

PAF Initial Tests of Physics

1-the study of charges at rest is called as:

Electrostatics

2-the conversion of matter into energy includes the phenomenon of:

Annihilation of matter

3-A photon loses all its entire energy during:

Photoelectric effect

4- the capacitance of two capacitors combined in parallel would be:

2C

5-one light year=:

a- $9.5 \times 10^{15} \text{m}$

6-The energy of a photon of wavelength 1 angstrom?

1.989×10^{-15}

7-if the temperature of sun is increased 4 times then what would be the effect on the beat of earth?

a- 8

b- 4

c-16

8- a for award biased pn junction is:

Closed switch

9-a reverse biased on junction is:

Off switch

10- in a pure resistive circuit voltage and current are:

in phase

11-the unit of viscosity is:

Nsm⁻²

12- the angular acceleration of a body having 2Nm^{-2} moment of inertia and 2000 torque is:

1000rad/s²

13- the no. of significant figures in 0.0001 is:

One

14- if two vectors of equal magnitude have a resultant also equal to their magnitude then the angle between them is:

120°

15- in the absence of an external force, the momentum of the body:

Remains conserved

16- which of the following is a non-conservative force:

Frictional force

17- the velocity required to escape the earth's surface is:

11 kms⁻¹

18- the relationship between linear and angular frequency is:

19- the force acting on a satellite is:

mv^2/r

20- The unit for spin angular momentum is?

A joule second

21- for a body moving upwards:

$w+ma$

22- the place where area increases the velocity:

Decreases

23- the angular acceleration is equal to:

$-\omega^2 x$

24- which angle tells the displacement and direction as well:

Phase

25- the energy absorption for resonance is:

Maximum

26- which waves are standing waves:

a- electromagnetic

b- longitudinal

c- transverse

27- for an aero plane moving towards the airport the apparent frequency

: Decreases

28- energy can neither be created nor destroyed is:

1st law

29- F/q is:

Electric field intensity

30- resistivity is dependent on:

Temperature

31- the motional emf of the rod increases with:

Increase in velocity

32- a pn junction could be used as:

Rectifier

33- the square of the average value is called:

Mean square

34- the ratio of stress to strain is:

Elastic modulus

35- stress is proportional to strain according to which law:

Hooke's law

36- high carbon steel is an example of;

Brittle substance

37- a p type semiconductor results when the impurity is added from: 3rd group

38- the charge on a p type semiconductor is:

Neutral

39- a photo diode is operated in:

Reverse biasing

40- the most suitable idealization of black body is:

Blackened surface with a hole

41- the emission of electron from a surface is:

Photo electric effect

42- the frequency in Compton effect:

Decreases

43- photo electric effect shows the:

Particle nature of light

44- the ionization potential energy for an electron is:

-13.6eV

45- the correct relation is:

half-life= $0.693/\lambda$

46- a neutron is equal to:

One up n two down quarks

47- unit of mutual induction:

Henry H= A/S

48- phase change when wave travelled from denser to rare medium:

No phase change

49- capacitance in parallel combination :

V= same and Q = different

50- capacitance in series combination :

V= different and Q = same

51- unit of power in case of volt:

Watt

52- helium atom is :

Alpha particle

53- photo electric effect show which nature of sub atomic particle:

Particle nature

54- what happen to frequency when source moves away from observer:

Pitch of sound decrease

55- when observer is in condition of moving what will be constant:

Wave length

56- when source moving then:

Velocity $V = \text{constant}$

57- dual nature mean :

Wave behave like particle and particle behave like wave

58- what happened to wave length and pitch of sound when observer move closer to source:

Wave length same and pitch of sound increase

59- who devised the dual nature of sub atomic particle:

DE Broglie in 1924

60- threshod frequency depend upon what:

Nature of material / metal and frequency of photon or incident photon frequency

61- unit of viscosity:

62- unit of induction :

Henry $H = A/s$

63- the process when mass converted into energy :

Inhalation of matter

64- the emission power of black body is:

Highest monochromatic at all wavelength

65- the length of pendulum increase by 4 times then time period will be :

Two

66- which reaction take place in sun:

Fusion reaction

67- when light wave travelled from denser to rare medium it phase different will be: No phase change

68- semiconductor has valence band:

Half valence band

empty conductor band is :

Band of orbital that are high in energy and no free electron

70- addition of impurity to semi-conductor is called:

Doping

71- P type material contain:

Holes

72- holes are particle that:

Vacancy of electron

73- the largest e/m ratio is of :

Electron

74- the absorption power of black body radiation is :

Remain same or constant

75- donor doping is in:

N type material

76- acceptor doping is in:

P type material

77- when a paratrooper jump from plain . His weight before opening parashoot is : Double

78- weight of man on going up:

Decrease

79- 1 radian is equal to :

$360^\circ / 2\pi = 57.3^\circ$

80- dimension of viscosity:

$[M^\circ L^{-1} T^{-1}]$

81- dimension of acceleration :

$[M^\circ L^\circ T^{-2}]$

82- dimension of power:

[$M^1 L^2 T^{-3}$]

83- unit of power:

Js-1= kg m²s⁻³

84- direction of current and potential difference :

In Phase

85- unit vector of $4i, 2j, 4k$:

86- cross product of $4i, 6j$:

87- if $\sum \tau = 0$ and $\sum F = 0$ then is it equilibrium :

Yes it is equilibrium

88- mechanical wave required :

Medium

89- example of transverse wave :

Light wave (mechanical wave)

90- what is standing wave:

Stationary wave

91- photo electric effect occur in :

Ultra violet light

92- centripetal force $F = ?$

$F = mv^2 / r$

93- direction of centripetal force:

Toward the center of circle

94- when a body move with speed of light it mass will be:

Zero (because weightlessness created)

95- holes are :

P type material and negative by nature

in conductor the valence band is :

Valence band is above the bottom of conduction band.

97- germanium and silicon has valency of:

4 valence

98- when impurity added to germanium from 5th group the it is called : Pentavalent (N type)

99- 2 capacitor are joined parallel the equivalent capacitor is :

2C

100- energy on sun due to:

Nuclear fusion

101- formula for acceleration in SHM:

102- ammeter used to measure:

Electric current

103- primary V= 220. If number of turn increase in secondary coil then what will be resistance :

Same

104- heighest e/m ratio is :

Electron

105- dimension of self induction :

[M² L²T⁻²A⁻²]

106- 1 ev = ?

1.602 x 10⁻¹⁹ j

107- magnetic lines are called :

Line of force

108- columb force F = ?

$F = k \frac{q_1 q_2}{r^2}$

109- alpha partical are :

Helium nuclei

110- absolute zero in fahrenheit scale:

459.67

111- unit of magnetic flux:

Weber Nm/A

112- spectrum of black body:

Continuous spectrum

113- second ionization of mercury:

$X + X^{2+} + e$

114- device which just run AC voltage

Transformer, capacitor, inductor and resistor etc

115- when perpendicular force act on body it will move on :

No motion but produce torque

116- unit of magnetic flux density:

Tesla $T = \text{wb}/\text{m}^2$

117- equation of continuity:

$A_1V_1 = A_2V_2$

118- particle nature shown by :

Photoelectric effect, Compton effect, pair production and e/m ratio of electron

Interference, diffraction, polarization etc

120- when source moving then:

Wavelength = decrease, $V = \text{constant}$ and $f = \text{increase}$

121- when observer moving then:

Wavelength = constant, $v = \text{increase}$, $f = \text{increase}$

122- mass convert to energy is:

Annihilation of matter

123- energy convert to mass:

Pair production.

124- in black body when temperature increase then:

Radiation will be richer in shorter wavelength

125- in black body when temperature decrease then:

Radiation will be richer in high wavelength

126- temperature inversely proportional to wavelength only in case of:

Black body radiation

127- semi-conductor is:

Partially filled Valence and conduction band

128- p type material :

Holes (trivalent)

129- N type material:

Electron (pentavalent)

130- direction of centripetal force is toward:

Center of circle and remain constant

131- $0^{\circ}\text{K} = ?$

273.16 $^{\circ}\text{C}$

132- formula for kelvin K:

$$K = C^{\circ} + 273$$

133- formula for fahrenheit F:

$$F = 9/5 (C^{\circ} + 32)$$

134- formula for centigrade C:

$$C^{\circ} = 5/9 (F - 32)$$

◆ Past Initials of GDP_Physics ◆

Physics portion was very easy . I remember some questions that I want to share

1- when light waves enter from rarer medium to denser medium the phase change will be? (180°)

2- when waves enter from denser to rarer medium then phase change will be ?(0°)

3- wave equation

4- dimension of viscosity

5- current measuring device?(ammeter)

6- unit of impedence ? (Henry)

7- absorbtion power of black body? (I think 1 BT not confirmed)

8- rejection power of black body?(I think 0 .confirme kr lejeay ga.)

9- which has maximum e/m value?

10- count significant figuers ?

11- calculate area of following.. And calculate significant figures.

12- wiens equation

13- reaction taking place in sun ??

Absorption power of perfect black body.(1)

Absorption ability of black body

(Maximum or infinity)

Aeroplane coming toward airport its apparent frequency

(Increase)

Same but move away from airport