

MODEL PAPER ‘PHYSICS’
Secondary School Annual Examination 2008 And Onward

Roll No.
In Figures _____
In Words _____

OBJECTIVE

Time: 20 Minutes

Marks:17

Note: Write your Roll No. in space provided. Over-writing, Cutting, Using lead pencil will result in loss of marks.

Q.No.1. Select the correct answer.

17

- (i) Rate of change of velocity is called:
(a) Displacement (b) Acceleration (c) Distance (d) Relative Motion
- (ii) If the mass of a body is doubled, while keeping the force constant, then the acceleration will be:
(a) one half, (b) doubled. (c) one fourth, (d) four times,
- (iii) Two forces of 5 N each act on a body, what can be their maximum resultant.
(a) 0 N, (b) 10 n, (c) 5 N, (d) 2.5 N
- (iv) How many times centripetal force will increase, if the mass of the body moving with uniform speed in a circle is doubled:
(a) two times, (b) six times, (c) four times, (d) eight times,
- (v) Which is the unit of work in SI system|?
(a) watt (b) meter (c) Newton (d) Joule
- (vi) At what temperature the surface tension of a liquid will b e maximum?
(a) 0 C (b) 20 C (c) 80 C (d) 100 C
- (vii) When water changes to ice, it.
(a) contracts (b) expends
(c) become dense (d) remains the same
- (viii) Which material is better for insulation?
(a) Glass (b) Air (c) Brass (d) Fiber glass
- (ix) If the mass of a bob of a simple pendulum is doubled its time period:
(a) doubled (b) become four times
(c) remains the same (d) none of the above
- (x) Focal length of a concave lens is:
(a) positive (b) negative (c) greater (d) smaller
- (xi) The instrument which stores charge is known as:
(a) electroscope (b) conductor (c) capacitor (d) capacitance
- (xii) As the temperature of a conductor rises, its resistance:
(a) increases (b) decreases
(c) does not change (d) become zero
- (xiii) The N-type crystal, the majority carrier are.
(a) holes (b) free electrons (c) protons (d) positrons
- (xiv) If the image is virtual, then its distance from the lens is taken:
(a) positive (b) negative (c) doubled (d) half
- (xv) A ball is dropped from the top of a tower. The distance traveled by it in the first second is:
(a) 5 m (b) 50 m (c) 100 m (d) 10 m
- (xvi) The weight of a body of mass 0.5 Kg is.
(a) 10 N (b) 5 N (c) 0.5 N (d) 1 N
- (xvii) Which is the unit of power in system International?
(a) Watt (b) Joule (c) Newton (d) Meter

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SUBJECTIVE

Time: 2:10Hours

Marks: 68

Q.No.2. Write short answers of any twenty-two of the following. (22x2)=44

- (i) What is meant by velocity?
- (ii) What is momentum?
- (iii) Define work and name its unit.
- (iv) State Newton's first Law of Motion.
- (v) What is vector? Give an example.
- (vi) What is a scalar quantity? Give an example.
- (vii) What is center of gravity?
- (viii) How can a body be in equilibrium?
- (ix) What is a Circular Motion?
- (x) What is a centripetal force?
- (xi) Define power and write its unit.
- (xii) What is meant by efficiency of a machine?
- (xiii) What is the efficiency of an inclined plain?
- (xiv) What is mechanical advantage?
- (xv) What is meant by the resistance of a resistor? What is its unit?
- (xvi) What is linear expansion?
- (xvii) What is friction? Is it useful for us?
- (xviii) How does the density of water change when its teperature is increase from 0 C to 4 C?
- (xix) Define specific Heat capacity?
- (xx) What is the relation between frequency and time period of a wave? Write its mathematically.
- (xxi) How is sound produce and how does it travel?
- (xxii) What is linear magnification?
- (xxiii) What is meant by the focal length of a lense?
- (xxiv) What is capacitor?
- (xxv) What is meant by the power of a lens?
- (xxvi) State Ohm's law and explain it mathematically.
- (xxvii) A car travels 154 Km in 2 hrs and 45 mts. Find its average speed.
- (xxviii) A body of mass 5 Kg is moving at 8m/Sec. Find its Kinetic energy.
- (xxix) The velocity of a body changes from 5m/Sec to 20 m/S in 5 Sec. Find its acceleration.
- (xxx) What is a couple?
- (xxxi) What is an earth wire in an electric circuit and what is its advantage?
- (xxxii) Make the TRUTH table of an AND gate.
- (xxxiii) What is a critical angle?

Note. Write answers of any three questions. (8x3)=24

Q.No.2.

- (a) Prove the equation $S=Vit+1/2 at^2$. 4
- (b) The mass of a car is 1000 Kg. How much force is needed to change its velocity from 10m/Sec to 20m/Sec in 5seconds? 4

Q.No.3.

- (a) State the two equations of equilibrium. 4
- (b) An electric motor lifts a mass of 40 Kg to a height of 5 m in 4 seconds. Find the power of the motor. 4

- Q.No.4.**
- (a) Explain Pascal's Law. Give two advantages of Pascal's Law. 4
 - (b) 200 g of water at 10 C was mixed with 300 g of water at 70 C. find the final steady temperature of water. 4
- Q.No.5.**
- (a) What is wave? What are its two kinds. Give one example of each. 4
 - (b) An object of 2cm height is place in front of a convex lens of focal length 14cm. Where should the object be placed so as to get a real image 4 cm high. 4
- Q.No.6.**
- (a) State Coulomb's Law and express it mathematically. 4
 - (c) Two resistors of $3K\Omega$ and $6K\Omega$ are connected in parallel and then Connected to the terminals of a battery of 6 V. 4
- Find
- (i) The combined resistance of the combination.
 - (ii) Current flowing through each resistor.