Scheme of Evaluation

Revision 2015

Course code :2003

ENGINEERING PHYSICS - II

Qn No.	Scoring Indicator	Split up Score	Sub Total	Total
PartA				
1	Statement			2
2	Statement			2
3	Statement Equation V=IR	1 1	2	2
4	Stating the difference of each	1 +1	2	2
5	Explanation			2
Part B				
1	Derivation of M.I of acircular disc about a Derivation of M.I of acircular disc about a	3 3	6	6
2	$\text{Tan}\Theta = v^2/rg = 15^2/9.8*400 = 0.0574$ $h = D\text{tan}\Theta = 0.057m = 5.7cm$	3 3	6	6
3	Definition Solving $v=\sqrt{2GM/R} = 11.2$ km/s	3 3	6	6
4	Statement Equation Derivation of g	2 1 3	6	6
5	Diagram Shunt resistance in parallel with galvanometer Derivation $i_s = iS / G + S$	1 1 4	6	6
6	Resistors in series $R=R_1+R_2+\ldots\ldots+R_n$ Resistors in parallel $1/R=1/R_1+1/R_2+\ldots\ldots+1/R_n$	3 3	6	6
7	Explanation Equation $h\nu=\varphi + 1/2mv^2$	4 2	6	6
Part C				
III a b c	Definition of angular velocity Relation $v=r\omega$ Derivation $I = MR^2/2$ Translational K.E=1/2 mv^2 Rotational K.E=1/4 mv^2 Total K.E=3/4mv^2 =4.8 x 10^{-3}J	1 2 6 2 2 2	3 6 6	15

IV(a)	Definition	2		
	Equation	1	3	
(b)	Statement and explanation of each theorem	3 + 3	6	15
c	$I = MR^2/2 = 0.2\ kgm^2$	3		
	$L=I\omega=62.8\ Js$	3	6	
V (a)	Definition and uses	1+2	3	
(b)	Derivation of orbital velocity	3		
	Derivation of period of satellite	3	6	
c	$V_0=\sqrt{GM/R}=7.92\ km/s$	3		15
	$T = 2\pi\sqrt{R^3/GM} = 5083\ s$	3	6	
VI (a)	Definition and uses	1+2	3	
(b)	Derivation of g with altitude and depth	3 +3	6	
c	$T = 2\pi\sqrt{(R+h)^3/GM}$	2		15
	T= 24 hr	1		
	H=35954 km	3	6	
VII a	Statement	1	3	15
	Explanation	2		
b	Diagram	2		
	Explanation	4	6	
c	F= Bil sinΘ	2		
	Θ= 90	2		
	i=F/Bl = 5A	2		
VIII a	Statement	3	3	15
b	principle construction and working	2+2+2	6	
c	$R_1+ R_2 = 8$	2		
	$R_1R_2/ R_1+ R_2=3/2$	2	6	
	$R_1=6\Omega\ \ R_2=2\Omega$	2		
IX a	advantages	3	3	15
b	diagram	2		
	working	4	6	
c	laws of PEE	3		
	threshold frequency	1		
	photoelectric work function	1	6	
X a	Uses	3	3	15
b	Components of nuclear reactor	3		
	Working of nuclear reactor	3	6	
c	$E= \varphi + 1/2mv^2$	5		
	$K= 3.1x\ 10^{-19}\ J$	1	6	