APPSC AEE Previous Papers for Mechanical Engineering

1. According to principle of conservation of energy, the total momentum of a system of masses in any direction remains constant unless acted upon by an external force in that direction.

A. True

B. False

Answer: Option B

2. The friction experienced by a body, when in motion, is known as

A. rolling friction

B. dynamic friction

C. limiting friction

D. static friction

Answer: Option B

3. Two balls of equal mass and of perfectly elastic material are lying on the floor. One of the ball with velocity v is made to struck the second ball. Both the balls after impact will move with a velocity

A. v

B. v/2

C. v/4

D. v/8

Answer: Option B

4. The term 'force' may be defined as an agent which produces or tends to produce, destroys or tends to destroy motion.

A. Agree

B. Disagree

Answer: Option A

5. The coefficient of restitution for elastic bodies is one.

A. Correct

B. Incorrect

Answer: Option B

6. The velocity ratio in case of an inclined plane inclined at angle θ to the horizontal and weight being pulled up the inclined plane by vertical effort is

A. sin θ

B. cos θ

C. tan θ

D. cosec θ

Answer: Option A

7. The range of projectile on a downward inclined plane is _____ the range on upward inclined plane for the same velocity of projection and angle of projection.

A. less than

B. more than

C. equal to

Answer: Option B

8. The angle of inclination of a vehicle when moving along a circular path _____ upon its mass.

A. depends

B. does not depend

Answer: Option B

9. A body of weight W is required to move up on rough inclined plane whose angle of inclination with the horizontal is α. The effort applied parallel to the plane is given by(where μ = tanφ = Coefficient of friction between the plane and the body.)

A. $P = W \tan\alpha$

B. $P = W \tan(\alpha + \varphi)$

C. $P = W (\sin\alpha + \mu\cos\alpha)$

D. $P = W (\cos\alpha + \mu\sin\alpha)$

Answer: Option C

10. If the resultant of two equal forces has the same magnitude as either of the forces, then the angle between the two forces is

A. 30°

B. 60°

C. 90°

D. 120°

Answer: Option D