

THE TAMIL NADU Dr.M.G.R. MEDICAL UNIVERSITY

[LR 1220]

**DECEMBER 2020
(AUGUST 2020 EXAM SESSION)**

Sub. Code: 6275

**BPT DEGREE EXAMINATION
FIRST YEAR
(New regulations for the candidates admitted from 2017-2018 onwards)
PAPER IV – BASIC AND APPLIED PHYSICS FOR PHYSIOTHERAPY
Q.P. Code : 746275**

Time: Three hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate on: **(2 x 15 = 30)**

1. Explain in detail about application of physical principles in Exercise therapy.
2. Explain in detail about the Newton's laws.

II. Write notes on: **(10 x 5 = 50)**

1. Define Biomechanics.
2. Differentiate between line of gravity and centre of gravity.
3. Explain Static and Dynamic equilibrium.
4. Friction.
5. Define frequency, wavelength, Amplitude and phase of a sine wave.
6. Resistances in series and parallel combination.
7. Magnetic effects of electric current.
8. Thermionic emission.
9. Intrinsic and extrinsic semiconductors.
10. Functions and applications of Ammeter, volt meters and Ohmmeters.

III. Short answers on: **(10 x 2 = 20)**

1. Direct currents.
2. Wheat stone bridge.
3. Concurrent forces.
4. Lenz's law.
5. Shunt Rheostat.
6. Ohm's law.
7. S-D Curve.
8. Electromagnetic spectrum.
9. Composition and resolution of forces.
10. HOOKE'S Law.
