

LAHORE BOARD

GRADE 9

PHYSICS

2017 GROUP 1

MCQ'S

i) A boy jumps out of a moving bus. There is a danger for him to fall:

(Mark 1)

- A. Towards the moving bus
- B. Away from the bus
- C. In the direction of motion
- D. Opposite to the direction of motion

Answer:

- C. In the direction of motion

ii) A body is in equilibrium when its:

(Mark

1)

- A. Acceleration is uniform
- B. Speed is uniform
- C. Speed and acceleration are uniform
- D. Acceleration is zero.

Answer:

- D. Acceleration is zero.

iii) The value of Sin 45° is:

(Mark

1)

- A. Zero
- B. 1
- C. 0.2
- D. 0.707

Answer

- D. 0.707

iv) The speed of satellite nearest to the earth orbit is:

(Mark

1)

- A. 6 kms⁻¹
- B. 7 kms⁻¹
- C. 8 kms⁻¹
- D. 10 kms⁻¹

Answer

- C. 8 kms⁻¹

v) Convert 54 Km^h⁻¹ into ms⁻¹:

(Mark

1)

- A. 5 ms⁻¹
- B. 10 ms⁻¹
- C. 15 ms⁻¹
- D. 20 ms⁻¹

Answer

C. 15 ms⁻¹

vi) If the velocity of a body becomes double, then its kinetic energy:

(Mark 1)

- A. Remains the same
- B. Becomes double
- C. Becomes four times
- D. Becomes half

Answer

C. Becomes four times

vii) One mega is equal to:

(Mark

1)

- A. 10³
- B. 10⁴
- C. 10⁵
- D. 10⁶

Answer

D. 10⁶

viii) False ceiling is done to:

(Mark

1)

- A. Lower the height of ceiling
- B. Keep the roof clean
- C. Cool the room
- D. Insulate the ceiling

Answer

D. Insulate the ceiling

ix) One litre is equal

(Mark 1)

to

- A. 1 mm³
- B. 1 cm³
- C. 1 dm³
- D. 1 m³

Answer

C. 1 dm³

x) What happens to the thermal conductivity of a wall if its thickness is double:

(Ma

rk 1)

- A. Becomes double
- B. Remains the same
- C. Becomes half

D. Becomes one fourth

Answer

C. Becomes half

xi) Which of the substance is the lightest one:

(Mark

1)

A. Copper

B. Mercury

C. Aluminum

D. Lead

Answer

C. Aluminum

xii) Normal human body temperature is:

(Mark

1)

A. 15 °C

B. 37 °C

C. 37 °F

D. 98.6 °C

Answer

B. 37 °C

Q.2 i) Differentiate between atomic physics and nuclear physics.

(Marks 2)

Q.2 ii) You are fifteen years old. Estimate your age in seconds. (Marks 2)

Q.2 iii) What is meant by least count of vernier callipers? (Marks 2)

Q.2 iv) Define uniform acceleration. (Marks 2)

Q.2 v) What is the difference between scalars and vectors? (Marks 2)

Q.2 vi) Differentiate between distance and displacement. (Marks 2)

Q.2 vii) Define unit of force. (Marks 2)

Q.2 viii) Write two advantages of friction. (Marks 2)

Q.3 i) What is meant by resolution of forces? (Marks 2)

Q.3 ii) Define axis of rotation. (Marks 2)

Q.3 iii) Write the mathematical forms of conditions of torque. (Marks 2)

Q.3 iv) Define force of gravitation. (Marks 2)

Q.3 v) Define satellites and give an example. (Marks 2)

Q.3 vi) State the law of gravitation. (Marks 2)

Q.3 vii) Define mechanical energy and give an example. (Marks 2)

Q.3 viii) What is power? Write its unit. (Marks 2)

Q.4 i) State Hook's law. (Marks 2)

Q.4 ii) Define plasma. What is its relation with electric current? (Marks 2)

Q.4 iii) Define elasticity. (Marks 2)

Q.4 iv) How many scales are there for the measurement of temperature? Write their names. (Marks 2)

Q.4 v) What is meant by freezing point and melting point? (Marks 2)

Q.4 vi) How does cross-sectional area of solid affect thermal conductivity? (Marks 2)

Q.4 vii) Define convection. (Marks 2)

Q.4 viii) What is meant by greenhouse effect? (Marks 2)

Q.5 a) What do you mean by centripetal force? Derive the equation for centripetal force : $F_c = mv^2 / r$ (Marks 4)

Q.5 b) A boy throws a ball vertically up. It returns to the ground after five seconds. Find:

- (i) The maximum height reached by the ball.**
 - (ii) The velocity with which the ball is thrown up.**
- (Marks 5)**

Q.6 a) Define both conditions for equilibrium. Describe each with one example. (Marks 4)

Q.6 b) A body of mass 50 kg is raised to a height of 3 m. What is its potential energy? ($g=10 \text{ ms}^{-2}$) (Marks 4)

Q.7 a) Describe and explain kinetic molecular model of matter. (Marks 4)

Q.7 b) Normal human body temperature is 98.6°F . Convert it into Celsius scale and Kelvin scale. (Marks 4)

LAHORE BOARD

GRADE 9

PHYSICS

2017 GROUP 2

MCQ'S

i) One tera is equal

to:

(Mark 1)

A. 10^{-12}

B. 10^{-18}

C. 10^{12}

D. 10^{18}

Answer

C. 10^{12}

ii) Least count of meter rule is:

(Mark

1)

A. 1 cm

B. 1 mm

C. 1 dm

D. 0.01 cm

Answer

C. 1 mm

iii) A body has translatory motion if it moves along a:

(Mark 1)

A. Circle

B. Straight line

C. Curved path

D. Line without rotation

Answer

D. Line without rotation

iv) Inertia depends upon:

(Mark

1)

A. Velocity

B. Mass

C. Weight

D. Speed

Answer

B. Mass

v) Two equal but unlike parallel forces having different line of action

produce:

(Ma

rk 1)

A. Torque

B. Couple

- C. Equilibrium
- D. Neutral equilibrium

Answer

- B. Couple

vi) Earth's gravitational force of attraction vanishes at: (Mark 1)

- A. 6,400 km
- B. Infinity
- C. 42,300 km
- D. 1000 km

Answer

- B. Infinity

vii) The value of 'g' at a height one earth's radius above the surface of earth: (Mark 1)

k 1)

- A. 2 g
- B. 1/2 g
- C. 1/3 g
- D. 1/4 g

Answer

- D. 1/4 g

viii) Work will be maximum when the angle between force and displacement will

be:

(Mark 1)

- A. 90°
- B. 0°
- C. 60°
- D. 180°

Answer

- B. 0°

ix) At sea level, the atmospheric pressure is: (Mark 1)

- A. 10107 Pascal
- B. 10300 Pascal
- C. 10130 Pascal
- D. 101300 Pascal

Answer

- D. 101300 Pascal

x) The water converts into ice at a temperature: (Mark 1)

- A. 0 °F
- B. 32 °F
- C. -273 K
- D. 0 K

Answer

- B. 32 °F

xi) Rooms are heated using gas heaters by: (Mark 1)

- A. Conduction only
- B. Convection and radiation
- C. Radiation only
- D. Convection only

Answer

- B. Convection and radiation

xii) The thermal conductivity of brick is:

(Mark

1)

- A. $0.8 \text{ Wm}^{-1}\text{K}^{-1}$
- B. $1.7 \text{ Wm}^{-1}\text{K}^{-1}$
- C. $0.6 \text{ Wm}^{-1}\text{K}^{-1}$
- D. $0.2 \text{ Wm}^{-1}\text{K}^{-1}$

Answer

- C. $0.6 \text{ Wm}^{-1}\text{K}^{-1}$

Q.2 i) Write two names of measuring instruments.

(Marks

2)

Q.2 ii) Differentiate between base quantities and derived quantities.

(Marks 2)

Q.2 iii) Define acceleration.

(Marks

2)

Q.2 iv) Define vibratory motion.

(Marks

2)

Q.2 v) Differentiate between scalar and vector.

(Marks 2)

Q.2 vi) State Newton's third law of motion.

(Marks

2)

Q.2 vii) What is meant by centripetal force?

(Marks

2)

Q.2 viii) What is meant by vernier constant?

(Marks

2)

Q.3 i) Differentiate between like and unlike parallel forces. (Marks 2)

Q.3 ii) Define the resolution of forces. (Marks 2)

Q.3 iii) Define centre of mass. (Marks 2)

Q.3 iv) State Newton's law of gravitation. (Marks 2)

Q.3 v) What is meant by geo-stationary satellites? (Marks 2)

Q.3 vi) Why can we not feel gravitational force between the bodies around us? (Marks 2)

Q.3 vii) Define unit of work, Joule. (Marks 2)

Q.3 viii) Write down the two disadvantages of fossil fuels.

(Marks 2)

Q.4 i) What is meant by density? What is its SI unit? (Marks 2)

Q.4 ii) Define elasticity. (Marks 2)

Q.4 iii) State Pascal's law. (Marks 2)

Q.4 iv) Define specific heat capacity and write its formula. (Marks 2)

Q.4 v) Gaps are left in railway tracks. Why? (Marks 2)

Q.4 vi) What causes a glider to remain in air? (Marks 2)

Q.4 vii) What is greenhouse effect? (Marks 2)

Q.4 viii) We wear white and light coloured clothes in summer. why? (Marks 2)

Q.5 a) Write the advantages and disadvantages of friction. (Marks 4)

Q.5 b) A stone is dropped from the top of the tower. The stone hits the ground after 5 seconds. Find the height of the tower and velocity with which the stone hits the ground. (Marks 5)

Q.6 a) Define torque or moment of force. Explain on what factors, does it depend? (Marks 4)

Q.6 b) Calculate the power of a pump which can lift 70 kg of water through a vertical height of 16 meters in 10 seconds. Also find the power in horse power. (Marks 5)

Q.7 a) Define Young's Modulus. Derive the formula and write the unit. (Marks 4)

Q.7 b) A brass rod is 1 mm long at 0 °C. Find its length at 30 °C. (Coefficient of linear expansion of brass = $1.9 \times 10^{-5} \text{ k}^{-1}$) (Marks 5)

Group 1

