

Class-9 SUBJECT-PHYSICS DATE 31.05.2020 PAWAN KR.

HOME WORK

SOLVE NUMERICAL PROBLEMS

CHAPTER: (FORCE AND LAWS OF MOTION)

Q. N. 1. A 8000 kg engines pulls a train of 5 wagons, each of 2000kg. along a horizontal track. If the engine exerts a force of 40000 N and the track offers a friction force of 5000N. Then calculate

- A) The net accelerating force. Ans. 35000N
B) The acceleration of the train. Ans 3.5m/s²
C)The Force of wagon 1 On wagon 2. Ans. 28000N

Q. N. 2 A stone of 1 kg is thrown with a velocity of 20 m/s across the frozen surface of a lake and comes to rest after travelling at a distance of 50 m. What is the force of friction between the stone and the ice?

Ans. $F = -4 \text{ N}$.

Q. N. 3 An automobile vehicle has a mass of 1500kg. What must be the force between the vehicle and road If the vehicle is to be stopped with a negative acceleration of 1.7 m/s²? Ans. $F = -2550\text{N}$

Q. N. 4. How much momentum will a dumb-bell of mass 10 kg transfer to the floor if it falls from a height of 80 Cm? Take its downward acceleration to be 10 m/s². Ans. 40 kg m/s.