P P SAVANI UNIVERSITY

Second Semester of B.P.T Examination
December 2021
SPPT1110 Biomedical Physics

05.01.2022,Wednesday   Time: 09:30 a.m. To 11:30 a.m.   Maximum Marks: 35

Instructions:
1. The question paper comprises of two sections.
2. Section I and II must be attempted in separate answer sheets.
3. Make suitable assumptions and draw neat figures wherever required.
4. Use of scientific calculator is allowed.

SECTION – I

Q - 1	Essay Question(Any One)	[10]
(i)	Explain and derive Newton's Formula for velocity of sound. Also, derive Laplace's correction.	
(ii)	Explain the effective factor on which work done depends. Also, state and prove the work energy theorem.	

Q - 2	Short Note(Any Two)	[10]
(i)	What is force of friction? Write the advantage and disadvantage of frictional force.	
(ii)	Describe the effect of heat and cold application for therapeutic benefits.	
(iii)	With the help of diagram, explain light emitting diodes (LEDs).	

Q - 3	Very Short Notes(Any Five)	[15]
(i)	Write the third Newton's law of motion.	
(ii)	State the law of flotation.	
(iii)	Define the elasticity of matter.	
(iv)	Give the properties of X-rays.	
(v)	What is the difference between longitudinal and transverse wave?	
(vi)	Define Eddy current.	
(vii)	Write the application of LASERs.	

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