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TEE/BOPTO401/2019/2021 - 22



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BRAINWARE UNIVERSITY

Term End Examination 2021 - 22
Programme – Bachelor of Optometry
Course Name – Optometric Optics II
Course Code - BOPTO401
(Semester IV)

Time allotted : 1 Hrs.15 Min.

Full Marks : 60

[The figure in the margin indicates full marks.]

Group-A

(Multiple Choice Type Question)

1 x 60=60

Choose the correct alternative from the following :

- (1) The factors influencing the photochromic performance of a photochromatic lenses are
- a) Intensity of light, temperature and lens thickness
 - b) Very high temperature, humidity and wind
 - c) Very low temperature and cloudy days
 - d) Medium temperature, high humid
- (2) The ideal fitting height and pantoscopic tilt in degree required to fit a progressive lenses are
- a) 20 mm & 8
 - b) 24 mm & 12
 - c) 28 mm & 5
 - d) 30 mm & 6
- (3) Which of the following is indicated and should be used when fitting the high minus lens wearer?
- a) rounded corners
 - b) large lenses
 - c) 40-degree V-bevels
 - d) crown glass lenses
- (4) The frontal angle is:
- a) the angle from which the front crest of the nose deviates from the vertical when viewed from the side
 - b) the angle from which the side of the nose deviates from the horizontal when viewed from above
 - c) the angle from which the side of the nose deviates from the vertical when viewed from straight ahead
 - d) All of these are correct
- (5) Benjamin Franklin bifocal also known as
- a) Solid curve bifocal
 - b) split bifocal
 - c) fused bifocal
 - d) all
- (6) In round shape bifocal the near segments consist of:
- a) Intermediate power
 - b) Near power
 - c) Distance power
 - d) None
- (7) Which of the following advantage of Benjamin Franklin's bifocal:
- a) Large field of view.
 - b) Dust accumulation at dividing line.
 - c) More time and labour required
 - d) None.
- (8) Cemented bifocal invented by:
- a) Morick.
 - b) John borsch

- c) Benjamin Franklin's
- (9) Advantages of Kryptok bifocal:
- a) Light weight
- c) Segment do not fall out
- (10) D- bifocal also known as:
- a) Flat top bifocal
- c) Round top bifocal
- (11) Disadvantages of Excecutive bifocal :
- a) Heavy
- c) The edge of segments chips easily
- (12) Which of the following properties of plastic lenses:
- a) Heavy
- c) High impact resistance
- (13) Which of the following properties are not glass lenses:
- a) Light weight
- c) High scratch resistance
- (14) Types of glass material:
- a) Crown glass
- c) High index glass
- (15) Crown glass are used for:
- a) Single vision
- c) Trifocal
- (16) Refractive Index if crown glasses:
- a) 1.523
- c) 1.543
- (17) Abbe value of crown glass:
- a) 59
- c) 42
- (18) The available R.I of high index glass:
- a) 1.7
- c) 1.9
- (19) Which of the following characteristics of CR-39:
- a) Lightness
- c) Tintability
- (20) Polycarbonate lens absorb UV radiation up to:
- a) 380 nm
- c) 350 nm
- (21) Abbe value of polycarbonate lens:
- a) 48
- c) 50
- (22) Two form of high index lenses is:
- a) Glass high index(GHI)
- c) Both
- (23) Benefits of high index plastic lenses:
- a) Good cosmetic
- c) Thinner and lighter
- (24) R.I of PMMA :
- d) None.
- b) Lenses can produce in large quantities
- d) All of the above
- b) Kryptok bifocal
- d) None
- b) Ugly
- d) All of the above
- b) Not preferred for children
- d) None
- b) High impact resistance
- d) None
- b) Brown glass
- d) All of the above
- b) Bifocal
- d) All of the above
- b) 1.552
- d) None
- b) 51
- d) 58
- b) 1.8
- d) All of the above
- b) Impact resistance
- d) All of the above
- b) 349 nm
- d) 377 nm
- b) 30
- d) 58
- b) Plastic high index(PHI)
- d) None
- b) Magnification is reduce
- d) All of the above

- a) 1.49
- b) 1.45
- c) 1.33
- d) None

(25) Benefits of Trivex lens:

- a) Lighter
- b) More rigid
- c) Unbreakable
- d) All of the above

(26) Which of the following materials consists of high abbe value:

- a) Trivex
- b) CR-39
- c) Polycarbonat
- d) Glass

(27) Which of the following statement are match with the definition of "Abbe value":

- a) Is the measure of the degree of light dispersed when entering a lens material
- b) Is the ratio between the velocities of light in air to the velocity of light in given media.
- c) Both
- d) None

(28) Which of the following statement are match with the definition of "Refractive index":

- a) Is the measure of the degree of light dispersed when entering a lens material
- b) Is the ratio between the velocities of light in air to the velocity of light in given media.
- c) Both
- d) None

(29) Abbe value of standard plastic lenses:

- a) 58
- b) 50
- c) 55
- d) None

(30) Specific gravity is a :

- a) Weight of the material
- b) Toughness of material
- c) Both
- d) None

(31) Which one of the following test we preferred for measure the impact resistance of any lenses:

- a) Drop ball test
- b) Steel wool test
- c) Taber test
- d) None

(32) What is the standard procedure of "drop ball test":

- a) 5/8" steel ball from a height of 50"
- b) 5/6" steel ball from a height of 60"
- c) 5/5" steel ball from a height of 65"
- d) None

(33) Which of the following statements are match with the "mirror coating":

- a) Applied to the front of the sunglasses
- b) May be applied to the front, back or both the surface
- c) Applied to the edges
- d) None

(34) Importance of the "polish" of the lens:

- a) Reduce the rough and the thickness appearance of high prescription
- b) Makes the edge of lens appear like the color of the frame
- c) Decrease the optical quality of the lens
- d) None

(35) Which of the following design of PAL:

- a) Mono design
- b) Multi design
- c) Both
- d) None

(36) In multi design lenses are one, where:

- a) A single design is used for all additional power
- b) The design changes according to the additional power
- c) Right and left design are separately
- d) None

(37) In Asymmetry lens design lenses are one, where:

- a) Right and left design are separately.
- b) Right and left design are same.
- c) The design changes according to the additional power
- d) All of the above

(38) Advantages of soft design lenses are:

- a) More easy to adapt, less peripheral distortion, with long intermediate portion.
- b) Narrow intermediate zone, shorter distance down to near viewing zone.
- c) Wider area of stable optics in both distance and near portion.
- d) None
- (39) The ideal fitting height and pantoscopic tilt in degree required to fit a PAL:
- a) 20 mm & 8
- b) 24 mm & 12
- c) 28 mm & 5
- d) None
- (40) When measuring the monocular/Binocular PD's:
- a) Limbal edge may be used as reference
- b) Inner canthus of one eye to the outer canthus of the other eye used as reference
- c) Pupil centers are always used as a reference
- d) Both 'a' & 'b'
- (41) In the PAL, as the width of the reading area increase:
- a) Addition power also increased
- b) Peripheral distortion also increased
- c) The intermediate corridor width increased
- d) The distance portion clarity increased
- (42) Name the two parts of frame:
- a) Frame front
- b) Temples
- c) Both 'a' & 'b'
- d) None
- (43) Name the different types of temples:
- a) Skull temples
- b) Riding bow temples
- c) Library temples
- d) All of the above
- (44) Which of the following disadvantage of PAL:
- a) Better cosmesis
- b) Extended working distance
- c) No image jump
- d) More time to adaptation
- (45) Which of the following advantage of PAL:
- a) More time to adaptation
- b) Required accurate fitting
- c) Peripheral distortion
- d) Thinner and lighter
- (46) Name the permanent marking of PAL:
- a) Micro-etching
- b) Add power
- c) Lens logo and , material logo
- d) All of the above
- (47) Name the temporary marking of PAL:
- a) Fitting cross
- b) Distance reference circle
- c) Prism reference point
- d) All of the above
- (48) Which of the following instruments are used for measuring the power of PAL:
- a) Automated lensometer
- b) Keratometry
- c) Geneva lens
- d) None
- (49) Which facial type is considered ideal for most of the frame shape:
- a) Round
- b) Oval
- c) Square
- d) Oblong
- (50) Name the lens material mentioned below, which has least chromatic aberration:
- a) crown glasses
- b) polycarbonate
- c) CR-39
- d) Trivex
- (51) Which of the following coating are commonly applied on lens:
- a) MAR coating
- b) UV coating
- c) Both
- d) none
- (52) Name the following tinted lenses:
- a) Blue tint
- b) Grey tint
- c) Green and brown tint
- d) All of the above

(53) A lens consists of two power is called:

- a) Bifocal
- b) Trifocal
- c) Single vision
- d) None

(54) Advantages of PAL:

- a) Better cosmesis
- b) No image jump
- c) No demarcation line
- d) All of the above

(55) Disadvantages of cemented bifocal:

- a) Dividing line tends to collect dirt
- b) Wafer had a tendency to fall off
- c) Both 'a' & 'b'
- d) None

(56) Ophthalmic lenses are:

- a) 2 refracting surface at least 1 of which is curved
- b) 2 refracting surface with 2 of curved surface
- c) Both
- d) None

(57) Flint glass made up of:

- a) 45-65% lead oxide
- b) 25-45% silica
- c) 10% soda with potassium oxide
- d) All of the above

(58) Polycarbonate lens was developed in :

- a) 1970s
- b) 1980s
- c) 1990s
- d) 2000s

(59) UV cutoff by high index plastic lens is

- a) 380-400 nm
- b) 480-500 nm
- c) only 380 nm
- d) none

(60) UV absorption by crown glass

- a) 380 nm
- b) 300 nm
- c) 280 nm
- d) all