

CHOITHRAM SCHOOL MANIKBAGH INDORE**CLASS XI Session: 2017-18****Subject: Physics****Allotment Date: 11 /8/2017****Assignment No: II****Submission Date: 18 /8/17**

S.N	QUESTION	MARKS	LEVEL
OBJECTIVE TYPE			
1.	Why do blades of an electric fan continue to rotate for some time, after the current is switched off?	1	Knowledge
2.	Three identical blocks, each of mass m are kept in contact on a frictionless table, a force F is applied to push them, what is acceleration of the blocks and what is the net force on each block?	1	Understanding
3.	Two bodies of masses M and m are allowed to fall from the same height. If air resistance for each be the same, then will both the bodies reach the earth simultaneously?	1	hot
SHORT ANSWER TYPE I			
4.	If force is acting on a moving body perpendicular to the direction of motion, then what will be its effect on the speed and direction of the body?	2	knowledge
5.	A motor car is travelling at 30m/s on a circular road of radius 500m . It is increasing in speed at the rate of 2m/s^2 . What is its acceleration?	2	understanding
6.	Two blocks of equal mass m are tied to each other through a light string. One of the blocks is pulled along the line joining them with a constant force F . Find the tension in the string joining the blocks.	2	logic
7.	A block on a horizontal surface is being pushed by a force F making an angle θ with the vertical. If the coefficient of friction is μ , how much force is needed to get the block just started.	2	Hot
SHORT ANSWER TYPE II			
8.	With what acceleration should a box descend so that a block of mass M placed in it exerts a force $Mg/4$ on the floor of the box?	3	understanding
9.	A bomb at rest explodes into three fragments of equal masses. Two fragments fly off at right angles to each other, with velocities of 9 m/s and 12m/s . Calculate the speed of the third fragment.	3	Multi conceptual
10.	Though friction opposes relative motion, yet in certain cases, friction is also the cause of motion. In fact without friction, motion cannot be started, stopped or transferred from one body to the other. Read the above passage and answer the following questions: (i) Give examples where friction causes motion. (ii) Give the direction of friction on front wheel and rear wheel of a bicycle when it is pedaled and when pedaling is stopped. (iii) Friction is a necessary evil. What does this imply in day to day life?	3	Value based
11.	A particle of mass 100g is moving in a vertical circle of radius 2m . The particle is just looping the loop. What is the speed of the particle and tension in the string at the highest point of the circular path? ($g=10\text{m/s}^2$)	5	Logic
12.	A body of mass $5 \times 10^{-3}\text{ kg}$ is launched upon a rough inclined plane making an angle of 30° with the horizontal. Obtain the coefficient of friction between the body and the plane if the time of ascent is half the time of descent.	5	Hot