LAHORE BOARD

GRADE 9

PHYSICS

2019 GROUP 1

MCQ'S

i) The least count of digital vernier calipers is : (Mark 1)

A. 0.1 mm
B. 0.01 mm
C. 0.001 mm
D. 0.0001 mm
Answer:
B. 0.01 mm

ii) Cheetah can run at a speed of : (Mark 1)

A. 50 kmh^{-1}
B. 60 kmh^{-1}
C. 70 kmh^{-1}
D. 80 kmh^{-1}
Answer:
C. 70 kmh^{-1}

iii) S.I unit of momentum is : (Mark 1)

A. $Kgm^{-1}s^{-1}$
B. $Kg^{-1}ms^{-1}$
C. Kgms
D. $Kgms^{-1}$
Answer:
D. $Kgms^{-1}$

iv) Newton's first law of motion is valid only in the absence: (Mark 1)

A. Force
B. Net force
C. Friction
D. Momentum
Answer:
B. Net force

v) The number of perpendicular components of a force are: (Mark 1)

A. 1
B. 2
C. 3

D. 4

Answer:

B. 2

vi) Moon is _____ km away from the earth. (Mark 1)

A. 1,80,000

B. 2,80,000

C. 3,80,000

D. 4,80,000

Answer:

C. 3,80,000

vii) Speed of light is: (Mark 1)

A. 2×10^{8} ms^{-1}

B. 2×10^{9} ms^{-1}

C. 3×10^{8} kms^{-1}

D. 3×10^{8} ms^{-1}

Answer:

D. 3×10^{8} ms^{-1}

viii) The work done in lifting a brick of mass 2 kg through a height of 5 m above ground will be: (Mark 1)

A. 2.5 J

B. 10 J

C. 50 J

D. 100 J

Answer:

D. 100 J

ix) S.I unit of pressure is Pascal which is equal to : (Mark 1)

A. 10^{4} Nm^{-2}

B. 1 Nm^{-2}

C. 10^{-2} Nm

D. 10^{3} Nm^{-2}

Answer:

B . 1 Nm^{-2}

x) The range of clinical thermometer is : (Mark 1)

A. 20°C-42°C

B. 25°C-42°C

C. 30°C-42C

D. 35°C - 42°C

Answer:

D. 35°C - 42°C

xi) Generally faces of Leslie's cube are : (Mark 1)

A. 3

B. 4

C. 5

D. 6

Answer:
D. 6

xii) In gases, heat is mainly transferred by: (Mark 1)

A. Molecular collision
B. Conduction
C. Convection
D. Radiation

Answer:
C. Convection

Q.2 i) What is meant by base quantities and base units? (Marks 2)

Q.2 ii) Define scientific notation . (Marks 2)

Q.2 iii) Write four names of laboratory safety equipments. (Marks 2)

Q.2 iv) Define terminal velocity. (Marks 2)

Q.2 v) Differentiate between vectors and scalars. (Marks 2)

Q.2 vi) What is meant by braking and skidding? (Marks 2)

Q.2 vii) Write two methods of reducing friction. (Marks 2)

Q.2 viii) Define centripetal force and write its formula. (Marks 2)

Q.3 i) What is meant by unstable equilibrium? (Marks 2)

Q.3 ii) What is the difference between like and unlike parallel forces?
(Marks 2)

Q.3 iii) How the mass of earth can be determined? (Marks 2)

Q.3 iv) Define field force. (Marks 2)

Q.3 v) Write the value of 'G' and write its S.I unit. (Marks 2)

Q.3 vi) What do you mean by light energy? (Marks 2)

Q.3 vii) Define potential energy and write its equation. (Marks 2)

Q.3 viii) Define power and write its S.I unit . (Marks 2)

Q.4 i) State Hooke's Law. (Marks 2)

Q.4 ii) State Young's Modulus . (Marks 2)

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

Q.4 iv) Define the latent heat of fusion. (Marks 2)

Q.4 v) Differentiate between heat and temperature. (Marks 2)

Q.4 vi) Define the thermal conductivity of a substance. (Marks 2)

Q.4 vii) What is the difference between land and sea breezes? (Marks 2)

Q.4 viii) Write two uses of good conductors. (Marks 2)

Q.5 a) Derive the first equation of motion with the help of a speed-time graph. (Marks 4)

Q.5 b) How much centripetal force is needed to make a body of mass 0.5 kg to move in a circle of radius 50 cm with a speed 3 ms^{-1}? (Marks 5)

Q.6 a) State and explain the conditions for equilibrium. (Marks 4)

Q.6 b) A motorboat moves at a steady speed of 4 ms^{-1}. Water-resistance acting on it is 4000 N. Calculate power of its

engine.

(Marks 5)

Q.7 a) Define volume thermal expansion. Derive the equation.
$V = V_o (1 + \beta \Delta T)$ **(Marks 4)**

Q.7 b) An object has weight 18 N in air. Its weight is found to be 11.4 N when immersed in water. Calculate its density. Can you guess the material of the object? **(Marks 5)**

LAHORE BOARD

GRADE 9

PHYSICS

2019 GROUP 2

MCQ'S

i) Einstein's mass-energy equation 'c' is the : (Mark 1)
A. Speed of sound
B. Speed of light
C. Speed of electron
D. Speed of earth
Answer:
B. Speed of light

ii) Thermal conductivity of wood is : (Mark 1)
A. 0.06 $Wm^{-1}K^{-1}$
B. 0.07 $Wm^{-1}K^{-1}$
C. 0.09 $Wm^{-1}K^{-1}$
D. 0.08 $Wm^{-1}K^{-1}$
Answer:
D. 0.08 $Wm^{-1}K^{-1}$

iii) Law of Inertia is known as: (Mark 1)
A. First law of motion
B. Second law of motion
C. Third law of motion
D. Momentum
Answer:
A. First law of motion

iv) Density of ice is : (Mark 1)
A. 900 kg m^{-3}
B. 910 kg m^{-3}
C. 920 kg m^{-3}
D. 940 kg m^{-3}
Answer:
C. 920 kg m^{-3}

v) Radiation is the mode of transfer of heat from one place to another in the form of waves called: (Mark 1)
A. Mechanical waves
B. Transverse waves
C. Compressional waves

D. Electromagnetic waves

Answer:

D. Electromagnetic waves

vi) One litre is equal to: (Mark 1)

A. 1 mm^3

B. 1 cm^3

C. 1 dm^3

D. 1 m^3

Answer:

C. 1 dm^3

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

A. 2 g

B. ½g

C. ⅓g

D. ¼g

Answer:

D. ¼g

viii) Cheetah can run at a speed of: (Mark 1)

A. 15 kmh^{-1}

B. 60 kmh^{-1}

C. 70 kmh^{-1}

D. 80 kmh^{-1}

Answer:

C. 70 kmh^{-1}

ix) One horse power is equal to : (Mark 1)

A. 744 W

B. 745 W

C. 746 W

D. 748 W

Answer:

C. 746 W

x) Value of sin 30° is (Mark 1)

A. 0 (Zero)

B. 0.5

C. 0.707

D. 0.866

Answer:

B. 0.5

xi) Coefficient of friction between tyre and wet road is: (Mark 1)

A. 0.1

B. 0.2

C. 0.3

D. 0.4
Answer:
B. 0.2
xii) Water freezes at: (Mark 1)
A. 0°F
B. 32°F
C. -273 K
D. 0°K
Answer:
B. 32°F

Q.2 i) Define physical sciences and biological sciences. (Marks 2)

Q.2 ii) What is meant by physical quantities? Give two examples (Marks 2)

Q.2 iii) What are the natural satellites? (Marks 2)

Q.2 iv) What is the value of 'g' at moon and mars? (Marks 2)

Q.2 v) Define vibratory motion and give its example. (Marks 2)

Q.2 vi) State Newton's third law of motion and write two examples (Marks 2)

Q.2 vii) What is meant by tension in a string? (Marks 2)

Q.2 viii) Define co-efficient of friction and write its equation. (Marks 2)

Q.3 i) Why are vehicles made heavy at the bottom? (Marks 2)

Q.3 ii) What is meant by neutral equilibrium? (Marks 2)

Q.3 iii) How the mass of earth can be determined? (Marks 2)

Q.3 iv) Define field force. (Marks 2)

Q.3 v) What is difference between 'g' and 'G'? (Marks 2)

Q.3 vi) What is the second name of solar cell and how is it made?

Q.3 vii) Define energy and write its S.I unit (Marks 2)

Q.3 viii) On which factors, work depends? (Marks 2)

Q.4 i) State Pascal's Law. (Marks 2)

Q.4 ii) State Archimedes Principle. (Marks 2)

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

Q.4 iv) Define lower and upper fixed points. (Marks 2)

Q.4 v) Write two applications of thermal expansion. (Marks 2)

Q.4 vi) Define conduction. (Marks 2)

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

Q.4 viii) Define radiation. (Marks 2)

Q.5 a) How can you relate a force with the change of momentum of a body and prove that: $(P_f - P_i)/t = F$. (Marks 4)

Q.5 b) A train slows down from 80 Kmh^{-1} with uniform retardation of 2 ms^{-2}. How long will it take to attain a speed of 20 Km h^{-1}. (Marks 5)

Q.6 a) Define equilibrium and explain its three states. (Marks 4)

Q.6 b) Calculate the power of a pump which can lift 200 kg of water through a height of 6 m in 10 seconds. (Marks 5)

Q.7 a) Define specific heat. How would you find the specific heat of a solid? (Marks 4)

Q.7 b) The head of a pin is a square of side 10 mm. Find the pressure on it due to a force of 20 N. (Marks 5)

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