



RAN-1806000301050001

First Year Bachelor of Physiotherapy

Examination September - 2025

Fundamental of Biomedical Physics (Paper - II)

Time: 3 Hours]

[Total Marks: 80

સૂચના : / Instructions

(1)

નીચે દર્શાવેલ નિશાનીવાળી વિગતો ઉત્તરવહી પર અવશ્ય લખવી.
Fill up strictly the details of signs on your answer book

Name of the Examination:

First Year Bachelor of Physiotherapy

Name of the Subject :

Fundamental of Biomedical Physics (Paper - II)

Subject Code No.: 1806000301050001

Seat No.:

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Student's Signature

Section - 1

Q. 1. Explain Newton's three laws of motion with examples. Explain why Newton's first law is known as law of inertia. **(10)**

OR

Q. 1. What is friction? With the help of a suitable example, explain the terms static friction, limiting friction and kinetic friction. Show that static friction is a self-adjusting force. **(10)**

Q. 2. Short Notes : (Three out of four) **(15)**

1. Explain types of motion.
2. Write and explain Pascal's law with its applications.
3. State and explain first law of thermodynamics.
4. Explain types of sound waves.

Q. 3. Short Answer: (Five out of six) (15)

1. Derive the relation between wave velocity, frequency and wavelength of a wave.
2. Explain special physical properties of water.
3. State and explain Hook's law.
4. State Archimedes' principle and prove it mathematically.
5. Write a short note on elasticity.
6. Explain types of forces.

Section - 2

Q. 1. Long Essay (Any 1 out of 2) (10×1=10)

1. Explain production, properties and uses of X-ray

OR

1. Explain transistor characteristics and use as amplifier

Q. 2. Short Essay (Any 3 out of 4) (5×3=15)

1. Explain PN junction as rectifier.
2. Explain production, properties and uses of UV rays.
3. Explain shock it's.
4. Explain properties and uses of Laser

Q. 3. Short Answer (Any 5 out of 6) (3×5=15)

1. Write a short note on reflection.
 2. Write a short note on resistance different type's connection.
 3. Write a short note on thermionic valve.
 4. Give properties and uses of IR rays.
 5. Write a short note on galvanic current.
 6. Explain Ohm's law.
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