

**CERTIFICATE IN DISPENSING OPTICS (CDO)**

**Term-End Examination**

**June, 2015**

**OAH-006 : COATING**

*Time : 90 Minutes*

*Maximum Marks : 30*

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**Note :**

- (i) *There will be multiple choice type of questions in this examination which are to be answered in **OMR Answer Sheets**.*
- (ii) *All questions are compulsory.*
- (iii) *Each question will have four options and only one of them is correct. Answers have to be marked in figures in the appropriate rectangular boxes corresponding to what is the correct answer and then blacken the circle for the same number in that column by using HB or lead pencil and not by ball pen in **OMR Answer Sheets**.*
- (iv) *If any candidate marks more than one option it will be taken as the wrong answer and no marks will be awarded for this.*
- (v) *There will be 30 questions in this paper and each question carries one mark.*
- (vi) *There will be no negative marking for wrong answers.*
- (vii) *No candidate shall leave the examination hall at least for one hour after the commencement of the examination.*

1. In the iris, the uveal pigment absorbs radiation and converts it into
  - (1) Electricity
  - (2) Heat
  - (3) Sound
  - (4) None of the above
  
2. The radiation received by the retina is the radiation transmitted by the
  - (1) Vitreous
  - (2) Choroid
  - (3) Sclera
  - (4) None of the above
  
3. Which of the following are growths of vascular and connective tissue into the epithelium of the bulbar conjunctiva and the cornea ?
  - (1) Pterygia
  - (2) Pingueculae
  - (3) Both (1) and (2)
  - (4) None of the above
  
4. Which of the following are small, yellowish elevated concretions of bulbar conjunctiva ? They have long been associated with continued exposure to solar radiation.
  - (1) Pterygia
  - (2) Pingueculae
  - (3) Both (1) and (2)
  - (4) None of the above
  
5. The terms spheroid degeneration and climatic droplet keratopathy are also used for the following condition :
  - (1) Pingueculae
  - (2) Pterygia
  - (3) Band shaped keratopathy
  - (4) None of the above

6. Discomfort glare occurs when the ratio between the height level of illumination in the visual field and the background illumination exceeds a ratio of
- (1) 3 to 1
  - (2) 2 to 1
  - (3) Both (1) and (2)
  - (4) None of the above
7. What occurs when patches of bright light are reflected from smooth, shiny surfaces into the eye ?
- (1) Specular reflection glare
  - (2) Discomfort glare
  - (3) Veiling or disability glare
  - (4) Glare
8. Once the transmission of a material is known, the density may be found by the use of the relationship
- (1)  $\text{Density} = \log_{10} \text{Opacity}$
  - (2)  $\text{Density} = \log_{20} \text{Opacity}$
  - (3)  $\text{Opacity} = \log_{10} \text{Density}$
  - (4)  $\text{Opacity} = \log_{10} \text{Density}$
9. Which type of lenses **cannot** be surface coated by evaporation because they would be deformed by the high temperature required ?
- (1) Tinted plastic lenses
  - (2) Tinted glass lenses
  - (3) Both (1) and (2)
  - (4) None of the above
10. A spectral transmittance curve shows the percentage of transmission for all
- (1) Invisible spectrum
  - (2) Visible spectrum
  - (3) Both (1) and (2)
  - (4) None of the above

- 11.** With which of the following lenses, the darkening involves mainly the silver halide crystals on or near surface, resulting in a uniform appearance ?
- (1) Plane lenses
  - (2) Photochromatic
  - (3) Both (1) and (2)
  - (4) None of the above
- 12.** Which type of lenses also have a uniform density appearance because the coating is applied uniformly over the lens surface ?
- (1) Coated
  - (2) Uncoated
  - (3) Both (1) and (2)
  - (4) None of the above
- 13.** Strongly coloured tints may affect
- (1) Colour vision
  - (2) Visual field
  - (3) Both (1) and (2)
  - (4) None of the above
- 14.** LTF stands for
- (1) Light Transfer Factor
  - (2) Light Transmission Factor
  - (3) Both (1) and (2)
  - (4) None of the above
- 15.** Draper's Law states that for radiation to have an effect on a substance through which it travels, it must be absorbed by the substance through which it is completely transmitted or by which it is completely reflected.
- (1) TRUE
  - (2) FALSE
  - (3) None of the above
  - (4) Can't say

- 16. Antireflection (AR) coatings are a type of optical coating applied to the surface of lenses and other optical devices to reduce reflection.**
- (1) TRUE
  - (2) FALSE
  - (3) None of the above
  - (4) Can't say
- 17. Exposure to radiation bordering on the visible spectrum can cause the sensation of vision.**
- (1) TRUE
  - (2) FALSE
  - (3) None of the above
  - (4) Can't say
- 18. IR radiation occupies slightly more than 7 octaves.**
- (1) TRUE
  - (2) FALSE
  - (3) None of the above
  - (4) Can't say
- 19. Ionizing radiation can occur as a natural phenomenon or can be produced artificially.**
- (1) TRUE
  - (2) FALSE
  - (3) None of the above
  - (4) Can't say
- 20. The most common effect of ionizing radiation is the formation of cataracts.**
- (1) TRUE
  - (2) FALSE
  - (3) None of the above
  - (4) Can't say

- 21. Photokeratitis is produced by excessive absorption of visible radiation by the cornea.**
- (1) TRUE
  - (2) FALSE
  - (3) None of the above
  - (4) Can't say
- 22. The tear layer absorbs only a small amount of radiation.**
- (1) TRUE
  - (2) FALSE
  - (3) None of the above
  - (4) Can't say
- 23. There is always a change in the absorption of IR radiation with increasing age.**
- (1) TRUE
  - (2) FALSE
  - (3) None of the above
  - (4) Can't say
- 24. Coated lens is tinted by depositing a thin metallic oxide on the surface of the lens.**
- (1) TRUE
  - (2) FALSE
  - (3) None of the above
  - (4) Can't say
- 25. The color of dyed plastic lenses is not as stable as color in glass lenses.**
- (1) TRUE
  - (2) FALSE
  - (3) None of the above
  - (4) Can't say

- 26.** Patients who work under conditions of good designed illumination usually report glare that interfaces with vision and produces discomfort.
- (1) TRUE
  - (2) FALSE
  - (3) None of the above
  - (4) Can't say
- 27.** Ocular protection from UV radiation can be provided by means of absorptive or reflective filters.
- (1) TRUE
  - (2) FALSE
  - (3) None of the above
  - (4) Can't say
- 28.** The transmission of the cornea (particularly for the shorter wavelengths) increases markedly with age.
- (1) TRUE
  - (2) FALSE
  - (3) None of the above
  - (4) Can't say
- 29.** The crystalline lens absorbs more UV radiation with decreasing age.
- (1) TRUE
  - (2) FALSE
  - (3) None of the above
  - (4) Can't say
- 30.** In the normal eye, the retina is shielded from much of the UV radiation by the filtering action of the cornea and the lens.
- (1) TRUE
  - (2) FALSE
  - (3) None of the above
  - (4) Can't say

# **SPACE FOR ROUGH WORK**