

[KD 908]

Sub. Code : 5132

BACHELOR OF PHYSIOTHERAPY DEGREE
EXAMINATION.

Third/Fifth Semester

(Revised/Modified Regulations)

Paper II —ELECTROTHERAPY — I

(LOW AND MEDIUM FREQUENCY)

Time : Three hours

Maximum : 100 marks

1. Write in detail any ONE of the following : (20)

(a) What is Electromagnetic induction and production of an Electro Motive Force?

(b) What are the different types of electrical tests done in electrotherapy department?

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

(a) What is transformer and what are its types?

(b) Voltmeter.

(c) Cells in series and parallel.

(d) Iontophoresis.

(e) Tens.

(f) Electrolytes.

(g) Diode valve.

(h) Precaution against earth shock.

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

(a) Write the physiological and therapeutic effects and uses of Faradic current.

(b) Production of Interrupt Direct current in Multivibrator circuit.

4. Write short notes on any SIX of the following :

(6 × 5 = 30)

(a) Accommodation.

(b) Kinked curve.

(c) Choke coil.

(d) Eddy current.

(e) Power plugs.

(f) Neurotmesis.

(g) Care of the apparatus.

(h) Stimulation of an innervated muscle.

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EXAMINATION.

Third/Fifth Semester

(Revised/Modified Regulations)

Paper II — ELECTROTHERAPY — I

(LOW AND MEDIUM FREQUENCY)

Time : Three hours

Maximum : 100 marks

1. Write in detail any ONE of the following : (20)

(a) Explain electrotherapeutic measures in the following conditions :

(i) Recovering Bell's Palsy

(ii) Post Tendon – Transplant.

(b) Give in detail the technique and use of faradism in electrotherapy.

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

(a) Peripheral nerve lesion

(b) Electrons

(c) Step down transformer

(d) Thermionic emission

(e) Fuse

(f) Strength duration curve

(g) Accommodation ratio

(h) Axonotmesis.

3. Write an essay on any ONE of the following :

(1 × 20 = 20)

(a) What is Galvanic current? Describe its physiological effects and techniques of treatment with galvanic current.

(b) Discuss uses of valves/transistors in electrotherapy explaining their mechanism.

4. Write short notes on any SIX of the following :

(6 × 5 = 30)

(a) Pulse duration

(b) Rheobase

(c) Electromotive force

(d) Ampere

(e) Chemical Burn

(f) Triod valve

(g) Resistance in parallel and series

(h) Zinc ionisation.

March-2002

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EXAMINATION.

Third/Fifth Semester

(Revised/Modified Regulations)

Paper II — ELECTROTHERAPY — I

(LOW AND MEDIUM FREQUENCY)

Time : Three hours

Maximum : 100 marks

1. Write in detail any ONE of the following : (20)

(a) Describe interferential therapy; its clinical effects, indications and contra indications.

(b) What is walerian degeneration? Draw a strength duration curve after 3 days; 3 weeks; and 3 months of nerve injury.

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

(a) Neuropraxia

(b) Skin resistance

(c) Ohm's law

(d) Motor points

- (e) Watt
- (f) Faradism under pressure
- (g) Voltmeter
- (h) Potentiometer.

- (f) Nerve conduction
- (g) Faradic-Galvanic test
- (h) Iodine Ionisation.

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

(a) Write about modified faradic currents and discuss their physiological effects.

(b) What are the causes of burns which can occur during the treatment of low frequency current? How will you prevent them?

4. Write short notes on any SIX of the following :

(6 × 5 = 30)

- (a) Fatigue test
- (b) Size of Electrodes
- (c) Step up transformer
- (d) Tens
- (e) Care of electrotherapy apparatus

September-2002

**BACHELOR OF PHYSIOTHERAPY DEGREE
EXAMINATION.**

Fifth Semester

(New Modified Regulations)

Paper I — ELECTROTHERAPY — I

(LOW AND MEDIUM FREQUENCY)

Time : Three hours

Maximum : 100 marks

1. Write in detail on any ONE of the following :

(1 × 20 = 20)

(a) Explain the principle, construction, working and uses of different Thermionic valves.

(b) Write the technique, procedure and selection of current for the following with reasons :

(i) Crutch palsy

(ii) Wrist drop

(iii) Bell's palsy

(iv) Lymphatic edema of leg.

2. Write any SIX of the following : (6 × 5 = 30)

- (a) Electro magnetic induction
- (b) Construction and working of choke
- (c) Physiological and chemical effects of Direct current
- (d) Surged Faradism
- (e) Define all the units of electricity
- (f) Prevention and management of chemical burns
- (g) Write briefly on theory of ionisation
- (h) Wallerian degeneration and regeneration.

3. Write in detail on any ONE : (1 × 20 = 20)

- (a) Transformer-Principle, Construction, working and uses.
- (b) Physiological, Therapeutic, Chemical and polar effects of Direct currents.

4. Write short notes on any SIX of the following :

(6 × 5 = 30)

- (a) Ohm's law
- (b) Therapeutic uses of electricity
- (c) Properties of magnets
- (d) Need for checking the apparatus-justify

(e) What is metal oxide rectifier? Mention its u

(f) Strength duration curve

(g) Types of condensers and its uses

(h) Voltmeter.

BACHELOR OF PHYSIOTHERAPY DEGREE
EXAMINATION.

Fifth Semester

(New Modified Regulations)

Paper I — ELECTROTHERAPY — I

(LOW AND MEDIUM FREQUENCY)

Time : Three hours

Maximum : 100 marks

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

(a) What are valves? What are the types of valves? Explain the construction and working of different valves and its uses.

(b) What is Interrupted galvanism? Write down its Physiological and Therapeutic uses with indications and contra indications.

2. Answer any SIX of the following : (6 × 5 = 30)

(a) Eddy current.

(b) Masking.

(c) Fuse.

- (d) Ohm's law and its applications.
- (e) Accommodation.
- (f) Chemical effects of constant D.C.
- (g) Ionisation.
- (h) Masking.

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

(a) Write down the selection of current, pulse, shape, duration and the reason for these selection for the following :

(i) Hallux valgus.

(ii) Axonotmesis of median nerve. One month duration.

(iii) Facial Palsy.

(b) What is S-D curve? Explain various types of curves with neat diagram and explain the terms Chronaxie and Rheobase.

4. Write short notes on any SIX of the following :

(6 × 5 = 30)

- (a) Nerve conduction test.
- (b) Interferential currents.

- (c) Vant Hoff's law.
- (d) Saturday night palsy.
- (e) Triode valve.
- (f) Rectifiers.
- (g) Inverse square law.
- (h) Galvanic Rasher.

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**BACHELOR OF PHYSIOTHERAPY
DEGREE EXAMINATION.**

Third/Fifth Semester

Revised /Modified Regulations

**Paper II - ELECTROTHERAPY - I
(LOW AND MEDIUM FREQUENCY)**

Time: Three hours

Maximum: 100 marks

1. Write essay on any ONE of the followings:

- a) Write in detail of construction and working of a voltmeter. (20)
- b) Write technique, procedure and selection of current for the following with reasons:
 - i) Saturday night palsy ii) quadriceps wasting iii) flat feet iv) Deltoid inhibition

2. Write short notes on any SIX

(6 X 5 = 30)

- a) Strength Duration Curve
- b) Dangers of Direct current
- c) Chokes
- d) Types & uses of Thermionic valves
- e) Resistances
- f) Effects of interrupted Galvanic currents
- g) Chronaxis & Rheobase
- h) Type of current used for Bell's Palsy patient and why?

3. Write essay on any ONE of the followings:

(20)

- a) Discuss the construction, working and significance of a metal value Rectifier.
- b) What is potentiometer? Explain the construction working & uses of potentiometer.

4. Write short notes on any SIX

(6 X 5 = 30)

- a) Physiological effects of alternating currents
 - b) Magnetic field
 - c) Square wave pulses
 - d) Prevention and management of electrical burns
 - e) Switch
 - f) Define different types of nerve lesions- write briefly on the type of current used each case.
 - g) Uses of Electromyography
 - h) Effects of Laser.
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**BACHELOR OF PHYSIOTHERAPY
DEGREE EXAMINATION.**

Third/Fifth Semester

Revised /Modified Regulations

**Paper II - ELECTROTHERAPY - I
(LOW AND MEDIUM FREQUENCY)**

Time: Three hours

Maximum: 100 marks

1. Write essay on any ONE of the followings:

- a) Write in detail of construction and working of a voltmeter. (20)
- b) Write technique, procedure and selection of current for the following with reasons:
 - i) Saturday night palsy ii) quadriceps wasting iii) flat feet iv) Deltoid inhibition

2. Write short notes on any SIX

(6 X 5 = 30)

- a) Strength Duration Curve
- b) Dangers of Direct current
- c) Chokes
- d) Types & uses of Thermionic valves
- e) Resistances
- f) Effects of interrupted Galvanic currents
- g) Chronaxis & Rheobase
- h) Type of current used for Bell's Palsy patient and why?

3. Write essay on any ONE of the followings:

(20)

- a) Discuss the construction, working and significance of a metal value Rectifier.
- b) What is potentiometer? Explain the construction working & uses of potentiometer.

4. Write short notes on any SIX

(6 X 5 = 30)

- a) Physiological effects of alternating currents
- b) Magnetic field
- c) Square wave pulses
- d) Prevention and management of electrical burns
- e) Switch
- f) Define different types of nerve lesions- write briefly on the type of current used each case.
- g) Uses of Electromyography
- h) Effects of Laser.

[KJ 908]

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BACHELOR OF PHYSIOTHERAPY DEGREE
EXAMINATION.

Third/Fifth Semester

(Revised/Modified Regulations)

Paper II — ELECTROTHERAPY — I

(LOW AND MEDIUM FREQUENCY)

Time : Three hours

Maximum : 100 marks

Theory : Two hours and
forty minutes

Theory : 80 marks

MCQ : Twenty minutes

MCQ : 20 marks

MCQ must be answered **SEPARATELY** on the answer
sheet provided as per the instructions on the first page
of M.C.Q. Booklet.

Answer ALL questions.

Essay :

(2 × 15 = 30)

What is Neuropraxia? Discuss in detail your aim
treatment, methods and selection of current for a case
neuropraxia.

2. Discuss in detail about the following electro-
diagnostic tests :

- (1) Strength -Duration curve
- (2) Fatigue test.

3. Write short notes on : (10 × 5 = 50)

- (1) Potential difference
- (2) Physiological effect of faradic ^{current} ~~current~~
- (3) Thermionic valves
- (4) Potentiometer
- (5) Galvanism
- (6) Interrupted galvanic current
- (7) Beat Frequency
- (8) Chronaxie
- (9) Eddy currents
- (10) Electro-magnetic induction.

[KJ 908]

[KL 970]

Sub. Code : 5351

BACHELOR OF PHYSIOTHERAPY DEGREE
EXAMINATION.

Fifth Semester

(New Modified Regulations)

Paper I — ELECTROTHERAPY — I

(LOW AND MEDIUM 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 : (2 × 15 = 30)

(1) Define interferential current. List down the physiological effects, indication, contra-indications of interferential therapy.

(2) What is Wallerian Degeneration. Draw a strength duration curve after three days, 3 weeks, 3 months of nerve injury.

II. Write short notes : (10 × 5 = 50)

- (a) Resting Membrane potential of the nerves.
- (b) Eddy currents.
- (c) Differentiate between earth shock and electric shock.
- (d) Half wave rectification.
- (e) Potentiometer.
- (f) Therapeutic application of Modified DC.
- (g) Transmission of Nerve Impulse.
- (h) Accommodation.
- (i) Smart Bristow faradic coil.
- (j) Surged faradism.