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***** EXAMINATION *****

DESIGN PARAMETERS FOR STACK-MOUNTED LIGHT EXTINCTION MEASUREMENT DEVICES

1. **The gradual loss in intensity of any kind of flux through a**

   a) medium is called extinction
   b) medium is called propagation
   c) medium is called attenuation
   d) medium is called ventilation

2. **The intentional movement of air from outside a building to**

   a) the inside is infiltration
   b) the inside is ventilation
   c) the inside is vaporization
   d) the inside is condensation

3. **The lining of mostly endodermal origin, covered in epithelium**

   a) that involved in absorption and secretion is mucosa
   b) that involved in absorption and secretion is mesothelium
   c) that involved in absorption and secretion is serosa
   d) that involved in absorption and secretion is lumen

4. **The absorption of light to the properties of the material**

   a) in which the light travels relate to Raman scattering
   b) in which the light travels relate to Rayleigh scattering
   c) in which the light travels relate to Brillouin scattering
   d) in which the light travels relate to Lambert-Beer law

5. **The imaginary part of the complex index of refraction, which**

   a) also relates to light absorption, is extinction coefficient
   b) also relates to light absorption, is absorption coefficient
   c) also relates to light absorption, is attenuation length
   d) also relates to light absorption, is partition coefficient

6. **The light with a single wavelength or the light of narrow**

   a) wavelength range is called polychromatic light
   b) wavelength range is called monochromatic light
   c) wavelength range is called slow light
   d) wavelength range is called actinic light

7. **The curved mirror with some type of light source or an image**

a) at its focus is a biconcave lens
b) at its focus is a gradient index lens
c) at its focus is a collimator lens
d) at its focus is a tessar lens

8. **The hole or an opening through which light travels**

a) is called a cloudscape
b) is called a rangefinder
c) is called a dye coupler
d) is called anaperture

9. **The extremely sensitive detectors of light in the ultraviolet**

a) visible and near infrared ranges are photomultiplier tubes
b) visible and near infrared ranges are photoelectric sensor
c) visible and near infrared ranges are passive infrared sensor
d) visible and near infrared ranges are torque sensor

10. **The relative intensity of electromagnetic radiation of each**

a) frequency emitted by atoms is a lyc photon
b) frequency emitted by atoms is an emission spectrum
c) frequency emitted by atoms is a spectral line
d) frequency emitted by atoms is a hydrogen line

11. **A light that exhibits more than one color is called**

a) polychromatic light
b) monochromatic light
c) slow light
d) actinic light

12. **An electronic light source is called**

a) a laser diode
b) a superluminescent diode
c) a light-emitting diode
d) a single-photon avalanche diode

13. **The lasers with a medium similar to semiconductor found in**

a) a light-emitting diode is a laser diode
b) a light-emitting diode is a superluminescent diode
c) a light-emitting diode is a laser beam
d) a light-emitting diode is a white light

14. **The optical device that splits a beam of light in two is**

a) a spatial filter
b) an image intensifier
c) a polarizer
d) a beam splitter

15. **The optical device with perfect axial symmetry which transmits**

a) and refracts light converging the beam is optical lens
b) and refracts light converging the beam is optical amplifier
c) and refracts light converging the beam is optical attenuator
d) and refracts light converging the beam is optical filter

16. **The light of all wavelengths or color can be reduced equally**

a) by an ideal photographic filter
b) by an ideal neutral density filter
c) by an ideal infrared filter
d) by an ideal H-alpha filter

17. **The advantages that make the photodiodes the best light**

a) detectors includes the excellent dynamic range
b) detectors includes the excellent linearity
c) detectors includes the high level of stability
d) All of the above

18. **The phototransistors and photodarlingtons can provide**

a) current gains of 1 to 10
b) current gains of 10 to 100
c) current gains of 100 to 100000
d) current gains of 100000 to 1000000

19. **The phototransistors and photodarlingtons fall shorts of**

a) photodiodes in linearity
b) photodiodes in stability
c) photodiodes in spectral response
d) All of the above

20. **The noise in optical measurements can be reduced by**

a) stabilizing a light source
b) stabilizing a measured signals
c) stabilizing an electric potentials
d) stabilizing a large frequency range

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