

PHYSICS 1 – FYGS – SEM 1

PRACTICE TEST QUESTION

1	A frame in which newtons first law is not valid is known as _____. a) non-inertial frame of reference b) inertia c) inertial frame of reference d) newtons first law
2	A cricket ball of mass 350 g is moving with a velocity of 14 m/s and is hit by a bat so that the ball is turned back with a velocity of 24 m/s. the force of the blow acts for 0.035 s. find the average force exerted on the ball by bat. a) 267 N b) 380 N c) 400 N d) 230 N
3	Friction is a _____. a) Contact force b) non-Contact force c) magnetic force d) electromotive force
4	Total shear strain is the result of two tensile strains perpendicular to each other, one corresponds to compression ($\theta/2$) and other corresponds to extension _____ at right angles to each other. a) $\theta/2$ b) $3\theta/2$ c) θ d) $\theta/4$
5	Motion of a liquid in a tube is best described by _____. a) Bernoulli theorem b) Poiseuille's equation c) Stoke's law d) Equation of continuity
6	What is the lens? a) An image – forming device b) An image – producing device c) An image – reflecting device d) An object – reflecting device
7	What is the reciprocal, of the length of radius of curvature? a) Focal length

	b) Curvature c) Optical centre d) Power
8	If the lens is placed in water, then the refractive index with respect to water will be _____ a) $m=a/b$ b) $m=b/a$ c) $m \cdot a=b$ d) $m/b=a$
9	When will the convex lens give a real image? a) Beyond optical centre b) Beyond focus c) Beyond centre of curvature d) Between focus and curvature
10	In the case of a concave mirror, the image of an object is (a) Real, erect and diminished when the object lies beyond the centre of curvature. (b) Real, inverted and of the same size as the object when it lies between the centre of curvature and focus. (c) Real, inverted and diminished when the object lies beyond the centre of curvature. (d) Not real, large and un-proportional.
11	Certain quantity of perfect gas at NTP is compressed adiabatically to one fourth of its original volume. Calculate the resulting pressure and temperature ($\gamma = 1.4$). a) Pressure = $6.95 \times 10^5 \text{ N/m}^2$ and Temperature = 475.3 K b) Pressure = $95 \times 10^5 \text{ N/m}^2$ and Temperature = 75.3 K c) Pressure = $1 \times 10^5 \text{ N/m}^2$ and Temperature = 475.3 K d) Pressure = $6.05 \times 10^5 \text{ N/m}^2$ and Temperature = 280 K
12	Which of the following is the largest unit of energy? a) electron volt b) joule c) calorie d) erg

13	If two objects give the feeling of being equally hot or cold, they are said to have the same temperature and the objects are said to be in _____ with each other. a) isothermal expansion b) thermal equilibrium c) isothermal compression d) thermally insulated
14	Heat energy flows from one system to another system as a result of _____. a) temperature difference only. b) pressure difference only. c) volume difference only. d) adiabatic difference only.
15	If the amount of heat is required to raise the temperature for 1 mole of a substance through one degree. then it is called_____. a) Specific heat b) molar Specific heat c) internal energy d) heat capacity