21. appearance of colour in thin films is due to

A. diffraction
B. dispersion
C. interference
D. polarization

Answer: Option C

---

22. The blue colour of the sky is due to

A. diffraction
B. reflection
C. polarization
D. scattering

Answer: Option D

---

23. A light ray traveling form rarer to denser medium suffers a phase change of

A. 60?
B. 90?
C. 180?
D. 45?

Answer: Option C

---

24. When one mirror of a Michelson Interferometer is moved a distance of 0.5 mm we observe 2000 fringes. What will be wavelength of light used?

A. 5000 nm
B. 5000A?
C. 500m
D. 2000um

Answer: Option B

---

25. Diffraction effect is

A. more for a round edge
B. less for a round edge
C. more for a sharp edge
D. less for a sharp edge.

Answer: Option C

---

26. The wavelengthe of X-rays is of the order of

A. 10A?
B. 1000 A?
C. 1A?
D. 100 A?

Answer: Option C

27. Wavelength of X-rays falling at glancing angle of 30? on a crystal with atmic spacing 2 x 10-10 for the fist order diffraction is

A. 4 x 10-10 m
B. 2 x 10-10 m
C. 0.02x10-10m
D. 20x10-10m

Answer: Option B

28. A diffraction grating has 500 lines per mm. Its slit spacing or grating element will be equal to

A. 500 mm
B. 5 x 10-3 mm
C. 2 x 10-5 mm
D. 2 x 10-3 mm

Answer: Option D

29. In a plane polarized light

A. vibration in all direction
B. vibration in two mutually perpendicular directions
C. vibration take place in a direction perpendicular to the direction of propagation of light
D. no vibration at all

Answer: Option C

30. Light on passing through a Polaroid is

A. plane polarized
B. un-polarized
C. circularly polarized
D. elliptically polarized

Answer: Option A

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