[KM 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 questions : (2 × 15 = 30)

(1) Define condenser and explain in detail its construction, working principle, types, capacity and uses.

(2) Discuss briefly about the various electro diagnostic tests used in determining the characteristics of normal and denervated muscle.

II. Short questions : (10 × 5 = 50)

(a) Electromotive force.

(b) Construction and working of a fuse.

(c) Dangers of direct current.

(d) Eddy currents.

(e) Neuropraxia.

(f) Rheobase and chronaxie.

(g) Ionisation.

(h) Uses of metal valve rectifiers.

(i) Physiological effects of galvanic current.

(j) Selection of current in different lesions.

August-2005

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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) Discuss briefly the principles and working of transcutaneous electrical nerve stimulation. Explain the mechanisms of pain relief by it.

(2) Define a transformer and its types. Describe in detail its principle of working, construction and uses.

II. Short questions : (10 × 5 = 50)

(a) Magnetic field and magnetic forces

(b) Volt meter – principle and working

(c) Physiological effects of interferential therapy

(d) Faradic – Galvanic test

(e) Masking

(f) Types of D.C. impulses

(g) Potential difference

(h) Uses of rectifiers

(i) Electrical burns

(j) Define : Farad and Watt.

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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) Define strength–duration curve. Discuss the procedure and interpration of Results in detail about it. (2 + 13)

(2) Explain with diagram the working of fuse and condensers. Add a note on their uses. (10 + 5)

II. Short notes : (10 × 5 = 50)

(a) DC Wave forms (DC–Direct current).

(b) Indications and contra indications of Interferential therapy.

(c) Faradic Foot bath.

(d) Motor point.

(e) Transcutaneous Electrical Nerve stimulation–parameters.

(f) Reduction of Limb oedema.

(g) Electric shock.

(h) Ions and its uses.

(i) Resistance and its types.

(j) Muscle Re–education.

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Fifth Semester

(New Modified Regulations)

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(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 questions :

(1) Discuss in detail the physiological effects of Faradic-Type current. Add a note on the technique of giving "Faradism under Pressure". (10 + 10 = 20)

(2) Define Interferential current. Enumerate in detail the indications, therapeutic effects and methods of providing interferential therapy. (2 + 13 = 15)

(3) Write in detail about the danger of direct current. Add a note on shock, safety precautions and management. (15)

II. Short notes : (6 × 5 = 30)

(a) Electrical lines of force.

(b) Quadricep's Inhibition.

(c) Rheostat.

(d) Characteristics of Denervated muscle.

(e) Fatigue test.

(f) Waveforms of faradic type current.

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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 questions :

1. Write about strength – duration curve – discuss the S–D curve in case of a peripheral nerve injury which has started regenerating. Relate the same using chronaxie and rheobase. (5 + 10 + 5)

2. Discuss the methods and technique of application of electrical stimulation in the treatment of quadriceps muscle wasting. (5 + 10)

3. Explain in detail the therapeutic effects, uses and technique of treatment with modified direct current. (15)

II. Short notes : (6 × 5 = 30)

(a) Pain gate theory.

(b) Faradic bath.

(c) Fuse and its uses.

(d) Voltmeter.

(e) Action potential.

(f) Hyperhydrosis.

August-2007

[KR 970] **Sub. Code : 5351**

BACHELOR OF PHYSIOTHERAPY DEGREE EXAMINATION.

Fifth Semester

(Modified/ 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

Draw suitable diagrams wherever necessary.

Answer ALL questions.

I. Essay questions : (2 × 15 = 30)

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

(2) Describe Interferential therapy ; its clinical effects, indications and contra indications.

II. Short notes : (10 × 5 = 50)

(a) Accommodation.

(b) Motor points.

(c) Faradism under pressure.

(d) Variable transformer.

(e) Potentiometer.

(f) Faradic – Galvanic test.

(g) Chronaxie and Rheobase.

(h) Electromagnetic Induction.

(i) Ohm's law and its application.

(j) Care of the electro therapy apparatus.

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FEBRUARY 2008

[KS 970] **Sub. Code : 5351**

BACHELOR OF PHYSIOTHERAPY DEGREE EXAMINATION.

Fifth Semester

(Modified/New Modified Regulations)

Paper I — ELECTROTHERAPY – I

(LOW AND MEDIUM FREQUENCY)

Q.P. Code : 745351

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. Discuss the production of faradic currents using Lewis Jones faradic coil.

2. Define Iontophoresis. Explain the procedure of medical ionization.

II. Short notes : (10 × 5 = 50)

(1) Bell's palsy.

(2) Faradic foot bath.

(3) Methods of application of dynamic currents.

(4) Uses of Interferential therapy.

(5) Pain gate theory.

(6) Importance of fuse in circuits.

(7) Grid.

(8) Condenser.

(9) Oscillating current.

(10) Rheobase.

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AUGUST 2008

[KT 970] **Sub. Code : 5351**

BACHELOR OF PHYSIOTHERAPY DEGREE EXAMINATION.

Fifth Semester

(Modified/New Modified Regulations)

Paper I — ELECTROTHERAPY — I

(LOW AND MEDIUM FREQUENCY)

Q. P. Code : 745351

Time : Three hours Maximum : 100 marks

Answer ALL questions.

Draw suitable diagrams wherever necessary.

I. Long Essay : (2 × 15 = 30)

1. What are the sources of electrical hazards in physiotherapy department and the safety devices used in low - frequency apparatus?

2. Explain Direct current and explain chemical and therapeutic effects of Direct current.

II. **Short notes :** (10 × 5 = 50)

1. Tens.
2. Wrist drop.
3. Physiological effects of faradism.
4. Wallerian degeneration.
5. Compressive bandage.
6. Crutch palsy.
7. Accommodation of nerve.
8. Voit meter.
9. Working of potentiometer.
10. Theory of ionisation.

III. **Write short answers :** (10 × 2 = 20)

1. Eddy current
2. Ohm's law.
3. Electro magnetic force.
4. Chokes.

5. Thermionic valves.
6. Rheobase.
7. Resistance.
8. Electricity.
9. Transformer.
10. Rectifier.
