Tridmyite formation.
9. Therapeutic uses of IFT.
10. Magnetron.

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THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[LO 6260]

FEBRUARY 2019

Sub. Code: 6260

**BPT DEGREE EXAMINATION  
THIRD YEAR  
PAPER II – ELECTROTHERAPY – II (HF)**

*Q.P. Code : 746260*

**Time: Three hours**

**Maximum: 100 Marks**

**I. Elaborate on:**

**(2 x 20 = 40)**

1. Explain in detail about principles, application, types and therapeutic effects of LASER.
2. Write about the non luminous and luminous generators of IRR, its therapeutic and physiological effects.

**II. Write notes on:**

**(8 x 5 = 40)**

1. Piezo electric effect.
2. Pain Gate Theory.
3. Pulsed shortwave.
4. Electromagnetic Spectrum.
5. Use of UVR in Alopecia.
6. Microwave diathermy.
7. Condenser field method.
8. Lewis hunting reaction.

**III. Short answers on:**

**(10 x 2 = 20)**

1. Fuse.
2. Magnetron.
3. Test dose.
4. Pulse repetition rate.
5. Grid.
6. Methods of application of ultrasound.
7. Phonophoresis.
8. Laws governing radiation.
9. Ulcer.
10. Electrode spacing in condenser field method.

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THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[LP 6260]

AUGUST 2019

Sub. Code: 6260

**BPT DEGREE EXAMINATION  
THIRD YEAR  
PAPER II – ELECTROTHERAPY – II (HF)**

*Q.P. Code : 746260*

**Time: Three hours**

**Maximum: 100 Marks**

**I. Elaborate on:**

**(2 x 20 = 40)**

1. Write in detail the production of Ultra sound and write the parameters of Ultra sound for different conditions.
2. Write in detail the production of Ultra violet rays and explain the principles of application of treatment.

**II. Write notes on:**

**(8 x 5 = 40)**

1. Water bag method of ultra sound application.
2. Laws governing radiation.
3. Magnetron.
4. Electro-magnetic spectrum.
5. Therapeutic effects of Ultra sound.
6. Indications for infra red radiation.
7. Test dose.
8. Properties of laser.

**III. Short answers on:**

**(10 x 2 = 20)**

1. Cryo stretch.
2. Hydro collator pack.
3. Collimation.
4. Psoriasis.
5. Erythema.
6. Paraffin wax bath.
7. Dangers of laser.
8. Moist heat therapy.
9. Mono planar technique of short wave diathermy.
10. Cold laser.

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THE TAMIL NADU Dr.M.G.R. MEDICAL UNIVERSITY

[LQ 6260]

FEBRUARY 2020

Sub. Code: 6260

**BPT DEGREE EXAMINATION  
THIRD YEAR  
PAPER II – ELECTROTHERAPY – II (HF)**

*Q.P. Code : 746260*

**Time: Three hours**

**Maximum: 100 Marks**

**I. Elaborate on:**

**(2 x 20 = 40)**

1. Describe the superficial heating modalities for patient with Low Backache.
2. Describe in detail about the production, construction and its dangers of SWD.

**II. Write notes on:**

**(8 x 5 = 40)**

1. Laser.
2. Non-thermal treatment.
3. Pain gate theory.
4. Ice-cube method.
5. Preparation of Infra-red lamp.
6. Aims of treatment of Wax bath.
7. Fluorescent lamp.
8. Water bag method.

**III. Short answers on:**

**(10 x 2 = 20)**

1. Magnetron.
2. Crystal laser.
3. Crepe bandage.
4. Capacitor.
5. Acne Vulgaris.
6. Quantum theory.
7. Pulsed Mark: Space ratio.
8. Modalities used for Tennis elbow.
9. Principle of phonophoresis.
10. Papules.

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THE TAMIL NADU Dr.M.G.R. MEDICAL UNIVERSITY

[LR 1220]

DECEMBER 2020  
(AUGUST 2020 EXAM SESSION)

Sub. Code: 6260

BPT DEGREE EXAMINATION  
THIRD YEAR – (Regulation form 2013-2014)  
PAPER II – ELECTROTHERAPY – II (HF)

*Q.P. Code : 746260*

**Time: Three hours**

**Answer ALL Questions**

**Maximum: 100 Marks**

**I. Elaborate on:**

**(2 x 20 = 40)**

1. Define Ultraviolet Radiation. Explain the various types of Generators and its production.
2. Principles of application of Wax bath for Rheumatoid Arthritis and its home programme.

**II. Write notes on:**

**(8 x 5 = 40)**

1. Advantages of Cable method.
2. Physiological and therapeutic uses of Lasers.
3. Luminous and Non luminous Generators.
4. Properties of Waves in Ultrasound.
5. Treatment for Plantar Fasciitis.
6. Production of Microwave Diathermy.
7. Effects of Contrast bath.
8. Water bag method.

**III. Short answers on:**

**(10 x 2 = 20)**

1. Excitatory Cold.
2. Name the modalities used for Ligament Injuries.
3. Scalds.
4. Contraplanar technique for Osteoarthritis.
5. Ice burn.
6. Inductor.
7. Grid method.
8. Pressure Sores.
9. Piezo-electric effect.
10. Coupling Medium.

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**THE TAMIL NADU Dr.M.G.R. MEDICAL UNIVERSITY**

**[BPT 0921]**

**SEPTEMBER 2021  
(FEBRUARY 2021 EXAM SESSION)**

**Sub. Code: 6260**

**BPT DEGREE EXAMINATION  
THIRD YEAR - (Regulations of 2004-2005 and 2006-2007 admitted candidates are  
merged with 2010-2011)**

**PAPER II – ELECTROTHERAPY – II (HF)**

***Q.P. Code : 746260***

**Time: Three hours**

**Answer ALL Questions**

**Maximum: 100 Marks**

**I. Elaborate on:**

**(2 x 20 = 40)**

1. Describe detail about the Ultrasound production & its physiological effects, dosage for chronic pain?
2. Write detail about Composition of Wax bath Therapy unit, Methods of application of Wax, Physiological & Therapeutic effects, indications & contraindication, dangers.

**II. Write notes on:**

**(8 x 5 = 40)**

1. Modulation of pain transmission.
2. Physiological effects of cold.
3. Safety precautions of LASER.
4. Test dosage calculation in UVR.
5. Near field, Far field in US therapy.
6. Therapeutic effects, duration & frequency of treatment, indication of IRR.
7. Types of SWD Electrode, Placement & Spacing Electrodes.
8. Micro wave Diathermy.

**III. Short answers on:**

**(10 x 2 = 20)**

1. Define wavelength ( $\lambda$ ).
2. Coupling agents.
3. Piezo Electric effects.
4. What is contraplanar method?
5. Magnetron.
6. Types of laser.
7. Define Moist heat.
8. Causes for burns following SWD.
9. Cold sensitivity.
10. E-2 dose of UVR.

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**THE TAMIL NADU Dr.M.G.R. MEDICAL UNIVERSITY**

**[BPT 0122]**

**JANUARY 2022  
(AUGUST 2021 EXAM SESSION)**

**Sub. Code: 6260**

**BACHELOR OF PHYSIOTHERAPY DEGREE COURSE  
THIRD YEAR - (Regulations of 2004-2005 and 2006-2007 are merged with 2010-2011)  
PAPER II – ELECTROTHERAPY – II (HF)  
Q.P. Code : 746260**

**Time: Three hours**

**Answer ALL Questions**

**Maximum: 100 Marks**

**I. Elaborate on:**

**(2 x 20 = 40)**

1. Define Ultrasound. Explain the production, physiological effects and therapeutic effects of Ultrasound, add note on Clinical application of Ultra Sound.
2. Define Microwave Diathermy. Explain in detail about the Indications, Contraindications, Production, Physiological & Therapeutic effects and its dangers.

**II. Write notes on:**

**(8 x 5 = 40)**

1. Cryo stretch.
2. Theories of pain.
3. Techniques of applications of liquid Paraffin WAX bath.
4. Discuss the properties of Electricity.
5. Physiological effects of heat.
6. Hydro collator packs.
7. Properties and Production of LASER.
8. Hubbard tank.

**III. Short answers on:**

**(10 x 2 = 20)**

1. Electric burn.
2. Triode valve.
3. Nodes & Antinodes.
4. Care of UVR lamp.
5. What is Pulsed Electro Magnetic energy.
6. Dangers of cryotherapy.
7. IRR.
8. Inverse square law.
9. Theraktin tunnel.
10. Lewis – hunting reaction.

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