

51213

Second B.P.Th. (2012) Examination, Winter 2018
ELECTROTHERAPY

Total Duration : Section A + B = 3 Hours

Total Marks : 80

SECTION – A and SECTION – B

- Instructions :**
- 1) Use **blue/black** ball point pen only.
 - 2) **Do not** write anything on the **blank portion of the question paper**. If written anything, such type of act will be considered as an attempt to resort to unfair means.
 - 3) **All** questions are **compulsory**.
 - 4) The number to the **right** indicates **full** marks.
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 - 7) **Use** a common answerbook for **all** Sections.

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.

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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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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 Erythema 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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- 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)
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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) Expalin 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.

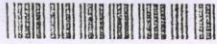
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SECTION – B LAQ (30 Marks)

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 and SECTION – B

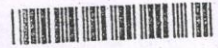
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SECTION "A" SAQ (50 Marks)

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 at pressure.

P.T.O.



SECTION "B" LAQ (30 Marks)

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

(1×15=15)

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

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

(1×15=15)

- Define a strength duration curve. *(Draw curves for innervated, partial and denervated curves with proper explanation of each.) Describe the characteristics of a normal strength duration curve.*
- Define IFT. Write its methods of application, indications and contraindications.

Q.No. 4 a) corrected as under:

Define a strength duration curve. Describe the characteristics of a normal strength duration curve.



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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.

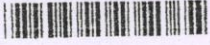
2. Short answer question (**any five** out of six) : (5×7=35)
 - a) Write a note on strength duration curve.
 - b) Briefly discuss therapeutic effects of pulsed SWD.
 - c) Discuss principles and uses of biofeedback.
 - d) Discuss properties and uses of LASER.
 - e) Discuss physiological and therapeutic effects of Ultra sound.
 - f) Discuss application of UVR in wound healing.

P.T.O.



SECTION – B (LAQ) (30 Marks)

3. Long answer question (**any one** out of two) : (1x15=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) : (1x15=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

(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.

P.T.O.



- 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)