

Book For
Central Reserve Police Force



CRPF SI Physics Sample Paper



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(1) Siphon will fail to work if

- [A] the densities of the liquid in the two vessels are equal
- [B] the level of the liquid in the two vessels are at the same height
- [C] both its limbs are of unequal length
- [D] the temperature of the liquids in the two vessels are the same

Answer : [B]

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(2) Light year is a unit of

- [A] time
- [B] distance
- [C] light
- [D] intensity of light

Answer : [B]

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(3) Out of the following pairs, choose the pair in which the physical quantities do not have identical dimension?

- [A] Pressure and Young's modules
- [B] Planck's constant and Angular momentum
- [C] Impulse and moment of force
- [D] Force and rate of change of linear momentum

Answer : [C]

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(4) Let a thin capillary tube be replaced with another tube of insufficient length then, we find water

- [A] will overflow
- [B] will not rise
- [C] depressed
- [D] change its meniscus

Answer : [B]

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(5) Magnetism at the centre of a bar magnet is

- [A] minimum
- [B] maximum

[C] zero

[D] minimum or maximum

Answer : [C]

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(6) Of the following properties of a wave, the one that is independent of the other is its

[A] amplitude

[B] velocity

[C] wavelength

[D] frequency

Answer : [A]

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(7) RADAR is used for

[A] locating submerged submarines

[B] receiving a signals in a radio receiver

[C] locating geostationary satellites

[D] detecting and locating the position of objects such as aeroplanes

Answer : [D]

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(8) It takes much longer to cook food in the hills than in the plains, because

[A] in the hills the atmospheric pressure is lower than that in the plains and therefore water boils at a temperature lower than 100°C causing an increase in cooking time

[B] due to low atmospheric pressure on the hills, the water boils at a temperature higher than 100°C and therefore water takes longer to boil

[C] in the hills the atmospheric density is low and therefore a lot of heat is lost to the atmosphere

[D] in the hills the humidity is high and therefore a lot of heat is absorbed by the atmosphere leaving very little heat for cooking

Answer : [A]

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(9) One thousand microns is equal to

[A] 10^{-3} m

[B] 10^{-6} m

[C] 10^{-9} m

[D] 10^{-12} m

Answer : [A]

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(10) Inside an aeroplane, flying at a high altitude,

- [A] the pressure is the same as that outside
- [B] normal atmospheric pressure is maintained by the use of air pumps
- [C] the pressure inside is less than the pressure outside
- [D] normal humidity and partial vacuum are maintained

Answer : [B]

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(11) Intensity of sound at a point is ____ its distance from the source.

- [A] directly proportional to
- [B] inversely proportional to
- [C] directly proportional to square of
- [D] inversely proportional to square of

Answer : [D]

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(12) Out of the following pairs, which one does not have identical dimension?

- [A] Moment of inertia and moment of a force
- [B] Work and Torque
- [C] Angular momentum and Planck's constant
- [D] Impulse and Momentum

Answer : [A]

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(13) Radio telescopes are better than optical telescopes because

- [A] they can detect faint galaxies which no optical telescope can
- [B] they can work even in cloudy conditions
- [C] they can work during the day and night
- [D] All of the above

Answer : [D]

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(14) Supersonic plane fly with the speed

- [A] less than the speed of sound
- [B] of sound
- [C] greater than the speed of sound
- [D] of light

Answer : [C]

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(15) ML^2T^{-2} is the dimensional formula for

- [A] moment of inertia
- [B] pressure
- [C] elasticity
- [D] couple acting on a body

Answer : [D]

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(16) Sir C.V. Raman was awarded Nobel Prize for his work connected with which of the following phenomenon of radiation?

- [A] Scattering
- [B] Diffraction
- [C] Interference
- [D] Polarization

Answer : [A]

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(17) In which of the following industries is mica as a raw material?

- [A] Cement
- [B] Glass and Pottery
- [C] Iron and Steel
- [D] Electrical

Answer : [D]

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(18) One should not connect a number of electrical appliances to the same power socket because

- [A] this can damage the appliances due to overloading
- [B] this can damage the domestic wiring due to overloading
- [C] this can damage the electrical meter
- [D] the appliance will not get full voltage

Answer : [B]

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(19) Large astronomical telescopes always use as objective

- [A] lens
- [B] mirror
- [C] combinations of lenses
- [D] None of the above

Answer : [C]

(20) Mica is used in electrical appliances such as electric iron because mica is

[A] a good conductor of heat but a bad conductor of electricity

[B] a bad conductor of heat but a good conductor of electricity

[C] a good conductor of heat as well as electricity

[D] a bad conductor of heat as well as electricity

Answer : [A]