

Second B.P.Th. (2012) Examination, Summer 2014
ELECTROTHERAPY

Duration : Section A + B + C = 3 Hours

Section B & C Marks : 60

SECTION – B & SECTION – C

- Instructions:**
- 1) Use blue/black ball point pen only.
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 - 3) All questions are compulsory.
 - 4) The number to the right indicates full marks.
 - 5) Draw diagrams wherever necessary.
 - 6) Distribution of syllabus in Question Paper is only meant to cover entire syllabus within the stipulated frame. The Question paper pattern is a mere guideline. Questions can be asked from any paper's syllabus into any question paper. Students cannot claim that the Question is out of syllabus. As it is only for the placement sake, the distribution has been done.
 - 7) Use a common answer book for all Sections.

SECTION – B

(30 Marks)

Answer the following (any five out of six) :

(5×3=15)

Properties of LASER.

Dangers of infra red radiations.

Types of electrodes used in SWD.

State the dosage and mechanism for action of any three therapeutic applications of UVR.

Precautions to be followed while applying Farradism under pressure.

Indications of strong surged farradic current.

Answer the following (any three out of four) :

(3×5=15)

Enlist the types of LASER and describe its production.

Define biofeedback and discuss its therapeutic uses.

State the principle of iontophoresis. State 4 different ions used with examples.

Application of UVR in wound healing.

SECTION - C

(20)

Write about the principle, production, therapeutic and physiological effects of ultrasound.

(1x15)

a) Write in details the principle and production of IFT. State advantages of IFT over TENS. State contraindications and precautions of IFT.

(1x15)

OR

b) Explain types of TENS. Describe the procedure of application and add a note on gate theory.

(1x15)



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Second B.P.Th. (2012) Examination, Summer 2016
ELECTROTHERAPY

Total Duration : Section A + B = 3 Hours

Total Marks : 80

SECTION – A & SECTION – B

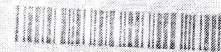
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SECTION – A

(50 Marks)**(SAQ)**

1. Short answer question (any five out of six) : **(5×3= 15)**
 - a) Enumerate any three ions used in iontophoresis along with its polarity.
 - b) Write any six contraindications of SWD.
 - c) Define Cavitation and Acoustic streaming.
 - d) Uses of strong surged faradic current.
 - e) Three contraindications of IR.
 - f) Write characteristics of normal SD curve.
2. Short answer question (any five out of six) : **(5×7=35)**
 - a) Write principles, methods and uses of Biofeedback.
 - b) Describe Physiological and therapeutic effects of radiant heat.
 - c) Explain therapeutic effect of Ultrasound on inflammation and repair process.

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- d) Explain different methods of application of SWD.
- e) State the properties of LASER. Explain the mechanism of wound healing by application of LASER.
- f) Define T.E.N.S. Discuss physiological and therapeutic effect of T.E.N.S.

SECTION – B

(30 Marks)

(LAQ)

3. Long answer question (any one out of two) :

(1×15= 15)

a) Define pain and explain pain pathway. Describe pain gate theory and descending pain suppressing system.

(7+8)

b) Describe the Physiological and therapeutic effects of Faradic current. Add a note on principle and technique of application of Faradic Re-education.

(5+5+5)

4. Long answer question (any one out of two) :

(1×15= 15)

a) Define Interferential therapy and state its principle. Describe Physiological and Therapeutic effects of IFT. Describe technique and methods of application of IFT.

(3+6+6)

b) Define and classify Actino therapy. Describe in detail the physiological effects of UVR and explain the procedure for test dose.

(4+7+4)



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Second B.P.Th. 2012 Examination, Summer 2017
ELECTROTHERAPY

Total Duration : Section A + B = 3 Hours

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SECTION –A and SECTION – B

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SECTION "A" SAQ (50 Marks)

1. Short answer question (any five out of six) : (5×3=15)
 - a) Draw a neat and labelled diagram of motor points of the face.
 - b) Name any three ions with their polarity and indication used in iontophoresis.
 - c) Describe various electrodes used in SWD.
 - d) Describe the mechanism of accommodation.
 - e) Properties of LASER.
 - f) Describe in brief High Voltage pulsed galvanic currents.
2. Short answer question (any five out of six) : (5×7=35)
 - a) Describe the various types of TENS.
 - b) Explain EMG biofeedback with examples.
 - c) Write on PUVA and Leeds regime.
 - d) Explain wound healing using LASER.
 - e) Describe different types of IR.
 - f) Explain in details the rationale and treatment technique of faradism under pressure.

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SECTION "B" LAQ (30 Marks)

(1×15=15)

3. Long answer question (any one out of two) :

- a) Define ultrasound. Write in details its treatment methods. Add on its physiological effects.
- b) Write in details the methods of application of SWD. Add on its contraindications and therapeutic effects.

(1×15=15)

4. Long answer question (any one out of two) :

- a) Define a strength duration curve. Draw curves for innervated, partial and denervated curves with proper explanation of each. *Maximal strength decrease*
- b) Define IFT. Write its methods of application, indications and contraindications.



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Second B.P.Th. 2012 Examination, Summer 2018
ELECTROTHERAPY

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SECTION – A SAQ (50 Marks)

1. Short answer question (**any five** out of six) : (5×3=15)
 - a) Define Chronaxie and Rheobase.
 - b) Write uses of Biofeedback.
 - c) Define Galvanic and Interrupted galvanic current.
 - d) Enlist precautions for LASER therapy.
 - e) Enlist contraindications for Infrared Radiation.
 - f) Sub Erythral Dosage of UVR.
2. Short answer question (**any five** out of six) : (5×7=35)
 - a) Describe methods of applications of Ultra Sound.
 - b) Describe physiological effects of Infrared Radiation.
 - c) Describe characteristics of normal intervened Strength Duration curve.

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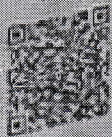
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- d) Describe types of Transcutaneous Electrical Nerve Stimulation.
- e) Describe therapeutic effects of Faradic current.
- f) Describe Pain gate theory.

SECTION – B LAQ (30 Marks)

3. Long answer question (any one out of two) (1×15=15)
- a) With respect to Short Wave Diathermy : describe methods of applications, types of electrodes used, describe therapeutic effects. (7+3+5)
 - b) With respect to Ultra Violet Radiation : write its types, describe physiological effects, method of calculation of test dose. (3+6+6)
4. Long answer question (any one out of two) : (1×15=15)
- a) Define Intophoresis. Explain its principles and method of applications. Enlist any 5 ions that can be applied using Intophoresis. (2+3+10)
 - b) With respect to Interferential Therapy : Write its advantages over Low Frequency Current, describe therapeutic effects, describe methods of applications. (2+6+7)



Second BPTH(2012), Winter 2015
ELECTROTHERAPY

Total Marks : 80

Total Duration : Section A + B = 3 Hours

Section - A & Section - B

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Section "A" SAQ (50 Marks)

(5x3=15)

Short answer question (any five out of six) :

- a) Define motor points and state their importance.
- b) Define chronaxie and rheobase.
- c) Explain Phonophoresis.
- d) Physiological effects of Faradic currents.
- e) Define Iontophoresis and name any two common ions used for pain relief.
- f) Describe and state the uses of Russian currents.

(5x7=35)

Short answer question (any five out of six) :

- a) Draw the SDC of a normally innervated muscle and describe its features.
- b) Explain five physiological and therapeutic effects of ultra violet radiations.
- c) Wound healing using LASER and ultrasound.
- d) Describe in detail, the pain gate theories.
- e) Describe therapeutic effects of high voltage and didynamic currents.
- f) Describe the principle and uses of biofeedback with examples.

Section "B" LAQ (30 Marks)

(1x15=

Long answer question (any one out of two) :

- a) Explain the different methods of application of short wave diathermy treatment. Discuss in details the therapeutic effects and contraindications of the same.
- b) Explain in details the indications and contraindications of Ultrasound therapy. Also add a note on its physiological effects.

(5+5+5=

(5+5+5=

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4. Long answer question (any one out of two)

a) Describe the types of TENS with its parameters. Also write about its benefits and contraindications.

b) Explain the principle and production of interferential currents. Write its effects and indications of the same. State the importance of hand held TENS.



Second B.P.Th. (2012) Examination, Winter 2016
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SECTION – A (SAQ) (50 Marks)

1. Short answer question (any five out of six) : (5×3=15)
 - a) Discuss property of accommodation. ✓
 - b) Write any three differences between galvanic and faradic current. ✓
 - c) Discuss any two laws of radiation with application to physiotherapy. ✓
 - d) Discuss types of electrodes used in Short wave diathermy. ✓
 - e) Explain E-2 dose of Ultra violet radiation. ✓
 - f) Mention any three ions with the solution used for pain relief. ✓
2. Short answer question (any five out of six) : (5×7=35)
 - a) Write a note on strength duration curve. ✓
 - b) Briefly discuss therapeutic effects of pulsed SWD. ✓
 - c) Discuss principles and uses of biofeedback. ✓
 - d) Discuss properties and uses of LASER. ✓
 - e) Discuss physiological and therapeutic effects of Ultra sound. ✓
 - f) Discuss application of UVR in wound healing. ✓



SECTION 3 (LAQ) (30 Marks)

3. Long answer question (any one out of two) : (1×15=15)
- a) Discuss positioning of electrodes in short wave diathermy. Also, discuss its indications and contra indications. (7+4+4)
 - b) Discuss physiological and therapeutic effects of Interferential therapy. Also, discuss advantages of Interferential therapy over low frequency currents. (10+5)
4. Long answer question (any one out of two) : (1×15=15)
- a) Describe the different types of IR generators. Also discuss the indications and contra indications of IR radiations. (7+4+4)
 - b) Discuss physiological and therapeutic effects of faradic currents. Also, discuss faradism under pressure along with its application. (8+7)
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SECTION – A SAQ (50 Marks)

1. Short answer question (any five out of six) :

(5×3=15)

- a) Types of LASER.
- b) Diadynamic currents.
- c) Anodal galvanism.
- d) Russian current.
- e) Electromagnetic spectrum.
- f) Psoralen Ultraviolet A (PUVA).

2. Short answer question (any five out of six) :

(5×7=35)

- a) Explain pain gate mechanism.
- b) Physiological and therapeutic effects of infra-red radiation.
- c) Explain in detail about different types of TENS.
- d) Iontophoresis for hyperhidrosis.
- e) Therapeutic uses of LASER.
- f) Thermal and non-thermal effects of Ultra sound.

P.T.O.



SECTION – B LAQ (30 Marks)

3. Long answer question (any one out of two): (1×15=15)
- a) Write in detail about galvanic current. Describe the plotting and characteristics of a normal strength Duration Curve. (5+10)
- b) Principle of IFT. (5)
- Therapeutic application of IFT. (10)
4. Long answer question (any one out of two): (1×15=15)
- a) Classification of UVR. (2)
- Physiological effects of UVR. (6)
- Application of UVR for Psoriasis. (7)
- b) Physical characteristics of SWD. (5)
- Different methods of electrodes placement. (5)
- Therapeutic effects of SWD. (5)



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SECTION – A SAQ (50 Marks)

1. Short answer question (any five out of six) : (5×3=15)
 - a) Motor point.
 - b) Chronaxie and rheobase.
 - c) Any three dangers of ultrasound.
 - d) Any three ions used for pain relief in iontophoresis.
 - e) Strong surged faradic.
 - f) Types of electrodes in IFT.
2. Short answer question (any five out of six) : (5×7=35)
 - a) Discuss principles and technique of plotting SD curve.
 - b) Discuss principles and uses of biofeedback.
 - c) Discuss application of therapeutic current in wound care.
 - d) Discuss pain pathways and pain gate theory in detail.
 - e) Discuss principles and technique of application of faradism under pressure.
 - f) Discuss test dose of UVR.

P.T.O.



SECTION – B LAQ (30 Marks)

3. Long answer question (any one out of two) : (1×15=15)
- a) Discuss physiological and therapeutic effects of faradic current. Discuss Faradic reeducation in detail. (8+7)
 - b) Discuss physiological and therapeutic effects of short wave diathermy. Discuss its danger and precaution. (8+7)
4. Long answer question (any one out of two) : (1×15=15)
- a) Define Interferential therapy. Discuss its advantages on low frequency currents. Discuss its indication. (3+7+5)
 - b) Discuss physiological and therapeutic effects of ultrasound. Discuss phonophoresis. Discuss its indication. (7+5+3)
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