

	Reg. No.:	
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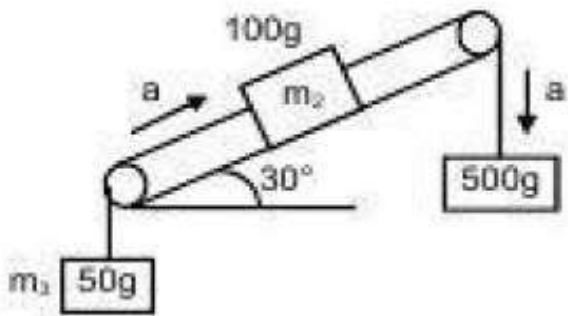


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Mid-Term Examinations – October 2021

Programme	: B.Tech (Common Course)	Semester	: Fall 2021-22
Course	: Engineering Physics	Code	: PHY1001
Faculty	: Dr. Divya Haridas	Slot/ Class No.	: C11+C12+C13/ 0019
Time	: 1 ½ hours	Max. Marks	: 50

Answer all the Questions

Q.No.	Sub. Sec.	Question Description	Marks
1		Find the acceleration of the 500g block in figure. The surfaces are frictionless. Take $g = 10\text{m/s}^2$ 	10
2		Derive Rayleigh Jeans's formula for black body radiation and discuss how it leads to the phenomena called ultraviolet catastrophe.	10
3		The position and momentum of a 1 Kev electron are simultaneously determined. If its position is located to within 1 \AA . What is the percentage of uncertainty in its momentum.	10
4		Elaborate the concepts (a) wave function (b) normalized wave function and (c) properties of wave function.	10
5		Elaborate on different synthesis methods for nanoparticles	10

