Half Yearly Examination (2023-24)

Subject : Physics

Class : VIII

M.M. 50

Note- *Attempt all questions*

Q.1 : Choose the correct options:

A) The SI unit of thrust is

i) Pa ( ) ii) N/m^2 ( ) iii) N ( ) iv) N/m ( )

B) Atmospheric pressure is maximum at:

i) Poles ( ) ii) Mount Everest ( ) iii) Equator ( ) iv) Sea level ( )

C) An object of mass m is moving with a constant speed v. Its kinetic energy is:

i) ½ ×mv ( ) ii) mv ( ) iii) ½ × mv^2 ( ) iv) 1/2 m^2v^2 ( )

D) Water stored in a Dam possesses:

i) No energy ( ) ii) Kinetic Energy ( )

iii) Potential Energy ( ) iv) Electrical Energy ( )

E) The approximate value of atmospheric pressure at sea level is:

i) 10^3 Pa ( ) ii) 10^5 Pa ( ) iii) 10^6 Pa ( ) iv) 10^4 Pa ( )

Q.2 : Give reasons for the following :

i) A person may have nose bleeding at high altitudes.

ii) A Horse has more kinetic energy than a Dog running at the same speed.

Q.3 : Give One- word Answers:

i) SI unit of Work. .....

ii) The rate of supply of Energy. .....

iii) Normal Force per unit Surface Area. .....

iv) The envelope of gases situated around the earth. .....

v) Product of Force and displacement in the direction of force. .....

Q.4 : Fill in the blanks:

i) Energy possessed by an object due to its specific configuration is known as its .....

ii) For a given thrust, Pressure is .....proportional to the area of the surface.

iii) 1 pascal = ...N/m^2.

iv) The SI unit of moment of a force is .....

v) Gravitational Potential energy of an object depend on its .....and .....

Q.5 : Answer the following questions:

i) Define the term Energy. What is its SI unit?

ii) State the two factors on which moment of a force depends.

iii) Name two factors on which kinetic energy of an object depends.

iv) Differentiate between thrust and pressure.

v) Name any two factors on which liquid pressure depends.

Q.6 : True or False :

i) Kinetic Energy possessed by an object is proportional to its speed. .....

ii) Pressure is exerted by solids and liquids but not by gases. .....

iii) The SI unit of powe is watt. .....

iv) Liquid pressure does not depend on its density. .....

v) Atmospheric pressure decreases with an increase in height from the ground. .....

Q.7 : Match the followings:

'A'	'B'
i) Atmospheric Pressure	Elastic Potential Energy
ii) Capacity of doing work	Sharp edge
iii) knife	Broad and deep foundation
iv) High-rise building	Barometer
v) A stretched rubber band	Energy

Q.8 : Long answers questions: (Any two of these only)

i) Draw the figures showing clockwise and anticlockwise moments.

ii- a) Writes difference between Kinetic energy and gravitational potential energy.

b) Give reason why Deep sea divers wear special suits.

iii- a) What force is required to exert a pressure of $2 \times 10^4 Pa$ on an area of $200 cm^2$?

b) Calculate the moment of a force of $16N$ about an axis of rotation at a normal distance of $0.5m$ from the force.

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