

**BACHELOR OF PHYSIOTHERAPY
THIRD SEMESTER (SPECIAL REPEAT)
ELECTROTHERAPY-II
BPT-302**

(Use separate answer scripts for Objective & Descriptive)

Duration : 3 hrs.

Full Marks : 70

(PART-A: Objective)

Time : 20 min.

Marks : 20

Choose the correct answer from the following:

1X20=20

1. Grothus law is seen in:
 - a. IFT
 - b. TENS
 - c. Electromagnetic radiation
 - d. Ultrasound
2. IFT, Russian current are types of:
 - a. Low frequency current
 - b. Medium frequency current
 - c. High frequency current
 - d. None
3. Minimum erythema dosage (MED) is also known as:
 - a. E1
 - b. E2
 - c. E3
 - d. E4
4. The Principle of Ultrasound is:
 - a. Piezo electric effect
 - b. Reverse Piezo electric effect
 - c. Both
 - d. None
5. MWD uses:
 - a. Piezo electric effect
 - b. Step down Transformer
 - c. Magnetron
 - d. Step Up Transformer
6. What is the frequency of SWD?
 - a. $10^3 - 10^5$
 - b. $10^5 - 10^6$
 - c. $10^7 - 10^8$
 - d. $10^{10} - 10^{12}$
7. What is the frequency of MWD?
 - a. 2345 Hz
 - b. 2445 Hz
 - c. 2450 Hz
 - d. 2550 Hz
8. Acoustic Streaming is a feature of:
 - a. Ultrasound
 - b. SWD
 - c. MWD
 - d. IFT
9. SWD, MWD is a kind of:
 - a. Low frequency current
 - b. Medium frequency current
 - c. High frequency current
 - d. None
10. Wavelength of UVA is:
 - a. Below 280nm
 - b. 315-400nm
 - c. 280-315nm
 - d. 400-414nm
11. PUVA stands for:
 - a. Psoriasis ultra violet radiation
 - b. Psoralene ultra violet radiation
 - c. Pulsed ultra violet radiation
 - d. None

12. Coherence is a property of:
 - a. LASER
 - b. US
 - c. SWD
 - d. MWD
13. The Kromayer lamp is used in:
 - a. IFT
 - b. MWD
 - c. UVR
 - d. IRR
14. Which type of generator takes longer time to warm up?
 - a. Luminous
 - b. Non luminous
 - c. US
 - d. All of the above
15. The principle of IFT and TENS are:
 - a. Deep heating
 - b. Superficial heating
 - c. Low frequency effect
 - d. Pain Gate theory
16. Cross fire method, contraplanar, coplanar is used in:
 - a. US
 - b. MWD
 - c. SWD
 - d. IFT
17. Standing Wave is a _____ effect of US.
 - a. Thermal
 - b. Non thermal
 - c. General
 - d. All of the above
18. UVR is the best modality for:
 - a. Skin diseases
 - b. Pain
 - c. Spasm
 - d. Paralysis
19. The introduction of drugs subcutaneously with the help of ultrasound is known as:
 - a. Therapeutic direct current
 - b. Ionotophoresis
 - c. Phonophoresis
 - d. None
20. Direct, water bag and water bath method are types of:
 - a. SWD
 - b. MWD
 - c. IRR
 - d. US

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(PART-B : Descriptive)

Time : 2 hrs. 40 min.

Marks : 50

[Answer question no.1 & any four (4) from the rest]

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| 1. What is LASER? Explain the properties of laser.
Indications and contraindication of laser. | 10 |
| 2. Explain the thermal and nonthermal effect of ultrasound.
Explain the various methods of application of Ultrasound. | 5+5=10 |
| 3. Explain the various laws governing radiation. | 10 |
| 4. Classify and describe UVR. Explain the calculation of dosage of UVR
with the importance of minimum erythema dosage. | 3+7=10 |
| 5. What is IFT? Explain the principle of Wave interference in IFT. | 5+5=10 |
| 6. What is SWD? Explain its principle of production. Describe briefly
about the method of electrode placement in SWD. | 2+5+3=10 |
| 7. What is long wave diathermy? Why is it considered superior to SWD
and US? Explain its indications. | 2+4+4=10 |
| 8. What is MWD? What is the importance of magnetron in the production
of MWD? Describe its indications and contraindications. | 2+4+4=10 |

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