2017 (S) Roll No: _____

INTERMEDIATE PART-I (11th CLASS)

PHYSICS PAPER-I (NEW SCHEME) (SESSION 2015-2017)

TIME ALLOWED: 2.40 Hours **SUBJECTIVE** MAXIMUM MARKS: 68

NOTE: - Write same question number and its part number on answer book, as given in the question paper.

SECTION-I

2. Attempt any eight parts. $8 \times 2 = 16$

(i) What are the dimensions and units of gravitational constant 'G' in the formula $F = \frac{Gm_1m_2}{r^2}$.

(ii) Why do we find it useful to have two units for the amount of a substance, the kilogram and the mole?

(iii) Name two steps required to measure a base quantity.

(iv) If voltage $V = 5.2 \pm 0.1$ volt and current $I = 0.84 \pm 0.05\,A$. Find resistance in conductor by calculating total uncertainty.

(v) What is a Position Vector? Draw position vector in plane and space and write down their magnitudes.

(vi) State and illustrate right hand rule for vector product of two vectors $\vec{A}$ and $\vec{B}$.

(vii) Two vectors have unequal magnitudes. Can their sum be zero? Explain.

(viii) Which quantity is obtained by taking slope of a velocity-time graph? If graph is a
(a) straight line inclined at $x-$axis (b) a curve

(ix) Hitting a stone by your toe will hurt you more that to a football. Explain.

(x) Motion with constant velocity is a special case of motion with constant acceleration. Is this statement true? Discuss.

(xi) Define Ballistic Missile and Ballistic Trajectory.

(xii) A person is standing near a fast moving train. Is there any danger that he will fall towards it?

3. Attempt any eight parts. $8 \times 2 = 16$

(i) Is the work done by a force ever be negative? Explain.

(ii) Work done by an agency is 2 kWh. Convert it into Joules.

(iii) A glass is dropped from a certain height which breaks into pieces. What energy changes are involved?

(iv) Define arc and radius of a circle and relate them.

(v) What is the physical significance of moment of inertia? Explain.

(vi) Why does a diver change his body positions before and after diving in the pool?

(vii) What are the conditions for simple harmonic motion of a body?

(viii) What is the difference between free and forced oscillations?

(ix) What is the period and frequency of a simple pendulum at the centre of earth? Where g is zero.

(x) State the Principle of Super Position.

(xi) How should a source of sound make with respect to an observer so that the frequency of the sound does not change?

(xii) Define beats and give at least one use of beats.

4. Attempt any six parts. $6 \times 2 = 12$

(i) Define Wavefront. What is the usual way to obtain plane wave from a point source of light?

(ii) How would you manage to get more orders of spectra using a diffraction grating?

(iii) Can visible light produce interference fringes? Explain.

(iv) In astronomical telescope, why objective of large aperture is used?

(v) Explain the difference between angular magnification and resolving power of an optical instrument.

(vi) Why is the average velocity of the molecule in a gas is zero but the average of the square of velocities is not zero?

(vii) Give two examples of a natural process that involves an increase in entropy.

(viii) Is it possible to convert internal energy into mechanical energy? Explain with an example.

(ix) Explain, how human metabolism is an example of energy conservation?

SECTION-II

NOTE: - Attempt any three questions.

5.(a) Define Projectile Motion and derive the relation for (i) Height of the projectile reached (ii) Range of the projectile 5

(b) Find the projection of vector $\overline{A} = 2\hat{i} - 8\hat{j} + \hat{k}$ in the direction of vector $\overline{B} = 3\hat{i} - 4\hat{j} - 12\hat{k}$ 3

6.(a) Prove that work done by Gravitational Field is independent of the path followed. What you conclude from this? 5

(b) What should be the orbiting speed to lunch a satellite in a circular orbit 900 km above the surface of the Earth? 3

7.(a) State and derive Bernoulli's Equation. 5

(b) A Carnot engine whose low temperature reservoir is at $7^{\circ}C$ has an efficiency of 50 %, If is desired to increase the efficiency to 70 %. By how many degrees the temperature of the source be increased? 3

8.(a) Define Stationary waves. Derive an expression for stationary waves in a stretched string have discrete set of frequencies. 5

(b) A block of mass 4 kg is dropped from a height of 0.80m on to a spring of spring constant $K = 1960\,Nm^{-1}$. Find the maximum distance through which the spring will be compressed 3

9.(a) What is Michelson's Interferometer? Describe its principle, construction and working. Mention its two applications. $1 + 1 + 1 + 1 + 1 = 5$

(b) An astronomical telescope having magnifying power of 5 consist of two thin lenses 24 cm apart. Find the focal length of the lenses. 3

Paper Code Number: 2471

2017 (S) Roll No._____

INTERMEDIATE PART-I (11th CLASS)

PHYSICS PAPER-I (NEW SCHEME) (SESSION 2015-2017)

TIME ALLOWED: 20 Minutes **OBJECTIVE** MAXIMUM MARKS: 17

Note: You have four choices for each objective type question as A, B, C and D. The choice which you think is correct, fill that circle in front of that question number. Use marker or pen to fill the circles. Cutting or filling two or more circles will result in zero mark in that question. Attempt as many questions as given in objective type question paper and leave others blank. No credit will be awarded in case BUBBLES are not filled. Do not solve question on this sheet of OBJECTIVE PAPER.

Q.No.1

(1) An example of base quantity is:-

(A) Area (B) Volume (C) Length (D) Velocity

(2) The cross product of $\hat{k} \times \hat{j}$ is equal to:-

(A) $\hat{i}$ (B) $\hat{j}$ (C) $\hat{k}$ (D) $-\hat{i}$

(3) The slope of velocity-time graph represents:-

(A) Force (B) Acceleration (C) Power (D) Energy

(4) Horizontal range is maximum when angle of projection is:-

(A) 30° (B) 45° (C) 15° (D) 10°

(5) A body of mass 2kg moving with velocity of $4ms^{-1}$ has K.E equal to:-

(A) 16 J (B) 8 J (C) 32 J (D) 2 J

(6) The formula for the speed of satellite orbiting around the Earth is:-

(A) $v = \sqrt{2gr}$ (B) $v = \sqrt{2gR}$ (C) $v = \sqrt{gR}$ (D) $v = \sqrt{\frac{gR}{M}}$

(7) 100 radians are equal to:-

(A) 57.3° (B) 573° (C) 5730° (D) 5.73°

(8) Angular acceleration is produced by:-

(A) Power (B) Torque (C) Pressure (D) P.E

(9) Blood pressure is measures by:-

(A) Hydrometer (B) Barometer (C) Galvanometer (D) Sphygmomanometer

(10) Frequency and time period are related as:-

(A) $fT^{-1} = 1$ (B) $fT^{-2} = 1$ (C) $f^{-1}T = 1$ (D) $fT = 1$

(11) The velocity of sound in air at $0^\circ C$ is:-

(A) $332ms^{-1}$ (B) $332cms^{-1}$ (C) $222ms^{-1}$ (D) Zero

(12) Wavelength of a wave for closed pipe having length 'ℓ' in the fundamental mode is:-

(A) 2ℓ (B) $\ell/2$ (C) 4ℓ (D) ℓ

(13) Vibrating tuning fork is a source of:-

(A) Torque (B) Heat (C) Light (D) Sound

(14) The wavelength of x – rays is of the order of:-

(A) $10m$ (B) $10^{-10}m$ (C) $10^{-2}m$ (D) $10cm$

(15) Multi-mode step index fibre is useful for:-

(A) Long distance (B) Short distance (C) Infinite distance (D) Very long distance

(16) According to first law of Thermodynamics, the quantity which is conserved:-

(A) Energy (B) Force (C) Momentum (D) Power

(17) The efficiency of a Carnot engine is:-

(A) Infinite (B) Zero (C) Less than one (D) Greater than one

Paper Code Number: 2473

2017 (S) Roll No._____

INTERMEDIATE PART-I (11th CLASS)

PHYSICS PAPER-I (NEW SCHEME) (SESSION 2015-2017)

TIME ALLOWED: 20 Minutes **OBJECTIVE** MAXIMUM MARKS: 17

Note: You have four choices for each objective type question as A, B, C and D. The choice which you think is correct, fill that circle in front of that question number. Use marker or pen to fill the circles. Cutting or filling two or more circles will result in zero mark in that question. Attempt as many questions as given in objective type question paper and leave others blank. No credit will be awarded in case BUBBLES are not filled. Do not solve question on this sheet of OBJECTIVE PAPER.

Q.No.1

(1) The wavelength of x – rays is of the order of:-

(A) $10m$ (B) $10^{-10}m$ (C) $10^{-2}m$ (D) $10cm$

(2) Multi-mode step index fibre is useful for:-

(A) Long distance (B) Short distance (C) Infinite distance (D) Very long distance

(3) According to first law of Thermodynamics, the quantity which is conserved:-

(A) Energy (B) Force (C) Momentum (D) Power

(4) The efficiency of a Carnot engine is:-

(A) Infinite (B) Zero (C) Less than one (D) Greater than one

(5) An example of base quantity is:-

(A) Area (B) Volume (C) Length (D) Velocity

(6) The cross product of $\hat{k} \times \hat{j}$ is equal to:-

(A) $\hat{i}$ (B) $\hat{j}$ (C) $\hat{k}$ (D) $-\hat{i}$

(7) The slope of velocity-time graph represents:-

(A) Force (B) Acceleration (C) Power (D) Energy

(8) Horizontal range is maximum when angle of projection is:-

(A) 30° (B) 45° (C) 15° (D) 10°

(9) A body of mass 2kg moving with velocity of $4ms^{-1}$ has K.E equal to:-

(A) 16 J (B) 8 J (C) 32 J (D) 2 J

(10) The formula for the speed of satellite orbiting around the Earth is:-

(A) $v = \sqrt{2gr}$ (B) $v = \sqrt{2gR}$ (C) $v = \sqrt{gR}$ (D) $v = \sqrt{\frac{gR}{M}}$

(11) 100 radians are equal to:-

(A) 57.3° (B) 573° (C) 5730° (D) 5.73°

(12) Angular acceleration is produced by:-

(A) Power (B) Torque (C) Pressure (D) P.E

(13) Blood pressure is measures by:-

(A) Hydrometer (B) Barometer (C) Galvanometer (D) Sphygmomanometer

(14) Frequency and time period are related as:-

(A) $fT^{-1} = 1$ (B) $fT^{-2} = 1$ (C) $f^{-1}T = 1$ (D) $fT = 1$

(15) The velocity of sound in air at $0^\circ C$ is:-

(A) $332ms^{-1}$ (B) $332cms^{-1}$ (C) $222ms^{-1}$ (D) Zero

(16) Wavelength of a wave for closed pipe having length 'ℓ' in the fundamental mode is:-

(A) 2ℓ (B) $\ell/2$ (C) 4ℓ (D) ℓ

(17) Vibrating tuning fork is a source of:-

(A) Torque (B) Heat (C) Light (D) Sound

Paper Code Number: 2475

2017 (S) Roll No._____

INTERMEDIATE PART-I (11th CLASS)

PHYSICS PAPER-I (NEW SCHEME) (SESSION 2015-2017)

TIME ALLOWED: 20 Minutes **OBJECTIVE** MAXIMUM MARKS: 17

Note: You have four choices for each objective type question as A, B, C and D. The choice which you think is correct, fill that circle in front of that question number. Use marker or pen to fill the circles. Cutting or filling two or more circles will result in zero mark in that question. Attempt as many questions as given in objective type question paper and leave others blank. No credit will be awarded in case BUBBLES are not filled. Do not solve question on this sheet of OBJECTIVE PAPER.

Q.No.1

(1) 100 radians are equal to:-

(A) 57.3° (B) 573° (C) 5730° (D) 5.73°

(2) Angular acceleration is produced by:-

(A) Power (B) Torque (C) Pressure (D) P.E

(3) Blood pressure is measures by:-

(A) Hydrometer (B) Barometer (C) Galvanometer (D) Sphygmomanometer

(4) Frequency and time period are related as:-

(A) $fT^{-1}=1$ (B) $fT^{-2}=1$ (C) $f^{-1}T=1$ (D) $fT=1$

(5) The velocity of sound in air at $0^{\circ}C$ is:-

(A) $332ms^{-1}$ (B) $332cms^{-1}$ (C) $222ms^{-1}$ (D) Zero

(6) Wavelength of a wave for closed pipe having length 'ℓ' in the fundamental mode is:-

(A) 2ℓ (B) $\ell/2$ (C) 4ℓ (D) ℓ

(7) Vibrating tuning fork is a source of:-

(A) Torque (B) Heat (C) Light (D) Sound

(8) The wavelength of $x-$rays is of the order of:-

(A) $10m$ (B) $10^{-12}m$ (C) $10^{-2}m$ (D) $10cm$

(9) Multi-mode step index fibre is useful for:-

(A) Long distance (B) Short distance (C) Infinite distance (D) Very long distance

(10) According to first law of Thermodynamics, the quantity which is conserved:-

(A) Energy (B) Force (C) Momentum (D) Power

(11) The efficiency of a Carnot engine is:-

(A) Infinite (B) Zero (C) Less than one (D) Greater than one

(12) An example of base quantity is:-

(A) Area (B) Volume (C) Length (D) Velocity

(13) The cross product of $\hat{k}\times\hat{j}$ is equal to:-

(A) $\hat{i}$ (B) $\hat{j}$ (C) $\hat{k}$ (D) $-\hat{i}$

(14) The slope of velocity-time graph represents:-

(A) Force (B) Acceleration (C) Power (D) Energy

(15) Horizontal range is maximum when angle of projection is:-

(A) 30° (B) 45° (C) 15° (D) 10°

(16) A body of mass 2kg moving with velocity of $4ms^{-1}$ has K.E equal to:-

(A) 16 J (B) 8 J (C) 32 J (D) 2 J

(17) The formula for the speed of satellite orbiting around the Earth is:-

(A) $v=\sqrt{2gr}$ (B) $v=\sqrt{2gR}$ (C) $v=\sqrt{gR}$ (D) $v=\sqrt{\frac{gR}{M}}$

Paper Code Number: 2477	2017 (S) INTERMEDIATE PART-I (11th CLASS)	Roll No._____

PHYSICS PAPER-I (NEW SCHEME) (SESSION 2015-2017)

TIME ALLOWED: 20 Minutes **OBJECTIVE** MAXIMUM MARKS: 17

Note: You have four choices for each objective type question as A, B, C and D. The choice which you think is correct, fill that circle in front of that question number. Use marker or pen to fill the circles. Cutting or filling two or more circles will result in zero mark in that question. Attempt as many questions as given in objective type question paper and leave others blank. No credit will be awarded in case BUBBLES are not filled. Do not solve question on this sheet of OBJECTIVE PAPER.

Q.No.1

(1) A body of mass 2kg moving with velocity of $4ms^{-1}$ has K.E equal to:-

(A) 16 J (B) 8 J (C) 32 J (D) 2 J

(2) The formula for the speed of satellite orbiting around the Earth is:-

(A) $v = \sqrt{2gr}$ (B) $v = \sqrt{2gR}$ (C) $v = \sqrt{gR}$ (D) $v = \sqrt{\frac{gR}{M}}$

(3) 100 radians are equal to:-

(A) 57.3° (B) 573° (C) 5730° (D) 5.73°

(4) Angular acceleration is produced by:-

(A) Power (B) Torque (C) Pressure (D) P.E

(5) Blood pressure is measures by:-

(A) Hydrometer (B) Barometer (C) Galvanometer (D) Sphygmomanometer

(6) Frequency and time period are related as:-

(A) $fT^{-1} = 1$ (B) $fT^{-2} = 1$ (C) $f^{-1}T = 1$ (D) $fT = 1$

(7) The velocity of sound in air at $0^{\circ}C$ is:-

(A) $332ms^{-1}$ (B) $332cms^{-1}$ (C) $222ms^{-1}$ (D) Zero

(8) Wavelength of a wave for closed pipe having length 'ℓ' in the fundamental mode is:-

(A) 2ℓ (B) $\ell/2$ (C) 4ℓ (D) ℓ

(9) Vibrating tuning fork is a source of:-

(A) Torque (B) Heat (C) Light (D) Sound

(10) The wavelength of $x-$rays is of the order of:-

(A) $10m$ (B) $10^{-10}m$ (C) $10^{-2}m$ (D) $10cm$

(11) Multi-mode step index fibre is useful for:-

(A) Long distance (B) Short distance (C) Infinite distance (D) Very long distance

(12) According to first law of Thermodynamics, the quantity which is conserved:-

(A) Energy (B) Force (C) Momentum (D) Power

(13) The efficiency of a Carnot engine is:-

(A) Infinite (B) Zero (C) Less than one (D) Greater than one

(14) An example of base quantity is:-

(A) Area (B) Volume (C) Length (D) Velocity

(15) The cross product of $\hat{k} \times \hat{j}$ is equal to:-

(A) $\hat{i}$ (B) $\hat{j}$ (C) $\hat{k}$ (D) $-\hat{i}$

(16) The slope of velocity-time graph represents:-

(A) Force (B) Acceleration (C) Power (D) Energy

(17) Horizontal range is maximum when angle of projection is:-

(A) 30° (B) 45° (C) 15° (D) 10°

2017 (S) Roll No: _____

INTERMEDIATE PART-I (11th CLASS)

PHYSICS PAPER-I (OLD SCHEME) (SESSION 2012-2014)

TIME ALLOWED: 3.10 Hours **SUBJECTIVE** MAXIMUM MARKS: 83

NOTE: - Write same question number and its part number on answer book, as given in the question paper.

SECTION-I

Q.No.2 Attempt any eight parts. **8 × 2 = 16**

(i) The period of simple pendulum is measured by a stop watch. What types of errors are possible in the time period?

(ii) The wavelength of a wave depends on the speed "V" of the wave and its frequency "f" knowing that $[\lambda]=[L]$, $[V]=[LT^{-1}]$ and $[f]=[T^{-1}]$. Decide which of the following is correct, $f = v\lambda$ or $f = \frac{v}{\lambda}$.

(iii) Write the dimensions of (i) Pressure (ii) Density

(iv) Define (i) Random error (ii) Systematic error

(v) Can a vector have a component greater than the vectors magnitude?

(vi) Two vectors have unequal magnitudes. Can their sum be zero? Explain.

(vii) If $A + B = 0$, what can you say about the components of the two vectors?

(viii) Point out the importance of an Isolated System.

(ix) Explain the circumstances in which the velocity "v" and acceleration 'a' of a car are:- (i) Parallel (ii) Antiparallel

(x) Show that the range of projectile is maximum when projectile is thrown at an angle of 45° with the horizontal.

(xi) Write two uses of velocity – time graph.

(xii) A person is standing near a fast moving train. Is there any danger that he will fall towards it?

Q.No.3 Attempt any eight parts. **8 × 2 = 16**

(i) A girl drops a cup from a certain height, which breaks into pieces. What energy changes are involved?

(ii) When a rocket re-enters the atmosphere, its nose cone becomes very hot. Where does this energy come from?

(iii) Define and explain Escape Velocity.

(iv) What is meant by Moment of Inertia? Explain its significance.

(v) A disc and a hoop start moving down from the top of an inclined plane at the same time. Which one will be moving faster on reaching the bottom?

(vi) Calculate the orbital speed of geo-stationary satellite.

(vii) Does frequency depends on amplitude for harmonic oscillators? Explain.

(viii) In relation to SHM, explain the equations (i) $Y = A\,Sin(wt + \phi)$ (ii) $a = -w^2 x$

(ix) Differentiate between Free and Forced Oscillations.

(x) Why does sound travel faster in solid than in gases?

(xi) Briefly explain Principle of Superposition of Waves.

(xii) Write two applications of Doppler Effect.

Q.No.4 Attempt any six parts. **6 × 2 = 12**

(i) Under what conditions two or more sources of light behave as coherent sources?

(ii) Can a visible light produce interference fringes? Explain.

(iii) An oil film spreading over a wet footh path show colours. Explain.

(iv) Why would it be advantages to use blue light with compound microscope?

(v) If a person looking through the telescope a full moon, how would the appearance of the moon be changed by covering half of the objective lens?

(vi) Does Entropy of a System increase or decrease due to friction? Explain.

(vii) A thermos flask containing milk as a system is shaken rapidly. Does the temperature of the milk rises?

(viii) Is it possible to construct a heat engine without sink? Explain.

(ix) Why is the average of velocity of a molecule is zero but average of square of velocity is not zero?

P.T.O

SECTION-II

NOTE: - Attempt any three questions of the following:-

5.(a) What is Projectile Motion? Find a relation for height and range of projectile. 1 + 2 +2 = 5

(b) What is the unit vector in the direction of the vector $\vec{A} = 4\hat{i} + 3\hat{j}$ 3

6.(a) What is the difference between Real and Apparent Weight? Discuss the variation of apparent weight in lift moving up and down with an acceleration with respect to lift at rest. 1 + 1 + 1 + 1 + 1 = 5

(b) How large a force is required to accelerate an electron from rest to a speed of $2.0 \times 10^7 ms^{-1}$ through a distance of 5.0 cm? 3

7.(a) State & prove Bernoulli's equation. 1 + 4 = 5

(b) A mechanical engineer develops an engine, working between $327^{\circ}C$ and $27^{\circ}C$ and claims to have an efficiency of 52 %. Does he claim correctly? Explain. 3

8.(a) What is the effect of temperature on speed of sound?

Derive the relation $V_t = V_o + 0.61t$ 1 + 4 = 5

(b) Find the amplitude, frequency and period of an object vibrating at the end of a spring, if the equation for its position, as a function of time, is $x = 0.25Cos\left(\frac{\pi}{8}\right)t$. What is the displacement of the object after 2.0 sec? 3

9.(a) What is Simple Microscope? Draw its rays diagram and derive an expression for the magnification of simple microscope. 5

(b) Sodium light $(\lambda = 589nm)$ is incident normally on a grating having 3000 lines per centimeter. What is the highest order of the spectrum obtained with this grating? 3

SECTION-III (PRACTICAL)

10. (A) Write answers of any four parts. 4 × 2 = 8

(i) What is meant by Zero Error? (ii) State Second Condition of Equilibrium.

(iii) What is Resolution of a Vector? (iv) What is Spring Constant? Write its unit.

(v) What is Critical Angle? (vi) What is Law of Tension?

(vi) What is meant by Resonance? (viii) What is Magnifying Glass?

(B) Write down the brief procedure to show that time period of simple pendulum is independent of the mass of the bob. 3

OR

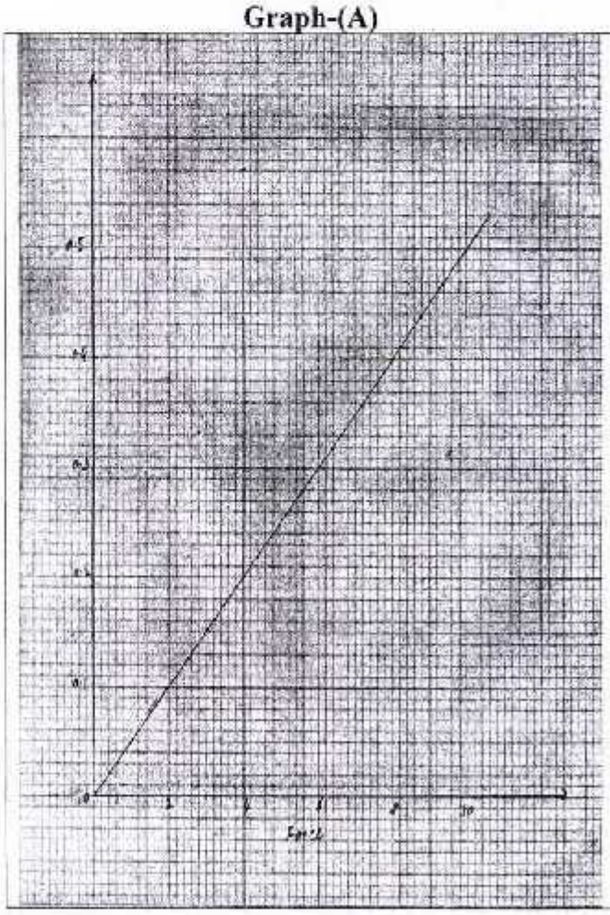
Write down the brief procedure to find speed of sound using resonance tube apparatus by End correction method.

(C) Answer the following questions on the basis of graph drawn below:- 2 × 2 = 4

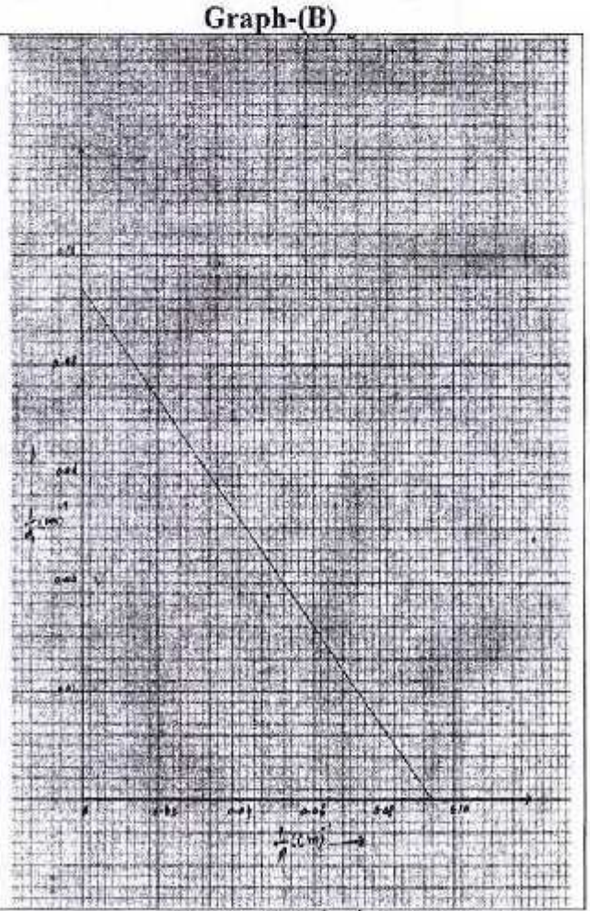
(A) (i) What do you infer from the graph? **OR** (B) (i) Find the focal length of lens from the graph.

(ii) Find the slope of the graph. (ii) When $\frac{1}{p} = 0.07(cm)^{-1}$. Find value of $\frac{1}{q}$.

Graph-(A)



Graph-(B)



Paper Code Number: 6471

2017 (S) Roll No._____

INTERMEDIATE PART-I (11th CLASS)

PHYSICS PAPER-I (OLD SCHEME) (SESSION 2012-2014)

TIME ALLOWED: 20 Minutes **OBJECTIVE** MAXIMUM MARKS: 17

Note: You have four choices for each objective type question as A, B, C and D. The choice which you think is correct, fill that circle in front of that question number. Use marker or pen to fill the circles. Cutting or filling two or more circles will result in zero mark in that question. Attempt as many questions as given in objective type question paper and leave others blank. No credit will be awarded in case BUBBLES are not filled. Do not solve question on this sheet of OBJECTIVE PAPER.

Q.No.1

(1) Age of the Earth in seconds is:-

(A) 1.4×10^{17} (B) 5×10^{17} (C) 3.2×10^{7} (D) 8.6×10^{4}

(2) The angle between $-\hat{i} + \hat{j}$ and $\hat{J} - \hat{K}$ is:-

(A) 30° (B) 75° (C) 45° (D) 60°

(3) The velocity time graph of a particle moving with constant velocity along horizontal path:-

(A) Horizontal straight line (B) Circle (C) Parabola (D) Not a straight line

(4) If $R = 4H$, the angle of projection in projectile motion is:-

(A) 60° (B) 45° (C) 76° (D) 30°

(5) _____ is renewable energy source.

(A) Oil (B) Biomass (C) Natural gas (D) Uranium

(6) The dimension of angular displacement is:-

(A) $[L]$ (B) $[LT^{-1}]$ (C) $[T^{-1}]$ (D) $[L^{0}]$

(7) If the distance of a satellite form the center of earth increases two times then its orbital velocity 'V_o' becomes:-

(A) $\sqrt{2}V_o$ (B) $\frac{1}{\sqrt{2}}V_o$ (C) $\frac{1}{2}V_o$ (D) $2V_o$

(8) The height above the equator for geostationary satellite is:-

(A) 27000 km (B) 30000 km (C) 36000 km (D) 40000 km

(9) For steady flow of incompressible fluid, the density:-

(A) Increases (B) Remains constant (C) Decreases (D) First increases then decreases

(10) The frequency of second pendulum is:-

(A) 10 Hz (B) 0.5 Hz (C) 5 Hz (D) 2 Hz

(11) Value of 'γ' for polyatomic gas is:-

(A) 1.4 (B) 1.67 (C) 1.29 (D) 1.5

(12) If a transverse wave is reflected from the boundary of a rare medium it under goes a phase change of:- (A) 180° (B) 360° (C) 0° (D) 90°

(13) Stars moving towards the earth show:-

(A) Blue shift (B) Red shift (C) Yellow shift (D) Orange shift

(14) The phenomenon of polarization of light reveals that light waves are:-

(A) Longitudinal (B) Mechanical (C) Matter (D) Transverse

(15) Critical angle for glass is:- (A) 41.8° (B) 48.6° (C) 43° (D) 48°

(16) In isothermal process the temperature:-

(A) Increases (B) Decreases (C) Remains constant (D) First increases then decreases

(17) Internal energy of an ideal gas depends upon:-

(A) Volume (B) Pressure (C) Entropy (D) Temperature

Paper Code Number: 6473

2017 (S) Roll No._____

INTERMEDIATE PART-I (11th CLASS)

PHYSICS PAPER-I (OLD SCHEME) (SESSION 2012-2014)

TIME ALLOWED: 20 Minutes **OBJECTIVE** MAXIMUM MARKS: 17

Note: You have four choices for each objective type question as A, B, C and D. The choice which you think is correct, fill that circle in front of that question number. Use marker or pen to fill the circles. Cutting or filling two or more circles will result in zero mark in that question. Attempt as many questions as given in objective type question paper and leave others blank. No credit will be awarded in case BUBBLES are not filled. Do not solve question on this sheet of OBJECTIVE PAPER.

Q.No.1

(1) The frequency of second pendulum is:-

(A) 10 Hz (B) 0.5 Hz (C) 5 Hz (D) 2 Hz

(2) Value of 'γ' for polyatomic gas is:-

(A) 1.4 (B) 1.67 (C) 1.29 (D) 1.5

(3) If a transverse wave is reflected from the boundary of a rare medium it under goes a phase change of:- (A) 180° (B) 360° (C) 0° (D) 90°

(4) Stars moving towards the earth show:-

(A) Blue shift (B) Red shift (C) Yellow shift (D) Orange shift

(5) The phenomenon of polarization of light reveals that light waves are:-

(A) Longitudinal (B) Mechanical (C) Matter (D) Transverse

(6) Critical angle for glass is:- (A) 41.8° (B) 48.6° (C) 43° (D) 48°

(7) In isothermal process the temperature:-

(A) Increases (B) Decreases (C) Remains constant (D) First increases then decreases

(8) Internal energy of an ideal gas depends upon:-

(A) Volume (B) Pressure (C) Entropy (D) Temperature

(9) Age of the Earth in seconds is:-

(A) 1.4×10^{17} (B) 5×10^{17} (C) 3.2×10^{7} (D) 8.6×10^{4}

(10) The angle between $-\hat{i} + \hat{j}$ and $\hat{J} - \hat{K}$ is:-

(A) 30° (B) 75° (C) 45° (D) 60°

(11) The velocity time graph of a particle moving with constant velocity along horizontal path:-

(A) Horizontal straight line (B) Circle (C) Parabola (D) Not a straight line

(12) If $R = 4H$, the angle of projection in projectile motion is:-

(A) 60° (B) 45° (C) 76° (D) 30°

(13) _____ is renewable energy source.

(A) Oil (B) Biomass (C) Natural gas (D) Uranium

(14) The dimension of angular displacement is:-

(A) $[L]$ (B) $[LT^{-1}]$ (C) $[T^{-1}]$ (D) $[L^{o}]$

(15) If the distance of a satellite form the center of earth increases two times then its orbital velocity 'V_o' becomes:-

(A) $\sqrt{2}V_o$ (B) $\frac{1}{\sqrt{2}}V_o$ (C) $\frac{1}{2}V_o$ (D) $2V_o$

(16) The height above the equator for geostationary satellite is:-

(A) 27000 km (B) 30000 km (C) 36000 km (D) 40000 km

(17) For steady flow of incompressible fluid, the density:-

(A) Increases (B) Remains constant (C) Decreases (D) First increases then decreases

Paper Code Number: 6475

2017 (S) Roll No._____

INTERMEDIATE PART-I (11th CLASS)

PHYSICS PAPER-I (OLD SCHEME) (SESSION 2012-2014)

TIME ALLOWED: 20 Minutes **OBJECTIVE** MAXIMUM MARKS: 17

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Paper Code

Number: 6477

2017 (S) Roll No._____

INTERMEDIATE PART-I (11th CLASS)

PHYSICS PAPER-I (OLD SCHEME) (SESSION 2012-2014)

TIME ALLOWED: 20 Minutes **OBJECTIVE** MAXIMUM MARKS: 17

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BOARD OF INTERMEDIATE AND SECONDARY EDUCATION, MULTAN

OBJECTIVE KEY FOR INTER (PART-I / II) Annual Examination, 2017.

Name of Subject Physics — Session

Group: 1st New Scheme

Q. Nos.	Paper Code 2471	Paper Code 2473	Paper Code 2475	Paper Code 2477
1.	C	B	C	A
2.	D	B	B	C
3.	B	A	D	C
4.	B	C	D	B
5.	A	C	A	D
6.	C	D	C	D
7.	C	B	D	A
8.	B	B	B	C
9.	D	A	B	D
10.	D	C	A	B
11.	A	C	C	B
12.	C	B	C	A
13.	D	D	D	C
14.	B	D	B	C
15.	B	A	B	D
16.	A	C	A	B
17.	C	D	C	B
18.				
19.				
20.				

Group: 2nd old Scheme

Q. Nos.	Paper Code 6471	Paper Code 6473	Paper Code 6475	Paper Code 6477
1.	A	B	A	B
2.	D	C	C	B
3.	A	C	B	D
4.	B	A	B	A
5.	B	D	C	C
6.	D	A	C	B
7.	A	C	A	B
8.	C	D	D	C
9.	B	A	A	C
10.	B	D	C	A
11.	C	A	D	D
12.	C	B	A	A
13.	A	B	D	C
14.	D	D	A	D
15.	A	A	B	A
16.	C	C	B	D
17.	D	B	D	A
18.				
19.				
20.				

سرٹیفکیٹ بابت تصحیح سوالیہ پرچہ/مارکنگ Key

ہم نے مضمون Physics پرچہ I گروپ ____ سکیم New, old انٹر/ سالانہ امتحان 2017 کا سوالیہ پرچہ انتہائی غور وخوض (Subjective & Objevtive) کو بنظر عمیق چیک کرلیا ہے یہ پرچہ سلیبس کے عین مطابق Set کیا گیا ہے۔اس سوالیہ پرچہ میں کسی قسم کی کوئی غلطی نہ ہے۔ہم نے سوالیہ پرچہ کا اردو اور انگریزی Version بھی چیک کرلیا ہے یہ Version آپس میں مطابقت رکھتے ہیں اور سلیبس (Syllabus) کے مطابق بھی ہیں۔نیز اس پرچہ کی Key کی بابت بھی تصدیق کی جاتی ہے کہ یہ بھی درست بنائی گئی ہے۔اس میں بھی کسی قسم کی کوئی غلطی نہ ہے۔

مزید یہ کہ ہم نے Key بنانے سے متعلق دفتر کی جانب سے تیارہ کردہ ہدایات وصول کر کے ان کا بغور مطالعہ کرلیا ہے اور ان کی روشنی میں Key بنائی ہے۔

PREPARED & CHECKED BY

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