Class -11 science

Subject -Physics

MM-30 Time -1hr

Note-Allquestions are compulsory .

Section -A(1×5=5)

Q-1Pascal-second has the dimensions of

(a) Energy (b)Pressure

(C) Coefficient of viscosity (d)Force

Q-2The ratio of planks constant and that of moment of inertia is the dimensions of

(a) Frequency (b) velocity

(C)Angular momentum (d) time

Q-3which of the following is not the unit of distance?

(a) Light year (b) Astronomical unit(c)parsec(d)nano second

Q-4which of the following is not the unit of length (a) angstrom (b)fermi (c) light year

(d)barn

Q-5SI unit of energy is J=Kgm*2s*-2 that of speed (v)ism/s and of acceleration (a)is m/s2 which of the following is correct formula for kinetic energy K ofa particle of mass m?(a)K=m2v3 (b)K=1/2mv*2

(C)3/16mv*3

(d)K=ma

Section-B (4×2=8)

Q-6 calculate the dimensional formula of1) Coefficient og viscosity . (2)

b) capacitance

Q-7what do you mean by 1)steradian

2)parsec. (2)

Q-8 calculate the angleof(i)1mint (ii)1degree in radian. (2)

Q-9Check the correct ness of the physical relation

V= √2√G√M/√R where symbols having usual meaning. (2)

Section -c (3×4=12)

Q-10 convert the value of G=6.67×10*-8 dyne cm*2/g in to SI system.

Q-11 In the Gas equation (P+a/V*2)(V-b)=RT, where Tis absolute temperature,p is pressure and Vis volume

Then find the dimensions of a andb.

Q12 write the dimensions of axb in the relation E=b-x*2/at where E is energy,x is the displacement,tistime.