

## UNIT TEST 6

### PHYSICS

STD : XI

MAX MARKS : 25

SEC : A1

TIME : 1 hrs

Answer all the questions

#### Part A

( 3 × 2 = 6 )

1. State Newton's second law
2. Define one Newton
3. Show that impulse is the change of momentum

#### Part B

( 3 × 3 = 9 )

4. Using free body diagram , show that it is easy to pull an object that to push it
5. Explain the concept of inertia . Write two examples each for inertia of motion , inertia of rest and inertia of direction .
6. What is concurrent forces ? State Lami's theorem

#### Part C

( 2 × 5 = 10 )

7. Prove the law of conservation of linear momentum . Use it to find the recoil velocity of a gun when a bullet is fired from it
8. Briefly explain the origin of friction . Show that in an inclined plane , angle of friction is equal to angle of repose .

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