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1001 Powerful Jamb Physics Key Points



Modified On Dec 3, 2021 By Isaac

Welcome to another edition of [Flashlearners Jamb Guide](#). Hope you are getting set for your Jamb examination? Here are **Updated** key Points in Jamb Physics to aid your studies. The Physics Questions in this article are repeated questions in Jamb Physics.

I have prepared these **Jamb key points** based on hot topics set in **Jamb physics**. I will be releasing them in a series of 50 hot Likely Physics questions from all the Jamb Physics topics.

The 1000 points will cover every topic in Jamb Physics. However, the key points will not be arranged topic by topic. I have already worked on **Jamb Biology repeated Questions**, Mathematics, **Chemistry Key Points**, CRS and the **Use of English**. You may also [click here](#) to go solve free Jamb questions online in all subjects.

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10 Key Points on Jamb Physics

1) The classification of Wave are:

- Mechanical Wave (E.g Water and Sound Wave)
- Electromagnetic Wave (E.g Gamma and X-Rays)
- Progressive/Travelling Wave (Water And Sound)

- Stationary/Standing Wave (Nodes And Antinodes)
- Longitudinal Wave (E.g Sound Waves)
- Transverse Wave (E.g Waves in Pipe and Strings).

2) Stationary Wave occurs when two interfering waves of the same amplitude and frequency travel in the opposite direction.

3) The velocity of Sound In:

- Air is 332m/s
- Water (Liquid) is 1435m/s
- Iron (Solid) is 5000m/s

4) The velocity of **Echo** is equal to the total distance travelled by the sound divided by the time taken.

5) The quality of sound depends on the number of overtones or harmonics. It makes it possible to distinguish between two instruments playing the same note.

6) Vibration can either be free, forced or resonance.

7) An eclipse occurs due to the travel of light in a straight line.

8) The application of plane mirrors is Periscope, Kaleidoscope and Sextant.

9) Refraction occurs at a constant frequency.

10) Hydrogen spectrum has all colours of white light, Sodium vapour has a yellow line (spectrum) and Mercury vapour has Blue and Green spectrum.

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20 Hot Points And Jamb Physics Topics

11) Another word for electrolysis is the chemical effect of current.

12) Passage of current through liquid doesn't obey Ohms law.

13) Magnetic fields are oval in shape.

- 14) The angle of dip is 90 degree at the magnetic poles and zero at the equator.
- 15) The strength of Magnet is greatest at the pole.
- 16) All electric charges are multiples of the charges of an electron.
- 17) Factors affecting capacitance are Area of plates, distance between the plates and dielectrics between the plates.
- 18) Examples of dielectric materials are Paraffin wax, Polythene, Ebonite and Glass.
- 19) Sliding friction is less than limiting friction.
- 20) EMF is the algebraic sum of potential difference acting in a circuit.

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30 Questions From Hot Topics in Jamb Physics

- 21) Electromagnetism is the production of current from Magnet.
- 22) In a closed circuit, the induced EMF gives rise to induced current.
- 23) Eddy current is used in damping moving coil, speedometers and induction coil.
- 24) The transformer steps up or steps down voltage at the same frequency.
- 25) The Inductor finds application in choke making industry.
- 26) Choke is used for varying current.
- 27) The induced voltage is equal to the rate of change of magnetic flux.
- 28) Solar cells convert sunlight energy directly into electrical energy.
- 29) Local action is caused by impurity of zinc plate.
- 30) Eddy current is reduced by lamination.

40 Hot Key Points In Jamb UTME Physics

- 31) The induction coil is used to step up voltage in DC circuit.

- 32) The generator operates based on the principle of self-induction.
- 33) DC doesn't oscillate and as such does not have a frequency.
- 34) Telephone receiver or earpiece works on the principle of magnetic effect of current.
- 35) Plane mirrors do not enlarge or reduce the size of object. Object size is the same as image size.
- 36) Factors affecting resistance are:
- Length of conductor.
 - Area of conductor.
 - Temperature and
 - Type of material used.
- 37) Triangular prism with two convex lenses is used to produce a pure spectrum.
- 38) If light energy is less than the work function, no electron will be emitted and vice versa.
- 39) Work function is the energy that can produce threshold frequency ($W=hf$).
- 40) The uncertainty principle only works for atoms and not ions.

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80 Likely Jamb Physics Questions And Notes

- 41) The applications of total internal reflection are Mirage and Fish view under water.
- 42) Binding energy is the reason for mass defect.
- 43) Bismuth is diamagnetic.
- 44) Current is the rate of flow of charge.
- 45) Kirchhoff's current law states that the algebraic sum of currents flowing into the circuit is equal to the algebraic sum of currents leaving the circuit.
- 46) Kirchhoff's voltage law states that the sum of all the voltages around circuit loop is equal to

zero.

47) Example of refrigerants is Ammonia and Ethyl Chloride.

48) Kaleidoscope is designed to obtain different color patterns.

49) To convert a Galvanometer to Ammeter, a low resistance called shunt is connected in parallel with the meter.

50) As temperature increases, the speed of sound increases.

51. The ground is always cold at night because the earth radiates heat to the atmosphere at night.

52. The escape velocity of an object from gravitational field of the planet increases with mass of the object and also increases with the mass of the planet. Escape velocity, $v = \sqrt{2Gm_p/r_p} = \sqrt{2g_p r_p}$

53. A transverse wave and a longitudinal wave travelling in the same direction in a medium differ essentially in their direction of vibration of the particles of the medium.

54. The different time rates of flow of fluid is due to viscous force.

55. The electrical property of germanium can be altered drastically by the addition of impurities. The process is referred to as **doping**.

56. The wave property which can be used to confirm water to be a transverse wave is **Polarization**.

57. In a common-emitter configuration, the output voltage is through the **base**.

58. When a ball rolls on smooth level ground, the motion of its centre is **Translational**

59. A vapour whose molecules are in dynamic equilibrium with those of its own liquid is said to be **Saturated**.

60. In a good thermos flask, the main cause of heat loss is the silvered walls and shiny metals.

61. The north pole of a magnet can never be separated from the south pole because of a property known as **magnetic dipole**.

62. An iron spoon placed inside hot tea becomes hot due to the **conduction** of heat from the tea through the surface of the spoon.

See Also: [How to Score 350+ With Past Questions](#)

63. A constant-volume gas thermometer operates under which gas law? Pressure law.

64. A vapour whose molecules are in dynamic equilibrium with those of its own liquid is said to be **Saturated**.

65. Red light travels faster than blue light when both of them pass through a glass prism because the refractive index of blue light is greater than that of red light.

66. **Heat** reaches the food which is being cooked in a saucepan chiefly by **Conduction and Convection**.

67. The force that tend to pull an object undergoing circular motion towards the centre is Centripetal.

68. Radiation is energy travelling through space.

69. A body cannot undergo “relative motion”. Relative motion usually involves two bodies.

70. The type of wave emitted by a loudspeaker is Longitudinal.

71. The prolongation of sound wave after which the source has been withdrawn is called Reverberation.

72. The mouthpiece of a telephone primarily converts sound energy into **Electrical**.

73. The quality of a musical note depends on what? Harmonics

74. The resultant force in a couple is **Zero**

74. The most suitable instrument for measuring the diameter of a thin wire accurately is a micrometer screw gauge.

75. A rainbow viewed through a blue sheet of glass will appear blue.

76. The slope of a straight-line velocity-time graph represents uniform acceleration.

77. The unit cycle per second is the same as hertz.

78. Trombone is a wind instrument.

79. A chemical balance is used for measuring mass

80. Sound wave cannot be polarized.

120 Repeated Questions In Jamb Physics

81. Neurons were discovered by who?

Answer: James Chadwick in 1932

82. The mass of a nucleus is the...

Answer: Total number of its proton and neutrons.

83. Three resistors with resistance of 200Ω , 500Ω and $1k\Omega$ are connected in series. A 6v battery is connected to either end of the combination. Calculate the potential difference between the ends of 200Ω resistance.

Answer: 0.71V

84. An a.c 1A at a frequency of 800 cycles per second flows through a coil, the inductance of which is 2.5mH and the resistance of which is 5Ω . What is the power absorbed in the coil?

Answer: 5W

85. In a semi-conductor, the carriers of current at room temperature are

Answer: Electrons and Holes

86. When a girl moves towards a plane mirror at a speed of 4m/s, the distance between the girl and her image reduces a speed of

Answer: 8m/s

87. One newton x one meter equals?

Answer: One Joule

88. A single force which produces the same effect as a set of forces acting together at a point is known as the

Answer: Resultant

89. Calculate the velocity ratio of a screw jack of pitch 0.2cm if the length of the tommy bar is 23cm

Answer: 230

90. The earth's magnetic equator passes through Jos in Nigeria. At Jos, the angle of dip is?

Answer: Zero

91. A car moving at 20m/s is with its horn blowing ($f=1200\text{Hz}$) is chasing another car going at 15m/s. What is the apparent frequency of the horn as heard by the driver being chased?

Answer: 1.22KHz

92. What is Wavefront?

Answer: Wave front is a line or section taken through an advancing wave in which the particles are in Phase.

93. The point at which the molecules of a loaded wire begin to slide across each other resulting in a rapid increase in extension is

Answer: Yield Point

94. The lower part of a faulty thermometer reads 2°C while the upper fixed point is 100°C . What is the temperature when the thermometer reads 51°C ?

Answer: 50°C

95. If a body moves with a constant speed and at the same time undergoes an acceleration, its motion is said to be

Answer: Circular

96. A boy pushes a 500kg box along a floor with a force of 2000N. If the velocity of the box is uniform, the co-efficient of friction between the box and the floor is

Answer: 0.4

97. When two objects A and B are supplied with the same quantity of heat, the temperature change in A is obtained to be twice that of B. The mass of P is half that of Q. The ratio of the specific heat capacity of A to B is

Answer: 1:1

98: The volume of 0.354g of Helium at 273°C and 114cm of mercury pressure is 2667cm³. Calculate the volume

Answer: 200.026cm³.

99. In the molecular explanation, heat is transferred by the

Answer: Free electrons

100. Which characteristic of a wave is used in the measurement of the depth of the Sea?

Answer: Reflection

101. If the attraction of the sun is suddenly ceased, the earth would continue to move in a straight line making a tangent with the original orbit. This statement is derived from which Newton's law?

Answer: First law of motion

102. By which heat transfer method does heat travel through a vacuum?

Answer: Radiation

103. The part of the eyes that does similar work as the diaphragm of a camera lens is the?

Answer: Iris

104. A projectile of mass 4kg is fired vertically and reaches a maximum height of 1m. Calculate the potential energy of the highest point ($g=10\text{ms}^{-2}$)

Answer: 1600J

105. The length of the second hands of laboratory clock is 0.1m. Calculate the speed at the

top of the second hand

Answer: $1.05 \times 10^{-2} \text{ms}^{-1}$

106. Work done on an object to bring it to a certain point in space is called?

Answer: Gravitational Potential Energy

107. A copper rod, 5m long when heated through 20°C , expanding by 1mm. If a second copper rod, 2.5m long is heated through 5°C , by how much will it expand?

Answer: 0.25mm

108. A safety precaution designed to prolong the life of a lead acid accumulator is

Answer: Keeping the specific gravity of the electrolyte within a specified range.

109. The mass of water vapour in a given volume of air is 0.05g at 20°C , while the mass of water vapour required to saturate it at the same temperature is 0.15g. Calculate the relative humidity of the air

Answer: 33.33%

110. The angular dispersion of a prism depends on the Index of refraction.

111. The efficiency of conduction in liquids and gases compared to solid is Less efficient than solid.

112. The first condition of equilibrium states that?

Answer: Sum of all forces acting on a body is Zero

113. How can you determine the volume of stone having an irregular shape?

Answer: Using a measuring cylinder

114. In sunlight, a blue flower looks blue because?

Answer: We see the flower by the light it reflects.

115. What is Curie's Point?

Answer: Curie point, also called curie Temperature, is the temperature at which certain magnetic materials undergo a sharp change in their magnetic properties.

116. Emission of gamma rays has no effect on size, mass number and atomic number of an atom.

117. All electromagnetic radiations are not deflected by magnetic or electric field.

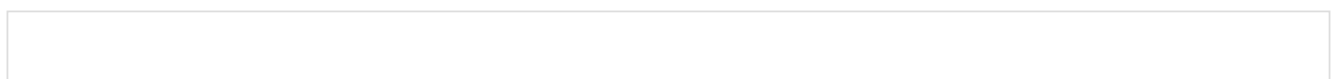
118. Alpha particle is Helium nucleus

119. Alpha, beta and gamma rays are emitted from the nucleus of an atom in radioactivity

120. Heat can be obtained from a renewable and non-renewable source.

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