PHY101:Online Quiz # 4 Physics (PHY101)

Quiz Start Time: 07:14 PM, 20 February 2021

Question # 1 of 10 (Start time: 07:14:28 PM, 20 February 2021)

Total Marks: 1

In constructing a thermometer it is NECESSARY to use a substance that:

Select the correct option

- ○ Expands linearly with rising temperature
- ○ Will not freeze
- ○ Will not boil
- ■ Undergoes some change when heated or cooled

Click to Save Answer & Move to Next Question

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PHY101:Online Quiz # 4 Physics (PHY101)

Quiz Start Time: 07:14 PM, 20 February 2021

Question # 2 of 10 (Start time: 07:15:31 PM, 20 February 2021)

Total Marks: 1

The reaction of an induction at 50 Hz is 10 Ω, its reactance at 100 Hz becomes:

Select the correct option

- ○ 20 Ω
- ○ 5 Ω
- ● 2.5 Ω
- ○ 1 Ω

Click to Save Answer & Move to Next Question

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PHY101:Online Quiz # 4 Physics (PHY101)

Quiz Start Time: 07:14 PM, 20 February 2021

Question # 3 of 10 (Start time: 07:17:03 PM, 20 February 2021)

Total Marks: 1

What is the name of the relationship between the peak wavelength for a blackbody radiator and its temperature?

Select the correct option

- ○ Stefan-Boltzmann Law
- ◉ Wien's Law
- ○ Snell's Law
- ○ Young's Law

Click to Save Answer & Move to Next Question

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PHY101:Online Quiz # 4 Physics (PHY101)

Quiz Start Time: 07:14 PM, 20 February 2021

Question # 4 of 10 (Start time: 07:19:10 PM, 20 February 2021)

Total Marks: 1

The reason there are two slits, rather than one, in a Young's experiment is:

Select the correct option

- to create a path length difference
- to increase the intensity
- one slit is for frequency, the other for wavelength
- one slit is for Electric fields , the other is for Magnetic fields

Click to Save Answer & Move to Next Question

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PHY101:Online Quiz # 4 Physics (PHY101)

Quiz Start Time: 07:14 PM, 20 February 2021

Question # 5 of 10 (Start time: 07:20:44 PM, 20 February 2021)

Total Marks: 1

Aging process of the human body:

Select the correct option

- Becomes fast at very high speed
- Becomes slow by motion at very high speed
- Remains constant
- None of these

Click to Save Answer & Move to Next Question

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PHY101:Online Quiz # 4 Physics (PHY101)

Quiz Start Time: 07:14 PM, 20 February 2021

Question # 6 of 10 (Start time: 07:22:34 PM, 20 February 2021)

Total Marks: 1

$2d\sin\theta = m\lambda$ is called:

Select the correct option

- Laplace's equation
- Reflection equation
- Refraction equation
- Bragg equation

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PHY101:Online Quiz # 4 Physics (PHY101)

Quiz Start Time: 07:14 PM, 20 February 2021

Question # 7 of 10 (Start time: 07:24:36 PM, 20 February 2021) **Total Marks:** 1

When an object (iron/tungsten) is heated, it emits light. It emits infrared (IR) light when it is heated at a temperature _____.

Select the correct option

- ○ Below 800 degree C
- ○ Between 800 degree C to 1600 degree C
- ◉ Between 1600 degree C to 2500 degree C
- ○ above 2500 degree C

Click to Save Answer & Move to Next Question

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PHY101:Online Quiz # 4 Physics (PHY101)

Quiz Start Time: 07:14 PM, 20 February 2021

Question # 9 of 10 (Start time: 07:26:51 PM, 20 February 2021)

Total Marks: 1

When two gases separate by a diathermal wall are in thermal equilibrium with each other:

Select the correct option

- Only their pressures must be the same
- Only their volumes must be the same
- They must have the same number of particles
- Only their temperatures must be the same

Click to Save Answer & Move to Next Question

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PHY101:Online Quiz # 4 Physics (PHY101)

Quiz Start Time: 07:14 PM, 20 February 2021

Question # 9 of 10 (Start time: 07:26:51 PM, 20 February 2021)

Total Marks: 1

When two gases separate by a diathermal wall are in thermal equilibrium with each other:

Select the correct option

- (●) Only their pressures must be the same
- ( ) Only their volumes must be the same
- ( ) They must have the same number of particles
- ( ) Only their temperatures must be the same

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PHY101:Online Quiz # 4 Physics (PHY101)

Quiz Start Time: 07:14 PM, 20 February 2021

Question # 10 of 10 (Start time: 07:28:22 PM, 20 February 2021)

Total Marks: 1

In an adiabatic process:

Select the correct option

- [x] The energy absorbed as heat equals the work done by the system on its environment
- [ ] The energy absorbed as heat equals the work done by the environment on the system
- [ ] The absorbed as heat equals the change in internal energy
- [ ] The work done by the environment on the system equals the change in internal energy

Click to Save Answer & Move to Next Question

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PHY101:Online Quiz # 4 Physics (PHY101)

Quiz Start Time: 10:21 AM, 20 February 2021

Question # 1 of 10 (Start time: 10:21:42 AM, 20 February 2021)

Total Marks: 1

Maximum power delivered by a battery is:

Select the correct option

- Unlimited
- VIT
- 4rE*E
- E*E/4r

AJ EDUZONE

PHY101:Online Quiz # 4 Physics (PHY101) Quiz Start Time: 10:21 AM, 20 February 2021

Question # 3 of 10 (Start time: 10:24:20 AM, 20 February 2021) Total Marks: 1

Which of the following is true of all virtual images?

Select the correct option

- They can be seen but not photographed
- They are smaller than the objects
- They are larger than the objects

AJ EDUZONE

Which of the following is true of all virtual images?

Select the correct option

- They can be seen but not photographed
- They are smaller than the objects
- They are larger than the objects
- None of these

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Click to Save Answer & Move to Next Question

Question # 1 of 10 (Start time: 10:09:10 AM, 20 February 2021) Total Marks: 1

All-natural process proceeds towards a state of:

Select the correct option

- Decrease in entropy
- Increase in entropy
- Remains constant
- None of these

AJ EDUZONE

Question # 2 of 10 (Start time: 08:27:58 PM, 20 February 2021) Total Marks: 1

A light entering into glass prism from air does not give change in its:

Select the correct option

- (●) Frequency
- ( ) Wavelength
- ( ) Velocity
- ( ) Direction

Click to Save Answer & Move to Next Question

Question # 3 of 10 (Start time: 08:28:51 PM, 20 February 2021) Total Marks: 1

Fiber optics works on the principle of _____.

Select the correct option

- (●) Total internal reflection
- ( ) Snell's law
- ( ) Fermat's principle
- ( ) Young's principle

Click to Save Answer & Move to Next Question

Question # 4 of 10 (Start time: 08:29:58 PM, 20 February 2021) Total Marks: 1

Due to relative motion of observer and the frames of reference of events, time always:

Select the correct option

- (●) Continuous itself
- ( ) Contracts itself
- ( ) Stretches itself
- ( ) Statics itself

Click to Save Answer & Move to Next Question

Question # 5 of 10 (Start time: 08:31:38 PM, 20 February 2021) Total Marks: 1

A basic postulate of Einstein's theory of relativity is:

Select the correct option

- ○ Moving clocks run more slowly than when they are at rest
- ○ Moving rods are shorter than when they are at rest
- ○ Light has both wave and particle properties
- ◉ The laws of physics must be the same for observers moving with uniform velocity relative to each other

Click to Save Answer & Move to Next Question

Question # 7 of 10 (Start time: 08:34:46 PM, 20 February 2021) **Total Marks:** 1

An LC series circuit with an inductance L and a capacitance C has an oscillation frequency f. Two inductors, each with inductance L, and two capacitors, each with capacitance C, are all wired in series and the circuit is completed. The oscillation frequency is:

Select the correct option

- ○ f/4
- ◉ f
- ○ 2f
- ○ f/2

Click to Save Answer & Move to Next Question

Question # 8 of 10 (Start time: 08:36:32 PM, 20 February 2021) Total Marks: 1

A particle with rest mass m moves with speed 0.6c.Its kinetic energy is:

Select the correct option

- ○ 0.18mc2
- ○ 0.22mc2
- ◉ 0.25mc2
- ○ mc2

Click to Save Answer & Move to Next Question

Question # 9 of 10 (Start time: 08:38:24 PM, 20 February 2021) Total Marks: 1

For an electron, the rest mass energy is:

Select the correct option

- 0.411 MeV
- 0.511 MeV
- 0.611 MeV
- 0.711 MeV

Click to Save Answer & Move to Next Question

Question # 1 of 10 (Start time: 08:46:13 PM, 20 February 2021) Total Marks: 1

Heat is:

Select the correct option

- Energy transferred by virtue of a temperature di?erence
- Energy transferred by macroscopic work
- Energy content of an object
- A temperature di?erence

Click to Save Answer & Move to Next Question

Question # 2 of 10 (Start time: 08:47:58 PM, 20 February 2021) Total Marks: 1

Bending of light around the edges of an obstacle called:

Select the correct option

- (●) Refraction
- ( ) Polarization
- ( ) Interference
- ( ) Diffraction

Click to Save Answer & Move to Next Question

Question # 5 of 10 (Start time: 08:52:15 PM, 20 February 2021) Total Marks: 1

Following are the ways by which light can interact with matter, EXCEPT:

Select the correct option

- Emission
- Interference
- Absorption
- Transmission

Click to Save Answer & Move to Next Question

Question # 7 of 10 (Start time: 08:55:00 PM, 20 February 2021) Total Marks: 1

Evidence that a gas consists mostly of empty space is the fact that:

Select the correct option

- (●) The density of a gas becomes much greater when it is liquefied
- ( ) Gases exert pressure on the walls of their containers
- ( ) Gases are transparent
- ( ) Heating a gas increases the molecular motion

Click to Save Answer & Move to Next Question

Question # 9 of 10 (Start time: 08:58:45 PM, 20 February 2021) Total Marks: 1

The rest mass of photon is:

Select the correct option

- ○ Infinite
- ◉ Zero
- ○ 1.6 × 10^-27 kg
- ○ 3 × 10^8 kg

Click to Save Answer & Move to Next Question

Question # 10 of 10 (Start time: 08:59:51 PM, 20 February 2021) **Total Marks:** 1

In a photoelectric e?ect experiment at a frequency above cuto?, the stopping potential is proportional to:

Select the correct option

- ○ The energy of the least energetic electron before it is ejected
- ○ The energy of the least energetic electron after it is ejected
- ○ The energy of the most energetic electron before it is ejected
- ◉ The energy of the most energetic electron after it is ejected

Click to Save Answer & Move to Next Question