

April-2001

[KD 914]

Sub. Code : 5147

BACHELOR OF PHYSIOTHERAPY DEGREE
EXAMINATION.

Fourth/Fifth Semester (M.R.)

(Revised Regulations)

Paper II — ELECTROTHERAPY — II

(High Frequency)

Time : Three hours

Maximum : 100 marks

Answer any TWO of the following : (20)

(a) How the heat is produced in high frequency?

(b) Explain the construction and working of shortwave diathermy apparatus.

(c) Describe the physiological, therapeutic effects of ultrasound.

2. Write short notes on any SIX : (6 × 5 = 30)

(a) Laws Governing Radiation.

(b) Piezo-electric effect.

(c) Coupling media.

(d) Spacing and its significance.

(e) Contra-indications for Microwave diathermy.

(f) Choice of treatment for osteoarthritis knee.

(g) Physiological effects of Ice.

3. Answer any TWO of the following : (2 × 10 = 20)

(a) Therapeutic and physiological effects of shortwave diathermy.

(b) Explain the construction, types, working and use of transformer.

(c) Explain the choice of treatment for the following with reasons :

(i) Lateral ligament sprain of ankle from acute to chronic.

(ii) Lateral epicondylitis of elbow.

4. Write short notes on any SIX : (6 × 5 = 30)

(a) Sensitizers.

(b) Pulsed shortwave.

(c) Physical properties of wax.

(d) Co-planar method and its uses.

(e) Cavitation and its prevention.

(f) Electromagnetic spectrum.

(g) How Joule's law is applicable in high frequency treatment?

[KE 914]

Sub. Code : 5147

BACHELOR OF PHYSIOTHERAPY DEGREE
EXAMINATION.

Fourth/Fifth Semester

(Revised/Modified Regulations)

Paper II — ELECTROTHERAPY — II

(High Frequency)

Time : Three hours

Maximum : 100 marks

1. Answer any TWO of the following : (20)

(a) Discuss ultrasound production with description of

Beam nonuniformity ratio

Mark space ratio

Near and far field.

(b) Describe in detail about pulsed electromagnetic energy and its effect on fracture healing.

(c) Measurement of minimal Erythematol dosage in UVR and use of UVR in

(i) Pressure sore

(ii) Acne vulgaris

(iii) Psoriasis.

2. Write short notes on any SIX : (6 × 5 = 30)

(a) Condenser field method

(b) Types of heat transmission with examples

(c) Argon Neon LASER

(d) Inductothermy

(e) Indications of cryotherapy

(f) Coupling media

(g) Dose reduction in UVR.

3. Write any ONE of the following : (20)

(a) Describe oscillation and explain 'Capacitance' and 'Inductance' with an example in oscillating system. Add a note on damping oscillation.

(b) Describe Wax bath with explanation of various techniques of application and its effects.

4. Write short notes on any SIX : (6 × 5 = 30)

(a) Electromagnetic spectrum

(b) Compare the effects of microwave radiation with infra red radiation

(c) Use of UVR in Alopecia

(d) Ice packs

(e) Rickets and UVR

(f) Sciatica

(g) Direct contact method in ultrasound.

March-2002

[KG 914]

Sub. Code : 5147

BACHELOR OF PHYSIOTHERAPY DEGREE
EXAMINATION.

Fourth/Fifth Semester

(Revised/Modified Regulations)

Paper II — ELECTROTHERAPY — II

(High Frequency)

Time : Three hours

Maximum : 100 marks

1. Answer any TWO of the following : (2 × 10 = 20)

(a) What is the most common ligament which is involved in lateral ligament sprain of ankle and describe the principles of ultrasonic therapy in treatment?

(b) Biophysics in LASER and LASER therapy in soft tissue injuries.

(c) What are the superficial heats? Describe the general and specific effects of it and add a note on IRR in low Back pain.

2. Write short notes on any SIX : (6 × 5 = 30)

- (a) Ohm's and Coulombs law
- (b) Filters used in ultra-violet rays
- (c) Ethylene dioxide spray
- (d) Hydrocollator packs
- (e) Fluidotherapy
- (f) Pulsed shortwave diathermy
- (g) Electric Grid.

3. Write any ONE of the following : (20)

(a) Discuss the various modalities that can be used in different stages of P.A. shoulder and discuss briefly the home programme.

(b) Discuss PUVA therapy in Psoriasis and write notes on narrow band UVB in the treatment of Psoriasis.

4. Write short notes on any SIX : (6 × 5 = 30)

- (a) LASER in wound healing
- (b) Ice in spasticity
- (c) Cosine law

(d) Difference between erythema seen in UVR

(e) Discuss briefly diet before UVR therapy

(f) Water bag technique

(g) Remodelling and Ultrasound.

September-2002

[KH 971]

Sub. Code : 5352

BACHELOR OF PHYSIOTHERAPY
DEGREE EXAMINATION.

Fifth Semester

(New Modified Regulations)

Paper II — ELECTROTHERAPY — II

(HIGH FREQUENCY)

Time : Three hours

Maximum : 100 marks

1. Answer any TWO of the following : (2 × 10 = 20)

(a) What is ultra sound therapy? Explain the properties of ultra sound.

(b) Technique of application of Microwave Diathermy and the dosage.

(c) Physiological and Therapeutic effects of ultra violet radiation.

2. Write short notes on any SIX : (6 × 5 = 30)

(a) Capacitance and Inductance

(b) Techniques of treatment using Interferential therapy

(c) Dangers of Infrared Radiation

- (d) Methods used in Cryotherapy
- (e) Condensers
- (f) Therapeutic effects of High frequency
- (g) Effects of Moist Heat Therapy
- (h) Therapeutic Indication and contra indications of Laser.

3. Write any ONE of the following : (20)

(a) Discuss the physiotherapeutic modality for the following conditions, write the dosage and methods of application.

- (i) Pelvic inflammatory diseases
- (ii) Osteoarthritis of knee
- (iii) Colle's fracture.

(b) Techniques and application of short wave Diathermy.

4. Write short notes on any SIX : (6 × 5 = 30)

- (a) Electro magnetic waves.
- (b) Effect of Magnetism on Electric current.
- (c) Draw a diagram and explain briefly about the production of Microwave Diathermy.

(d) Write on process of ionisation.

(e) How does Transcutaneous electrical nerve stimulation work?

(f) Thermal and Mechanical effects of ultrasonic sound.

(g) Indications and contra indications of wave bath.

(h) Name the conditions in which ultraviolet radiation is given.

April-2003

[KI 971]

Sub. Code : 5352

BACHELOR OF PHYSIOTHERAPY
DEGREE EXAMINATION.

Fifth Semester

(New Modified Regulations)

Paper II — ELECTROTHERAPY — II

(HIGH FREQUENCY)

Time : Three hours

Maximum : 100 marks

1. Answer any TWO of the following : (2 × 10 = 20)
 - (a) Physiological and Therapeutic effects and uses of short wave diathermy.
 - (b) Write about the non-luminous and luminous generators which produce Infra-Red rays.
 - (c) What is cryotherapy? Explain the methods of application and its therapeutic effects.
2. Write short notes on any SIX : (6 × 5 = 30)
 - (a) Filters used in ultra-violet rays.
 - (b) Transmission of heat.
 - (c) Electro magnetic spectrum.
 - (d) Care of mercury vapour lamps.
 - (e) Pulsed ultra sound therapy.

(f) Dangers and contra indication for Infra-red rays.

(g) The law of Inverse squares.

(h) Uses of Wax bath.

3. Write any ONE of the following : (20)

(a) What are the causes for Erythema following ultra violet radiation and discuss the various degrees of erythema and its therapeutic effects.

(b) Select a suitable modality for the following conditions. Write the dosage and methods of application giving reasons.

(i) Supra spinatus tendinitis.

(ii) Decubitus ulcer

(iii) Sciatica with radiating pain in right gluteal region.

4. Write short notes on any SIX : (6 × 5 = 30)

(a) Properties of high frequency current.

(b) What are the sensitisers and contra indication for ultra-violet rays.

(c) Microwave Diathermy.

(d) Cosine law.

(e) Electrode spacing.

(f) Technique of irradiation.

(g) Dangers and contra indication of ultra sc

(h) Moist heat.

[KL 971]

Sub. Code : 5352

BACHELOR OF PHYSIOTHERAPY DEGREE
EXAMINATION.

(New Modified Regulations)

Fifth Semester

Paper II — ELECTROTHERAPY — II

(HIGH FREQUENCY)

Time : Three hours

Maximum : 100 marks

Theory : Two hours and
Forty minutes

Theory : 80 marks

M.C.Q. : Twenty minutes

M.C.Q. : 20 marks

Answer ALL questions.

Draw suitable diagrams wherever necessary.

I. Essay questions : (2 × 15 = 30)

(1) What are the dangers that can occur while giving high frequency current in Physiotherapy department. How will you prevent them?

(2) Discuss the therapeutic effects of microwave diathermy in comparison with SWD.

II. Write short notes :

(10 × 5 = 50)

- (a) Rectifiers.
- (b) Tuning.
- (c) Test dose.
- (d) Tridymite formation.
- (e) Coupling media.
- (f) Inductance.
- (g) Damped oscillations.
- (h) Effects of LASER radiation on tissues.
- (i) Continuous ultrasound.
- (j) Effects of superficial heating on the tissues.