

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

[LR 1220]

DECEMBER 2020
(AUGUST 2020 EXAM SESSION)

Sub. Code: 6282

BPT DEGREE EXAMINATION
THIRD YEAR – (Regulation from 2017-2018)
PAPER II – ELECTROTHERAPY – II (HIGH FREQ & ACTINOTHERAPY)
Q.P. Code : 746282

Time: Three hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate on:

(2 x 15 = 30)

1. Define Cryotherapy. Discuss the methods of application and its therapeutic effects.
2. Describe in detail about Principles & therapeutic effects of Pulsed Shortwave Diathermy.

II. Write notes on:

(10 x 5 = 50)

1. Techniques of application of SWD.
2. Moist hot packs.
3. Couplants and its uses.
4. Treatment Parameters used in Ultrasound Therapy.
5. Luminous and Non-luminous Generator.
6. Treatment and dosage for Acne Vulgaris.
7. Contrast bath.
8. Alpine sun lamp.
9. Radiation energy and its properties.
10. Water cooled medium pressure Mercury vapor Lamp.

III. Short answer on:

(10 x 2 = 20)

1. Electrode spacing for SWD.
2. Electrostatic field.
3. Reverse piezo electric effect.
4. Nodes and Antinodes.
5. Ultrasonic field.
6. Photosensitization.
7. Super luminous diode Laser.
8. Dangers of SWD.
9. Properties of laser.
10. Hubbard Tank.

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

[BPT 0921]

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

Sub. Code: 6282

**BPT DEGREE EXAMINATION
THIRD YEAR**

**(Regulations for the candidates admitted from 2017-2018 onwards)
PAPER II – ELECTROTHERAPY – II (HIGH FREQ & ACTINOTHERAPY)
Q.P. Code : 746282**

Time: Three hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate on:

(2 x 15 = 30)

1. Explain principles and production of Ultrasound therapy. Describe thermal and non thermal effects of Therapeutic Ultra sound.
2. Write in detail about the production of MWD, physiological & therapeutic effects, dosage and dangers.

II. Write notes on:

(10 x 5 = 50)

1. Hydro collator pack and its application.
2. Types of Infra red radiation lamps.
3. Physiological & therapeutic effects of UVR.
4. Techniques of application of LASER.
5. Electrode spacing & electrode positioning of SWD.
6. Phonophoresis & contraindication.
7. Physiological effects of heat & laws governing radiation.
8. Application method and contraindication of Waxbath.
9. Cryotherapy in acute ankle sprain.
10. Whirlpool therapy and its precaution.

III. Short answer on:

(10 x 2 = 20)

1. Drugs used in Phonophoresis.
2. Difference between 1MHZ & 3MHZ frequency in ultrasound.
3. PUVA regimen.
4. Use of butterfly electrode in SWD.
5. Refraction.
6. Properties of High frequency currents.
7. Laws governing radiation.
8. Coherence.
9. Fluidotherapy.
10. Name the sensitizers used in UVR.

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

[BPT 0122]

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

Sub. Code: 6282

**BACHELOR OF PHYSIOTHERAPY DEGREE COURSE
THIRD YEAR- (Regulation from 2017-2018 onwards)
PAPER II – ELECTROTHERAPY – II (HIGH FREQ & ACTINOTHERAPY)
Q.P. Code : 746282**

Time: Three hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate on:

(2 x 15 = 30)

1. Define Ultrasound. Explain the Production, Physiological effects and Therapeutic effects of Ultrasound, add note on Clinical application of Therapeutic Ultra sound.
2. Define Infra Red Radiation. Write about the luminous and non luminous generators of IRR, and its physiological & therapeutic effects. Mention about precautions of IRR.

II. Write notes on:

(10 x 5 = 50)

1. Difference between Capacitance and Inductance.
2. Ruby LASER.
3. Indications and contraindications of Contrast Bath.
4. Production of SWD and its uses.
5. Modalities of treatment and dosage for Psoriasis.
6. Methods of application of Wax therapy.
7. Cryokinetics.
8. Laws governing Radiation.
9. Physiological effects of Microwave Diathermy.
10. Modalities for Osteoarthritis Knee.

III. Short answer 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. Joule's law.
7. Types of pain Contra indications of MWD.
8. Whirl pool bath.
9. Electro magnetic spectrum.
10. Duty Cycle.

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

[BPT 0622]

**JUNE 2022
(FEBRUARY 2022 EXAM SESSION)**

Sub. Code: 6282

**BACHELOR OF PHYSIOTHERAPY DEGREE COURSE
THIRD YEAR- (Regulation from 2017-2018 onwards)
PAPER II – ELECTROTHERAPY – II (HIGH FREQ & ACTINOTHERAPY)
Q.P. Code : 746282**

Time: Three hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate on: (2 x 15 = 30)

1. Define Microwave Diathermy. Describe the production, technique of application and dangers of Microwave Diathermy.
2. Classify UVR. Explain the various types of generators and its production.

II. Write notes on: (10 x 5 = 50)

1. Photosensitization.
2. Indication and contraindication of short wave Diathermy.
3. Techniques of Cryotherapy.
4. Laws Governing Radiation.
5. Cable method of SWD.
6. Therapeutic effects of Ultrasound.
7. Filters used in Ultraviolet Radiation.
8. Types and properties of LASER.
9. PUVA Therapy.
10. Ice burn and its prevention.

III. Short answer on: (10 x 2 = 20)

1. Buoyancy.
2. Cosine law.
3. Eddy currents.
4. Heliotherapy.
5. Cold LASER.
6. Erythema.
7. Indications of Wax Therapy.
8. Define Ultrasound.
9. Quick Ice.
10. Duty Cycle.

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

[BPT 1022]

**OCTOBER 2022
(AUGUST 2022 EXAM SESSION)**

Sub. Code: 6282

**BACHELOR OF PHYSIOTHERAPY DEGREE COURSE
THIRD YEAR- (Regulation from 2017-2018 onwards)
PAPER II – ELECTROTHERAPY – II (HIGH FREQ & ACTINOTHERAPY)
*Q.P. Code : 746282***

Time: Three hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate on:

(2 x 15 = 30)

1. Define Laser. Write in detail about the production of Laser, physiological and therapeutic effects of it.
2. Explain in detail about the production of Infra Red Radiation, Treatment techniques and precaution methods during treatment.

II. Write notes on:

(10 x 5 = 50)

1. Water bath method in Ultrasound Therapy.
2. Phonophoresis.
3. Kromayer Lamp.
4. Whirlpool Bath.
5. Pouring method in wax therapy.
6. Modality of treatment and dosage for alopecia totalis.
7. Vapocoolant Spray.
8. Cross fire method in short wave diathermy.
9. Lewis hunting reaction.
10. Hydrocollator packs.

III. Short answer on:

(10 x 2 = 20)

1. Grid.
2. Tridymite formation.
3. Minimal Erythermal Dose (MED).
4. Cryostretch.
5. Prevention of Periosteal Pain in Ultrasonic Therapy.
6. Pressure Sore.
7. Ice Towel Method.
8. Attenuation.
9. Conduction.
10. Desquamation.

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

[BPT 0423]

**APRIL 2023
(FEBRUARY 2023 EXAM SESSION)**

Sub. Code: 6282

**BACHELOR OF PHYSIOTHERAPY DEGREE COURSE
THIRD YEAR - (Regulation from 2017-2018 onwards)
PAPER II – ELECTROTHERAPY – II (HIGH FREQ & ACTINOTHERAPY)**

Q.P. Code: 746282

Time: Three hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate on:

(2 x 15 = 30)

1. Explain in detail about types of Various Superficial Heating Modalities, its Physiological and Therapeutic effects.
2. Define Ultra Violet Radiation and its types. Explain the production, physiological effects and therapeutic effects of Ultra Violet Radiation.

II. Write notes on:

(10 x 5 = 50)

1. PUVA apparatus.
2. Indication and contraindication of Infrared Radiation.
3. Application of techniques in Ultrasound.
4. Techniques of Application of LASER.
5. Microwave Diathermy.
6. Therapeutic uses of paraffin wax bath.
7. Whirlpool Bath.
8. Heat Transfer Methods.
9. Physiological and Therapeutic Effects of Cryotherapy.
10. Technique of application of Pulsed short wave diathermy.

III. Short answer on:

(10 x 2 = 20)

1. Hydro collator pack.
2. Cryo stretch.
3. Tridymite formation.
4. Coupling media.
5. PUVA.
6. Acne Vulgaris.
7. Kromayer Lamp.
8. Sensitizers.
9. Ice pack.
10. Physical effects of Heat.

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

[BPT 1123]

**NOVEMBER 2023
(AUGUST 2023 EXAM SESSION)**

Sub. Code: 6282

**BACHELOR OF PHYSIOTHERAPY DEGREE COURSE
THIRD YEAR - (Regulation from 2017-2018 onwards)
PAPER II – ELECTROTHERAPY – II (HIGH FREQ & ACTINOTHERAPY)**

Q.P. Code: 746282

Time: Three hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate on:

(2 x 15 = 30)

1. Mechanism of ultrasound production and methods and application for different conditions with therapeutic parameters.
2. Describe in detail about principles and therapeutic effects of Pulsed Short wave Diathermy.

II. Write notes on:

(10 x 5 = 50)

1. Properties of LASER.
2. Explain cable field method in Short wave Diathermy.
3. Radiation energy and its properties.
4. Physiological effects of Infra Red radiations.
5. Theraktin tunnel.
6. Microwave Diathermy.
7. Biophysics of cryotherapy.
8. Kromayer lamp.
9. Physiological effects of wax therapy.
10. Treatments for ulcers.

III. Short answer on:

(10 x 2 = 20)

1. Structure of skin.
2. Laws of refraction.
3. Precautions of Ultra violet radiations.
4. Ice massage.
5. Contrast Bath.
6. Psoriasis.
7. Cooling of lamp.
8. Ohms Law.
9. Indications and contraindications of Microwave Diathermy.
10. Preparation of short wave diathermy machine.

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

[BPT 0824]

AUGUST 2024

Sub. Code: 6282

**BACHELOR OF PHYSIOTHERAPY DEGREE EXAMINATION
THIRD YEAR - (Regulation from 2017-2018 onwards)
PAPER II – ELECTROTHERAPY – II (HIGH FREQ & ACTINOTHERAPY)**

Q.P. Code: 746282

Time: Three hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate on:

(2 x 15 = 30)

1. Define Short wave Diathermy. Explain the production, physiological effects and therapeutic effects of Short wave Diathermy.
2. Define Infrared radiation. Explain in detail about types of generators, its Production, Indications, Contraindications, Physiological and Therapeutic effects.

II. Write notes on:

(10 x 5 = 50)

1. General Body Bath.
2. Indication and contraindication of LASER.
3. Various techniques of application in Ultra Sound Therapy.
4. Cryotherapy – Physiological and Therapeutical benefits.
5. Micro wave Diathermy.
6. Hydro collator pack.
7. Various types of Paraffin Wax Application methods.
8. Hubbard Tank.
9. Ultrasonophoresis and mention commonly used drugs in Ultrasonophoresis.
10. Cryo Kinetics.

III. Short answer on:

(10 x 2 = 20)

1. Inductance.
2. Lewis Hunting reaction.
3. PUVA.
4. Photosensitisers.
5. Cold pack.
6. Types of LASER.
7. Moist Hot packs.
8. Mercury vapor lamp and its uses.
9. Ice burn.
10. Magnetron.

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

[BPT 0225]

FEBRUARY 2025

Sub. Code: 6282

**BACHELOR OF PHYSIOTHERAPY DEGREE COURSE
THIRD YEAR - (Regulation from 2017-2018 onwards)
PAPER II – ELECTROTHERAPY – II (HIGH FREQ & ACTINOTHERAPY)**

Q.P. Code: 746282

Time: Three hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate on:

(2 x 15 = 30)

1. Define LASER. Describe in detail about production, types, techniques and dosimetry.
2. Define shortwave diathermy. Enumerate in detail about methods of application, precaution, indication and contraindication SWD.

II. Write notes on:

(10 x 5 = 50)

1. Describe in detail about whirl pool bath.
2. PUVA apparatus.
3. Physiological effects of cryotherapy.
4. Pulsed short wave diathermy.
5. Role of ultraviolet radiation in pressure sore.
6. Phonophoresis.
7. Method of application of ultrasound.
8. Depth of penetration in actinotherapy.
9. Physiological effects of wax bath.
10. Theraktin Tunnel.

III. Short answer on:

(10 x 2 = 20)

1. Cryo kinetics.
2. Erythema.
3. Psoriasis.
4. Helium-neon laser.
5. Drugs used in phonophoresis.
6. Piezo electric effect.
7. Adhesive capsulitis.
8. Cryospray.
9. Layers of Skin.
10. Cooling lamp.

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

[BPT 0825]

AUGUST 2025

Sub. Code: 6282

**BACHELOR OF PHYSIOTHERAPY DEGREE COURSE
THIRD YEAR - (Regulation from 2017-2018 onwards)
PAPER II – ELECTROTHERAPY – II (HIGH FREQ & ACTINOTHERAPY)**

Q.P. Code: 746282

Time: Three hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate on:

(2 x 15 = 30)

1. Describe in detail about principle and therapeutic effects of Microwave diathermy.
2. Define ultraviolet radiation. Elaborate Production classification and Principles of application.

II. Write notes on:

(10 x 5 = 50)

1. Contrast bath.
2. Danger of shortwave diathermy.
3. Therapeutic effects of hydro collator packs.
4. Therapeutic effects of Infra red radiation.
5. Production of ultrasound.
6. Electromagnetic spectrum.
7. Paraffin Wax bath.
8. Grades and doses of Erythema.
9. Therapeutic effects of hydrocollator packs.
10. Difference between of dry and moist heat.

III. Short answer on:

(10 x 2 = 20)

1. Ruby LASER.
2. Cavitation.
3. Cryostretch.
4. Lewis hunting reaction.
5. Tenosynovitis.
6. Hubbard tank.
7. Ohm's law.
8. Magnetron.
9. Rickets.
10. Treatment for Acne.
