

Examrace

Physics Assertion Reason Questions Part 2

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1. Carts with rubber tyre are easier to ply than Iron as force of friction between rubber & road is less than between Iron & road.
2. Mercury doesn't feel wet as $F_{\text{adhesion}} < F_{\text{cohesion}}$
3. Satellite does not need fuel to circle round the earth-as gravitational force between satellite & earth provides centripetal force to move in circular orbit.
4. Current is not passed through potentiometer wire for a long time as it gets heated & resistance changes & potential gradient will change.
5. In a revolving artificial satellite everything is in a weight less condition. The things in the vessel is also weightless for this reason pressure at a point inside the liquid is nil.
6. When the Centre of gravity occupies the highest position, body become a heavy & there is a risk of toppling over passenger, therefore passengers are not allowed to stand on the upper deck of a double decker bus.
7. Velocity of light waves in vacuum is a constant quantity & velocity of matter waves in vacuum depends on wavelength
8. Wavelength of fast neutrons is very small as compared to the interatomic space & hence not used in the diffraction principle. Wavelength of thermal neutron is of order of interatomic spacing. So it is used in diffraction experiments.
9. Metals are coated with alkali so as to have low work function & the electricity can be easily emitted from it.
10. For analysis of spectral energy of radiation prism is used as it does not absorb thermal radiations.
11. Propagation of an actual wave through a medium the amplitude gradually diminishes due to the resisting effect of the viscous medium & loss in energy.
12. With decrement in velocity, increment of sound is more than in dry air.
13. Sound exhibits total internal reflection when sound in a medium they have less velocity meet at the surface of another medium with larger velocity at an angle more than critical angle.
14. Sound in a building/auditorium does not die immediately after it has ceased to produce it. It continues for some time due to multiple reflections called reverberation.

15. Chromatic aberration is produced in lenses because refractive index & consequently focal length is different for different colours of light.
16. Achromatic lens combination is cemented with Canada balsam as it is transparent & has refractive index almost equal to the refractive index of glass.
17. Current is measured in galvanometer due to torque produced by magnetic field.
18. Spherical aberration is due to different focal lengths of different parts of lens.
19. Coma arises due to different zones of lens produce different lateral magnification. It very close to axis will suffer spherical aberration & coma only.
20. When a stop is used with a lens, image is not same as object because different parts of objects suffer different magnification.
21. Contact lens is held to the cornea by the surface tension of the eye fluid.
22. Camera-Large aperture gives blurred image due to aberration.
23. Camera-small aperture due to diffraction.
24. The layer of oil on water & soap bubbles shows varied colours in white light due to interference of waves reflected from two surfaces of film.
25. Brilliant colors are seen in the inner surface of oyster shell & peacock feather due to interference of light.
26. As temperature of electrolyte increases, the internal resistance decreases as viscosity of electrolyte is decreased.
27. Potentiometer is more sensitive than voltmeter because it is based on null deflection method.
28. Nichrome is used in electric heater filament because of high specific resistance, high melting point & low temperature coefficient of resistance.
29. Current in the conductor flows only when electric field is established in conductor applies a force in each free electron.
30. Syrups & engine oil, which flow slower than water are more viscous.
31. Spinning ball are being dragged round by ball, thereby increase air flow on one side & decrease on the another side & a pressure difference is created.
32. Bernoulli's, yacht, or venturi tube theorem aerofoil-fluid flows faster on top surface than bottom i.e. pressure underneath is increased & above reduced upward force is created which lift aircraft.
33. Pendulum clock slow in summer because in summer the length increases so temperature increases & it goes slow.

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