



**ARKAJAIN**  
**University**  
Jharkhand

9/12/2020

23

**5<sup>th</sup> Semester End Term Examination: Dec - 2022.**

**Subject : Low Vision Care**  
**Course : B. Optometry**  
**Full Marks : 50**  
**Roll No: .....**  
**Time : 2 Hours.**

**Instructions to the Candidates:**

- Read the question paper very carefully.
- Start writing from 2nd page onwards; Don't Write On The 1st Page Backside.
- Question Paper is divided into Three Parts -A, B & C.
- Part-A is containing 10 multiple choice questions.
- Part- B containing SIX questions out of which FOUR questions are to be answered.
- Part C containing FOUR questions out of which TWO questions are to be answered.
- Do not write anything except your Roll No. on the question paper.
- Possession of Mobile Phones or any kind of Written Material, Arguments with the Invigilator or Discussing with Co-Student will come under Unfair Means and will Result in the Cancellation of the Papers.

**PART - A**

**Multiple Choice Questions**

[10x1=10]

- i) WHO headquarters are present in  
a) Copenhagen      b) Zurich  
c) Geneva            d) Prague
- ii) Developmental age identifies an individual's  
a) Motor function      b) Sensory function  
c) Embryology        d) Cognitive skills
- iii) JND stands for  
a) Just noticeable differences      b) Justifiable notifying disturbance  
c) Just noticed dioptr                d) Just noticed Disturbance
- iv) The two visual functions included in WHO's definition of Low vision are  
a) Visual acuity and Stereopsis      b) Visual Acuity and contrast sensitivity  
c) Visual field and visual acuity      d) Visual field and colour perception
- v) Which of the following causes avoidable blindness?  
a) Retinitis Pigmentosa                b) Optic atrophy  
c) Glaucoma                                d) Cataract



- vi) ADL stands for?
- Articles of daily living
  - Activities of daily living
  - Assisted diurnal limitations
  - None of the following
- vii) According to WHO there are \_\_\_ categories of Vision impairment?
- 5
  - 4
  - 3
  - 7
- viii) In an RP patient, where he is restricted to remain indoors it is a \_\_\_\_.
- Impairment
  - Disorder
  - Disability
  - Handicap
- ix) CCTV is a/an \_\_\_\_ device
- Optical
  - Non Optical
  - Electronic
  - Software
- x) Which of the following diseases cause peripheral vision loss?
- Macular oedema
  - Optic neuritis
  - Stargardt disease
  - Glaucoma

PART - B

Answer any FOUR out of SIX

[4x5=20]

- Write a short note on the RPWD and rights associated with Visually impaired people
- Describe the types of magnification. Define RSM, RDM and LVM.
- Write a short note on filters and their significance.
- Write a note on Achromatopsia.
- Elaborate on the factors affecting coping mechanisms from vision loss.
- What is contrast sensitivity? How is CS evaluated and recorded? Mention the importance of CS.

PART - C

Answer any TWO out of FOUR

[2x10=20]

- Explain a condition where colour vision is severely impaired. Describe 3 methods to rehabilitate a person with colour vision impairment.
- Write about: Usher's disease, Lawrence Moon Biedle Syndrome and Rod Cone dystrophy. Explain what is common in the three diseases.
- What are macular function test? Elaborate on Amsler Grid. State the Kestenbaum's principle for magnification and calculate the magnification for 11. Define low vision. Classify low vision according to WHO. Describe importance of history taking in low vision testing. Write down the role of optometrist in low vision.





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**5<sup>th</sup> Semester End Term Examination: Dec - 2022.**

**Subject : Systemic Diseases**  
**Course : B. Optometry**  
**Full Marks : 70**

**Roll No: .....**  
**Time : 3 Hours.**

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- Part C containing FOUR questions out of which THREE questions are to be answered.
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**PART - A**

**Multiple Choice Questions**

**[10x1=10]**

1. i) Abnormal growth of blood vessels is called \_\_\_\_\_.
- a) Neovascularization                      b) Neovascularization  
c) Natovascularizing                      d) Striaberation
- ii) Central retinal artery is a branch of \_\_\_\_\_
- a) Carotid artery                      b) Ophthalmic artery  
c) Chorio-capillaries                      d) Supero temporal artery
- iii) Risk factor for Diabetic retinopathy include both i] \_\_\_\_\_ and ii] \_\_\_\_\_.
- a) Duration of diabetes &                      b) Severity of diabetes and cancer  
    Hyperlipidaemia
- c) Stroke and cancer                      d) Hypertesnion and hyperglycemia
- iv) Amaurosis fugax requires \_\_\_\_\_ approach
- a) Cardio vascular                      b) Cerebro vascular  
c) Ophthalmic                      d) All of the above
- v) Migraines may cause \_\_\_\_\_
- a) Nausea and blurring of vision                      b) transient ocular ischemia  
c) None of the above                      d) Encephalitis









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**5<sup>th</sup> Semester End Term Examination: Dec - 2022.**

**Subject : Research Methodology & Biostatistics**  
**Course : B. Optometry**  
**Full Marks : 70**

**Roll No: .....**  
**Time : 3 Hours.**

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**PART - A**

**Multiple Choice Questions**

**[10x1=10]**

- i) Which one of the following is not a measure of mortality
  - a) Net reproduction rate
  - b) Crude death rate
  - c) Standardized death rate
  - d) Age specific death rate
- ii) In sampling method of statistical investigation, the term "population" refers to
  - a) A collection of human beings
  - b) A collection of non living thing
  - c) Collection of both having common character
  - d) None of the above
- iii) In sampling method of statistical investigation, we take observation on
  - a) Each observation of the population
  - b) Only a small part of population
  - c) Both
  - d) None of the above
- iv) The correlation coefficient always lies between
  - a) 0 and 1
  - b) 0 and  $\infty$
  - c)  $-\infty$  and  $\infty$
  - d) -1 and 1



- v) Age specific death rate is a special case of
- |                            |                        |
|----------------------------|------------------------|
| a) Net reproduction rate   | b) Crude death rate    |
| c) Standardized death rate | d) Specific death rate |
- vi) Mortality is related to
- |              |                      |
|--------------|----------------------|
| a) Birth     | b) Death             |
| c) Migration | d) None of the above |
- vii) Biostatistics is the branch of statistics that deals with
- |                   |                      |
|-------------------|----------------------|
| a) Living objects | b) Biological events |
| c) Biography      | d) None of the above |
- viii) When the participants are not revealed in the study is called
- |                    |               |
|--------------------|---------------|
| a) Confidentiality | b) Anonymity  |
| c) Ethics          | d) Discretion |
- ix) IRB full form
- |                               |                               |
|-------------------------------|-------------------------------|
| a) Internal review board      | b) Institutional rating board |
| c) Institutional review board | d) None of the above          |
- x) Hypothesis are how many types?
- |      |      |
|------|------|
| a) 2 | b) 1 |
| c) 3 | d) 0 |

### PART - B

Answer any SIX out of EIGHT

[6x5=30]

2. What is research methodology?
3. What is research problem?
4. Write a short note on research design
5. Explain the types of data collection.
6. What is research proposal
7. Explain research process.
8. Explain hypothesis and its types
9. What is applied research?

### PART - C

Answer any THREE out of FOUR

[3x10=30]

10. Describe types of research?
11. Describe ethical issues in research?
12. What are sampling methods, explain it types?
13. Describe sample size determination?





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**5<sup>th</sup> Semester End Term Examination: Dec - 2022.**

**Subject : Binocular Vision 1**  
**Course : B. Optometry**  
**Full Marks : 50**

**Roll No: .....**  
**Time : 2 Hours.**

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**PART - A**

**Multiple Choice Questions**

**[10x1=10]**

1. i) Physiological diplopia is manifest in case of object situated
  - a) On horopter
  - b) Within panum's space
  - c) Outside panum's space
  - d) All of this
- ii) Example of monocular clues except—
  - a) Looming
  - b) Disparate retinal image
  - c) Motion parallax
  - d) Aerial perspective
- iii) Occlusion is a treatment for
  - a) Toxoplasmosis
  - b) Exophoria
  - c) Amblyopia
  - d) Refractive error
- iv) Prism bar cover test is used to detect
  - a) Squint
  - b) Amblyopia
  - c) Steropsis
  - d) None of these
- v) Hirschberg test is used to detect
  - a) Heterophoria
  - b) Heterotropia
  - c) Diplopia
  - d) None of these



- vi) Vision with single eye  
 a) Monocular  
 b) Binocular  
 c) Bi ocular  
 d) None of these
- vii) No coordination between two eyes  
 a) Monocular  
 b) Binocular  
 c) Bi ocular  
 d) None of these
- viii) Coordinated vision between two eyes  
 a) Monocular  
 b) Binocular  
 c) Bi ocular  
 d) None of these
- ix) The correct neuromuscular development so that the visual axes are directed at the object  
 a) Motor mechanism  
 b) Sensory mechanism  
 c) Mental process  
 d) None of these
- x) The equal image clarity and size of two eyes  
 a) Motor mechanism  
 b) Sensory mechanism  
 c) Mental process  
 d) None of these

**PART - B**

**Answer any FOUR out of SIX**

[4x5=20]

2. Herring's law of equal innervation
3. Write a short note on Horopter?
4. What is sensory adaptation?
5. Local and global stereopsis
6. Grades of binocular vision
7. Extraocular muscles

**PART - C**

**Answer any TWO out of FOUR**

[2x10=20]

8. What is BSV? Describe the advantages of BSV? What are the prerequisites of BSV? How is BSV measured using Synaptophore?
9. Discuss the classic features and management of Convergence Insufficiency.
10. Define Diplopia. Describe crossed and uncrossed Diplopia. Elaborate on the management techniques for a phoria case.
11. What is accommodative facility? How do we measure it? Explain the process.





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**5<sup>th</sup> Semester End Term Examination: Dec - 2022.**

**Subject : Geriatric Optometry and Paediatric Optometry**  
**Course : B. Optometry**  
**Full Marks : 50**

**Roll No: .....**  
**Time : 2 Hours.**

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**PART - A**

**Multiple Choice Questions**

**[10x1=10]**

1. i) Remedial Therapy for myopia is
  - a) Therapy with atropine
  - b) Therapy with contact lens
  - c) Therapy with glasses
  - d) None of these
- ii) Absence of crystalline lens from birth
  - a) Congenital aphakia
  - b) Congenital aniridia
  - c) Congenital polycoria
  - d) None of these
- iii) Congenital absence of iris is called
  - a) Aniridia
  - b) Polycoria
  - c) PPM
  - d) None of these
- iv) Abnormally eccentric placed pupil is known as
  - a) Corectopia
  - b) Polyopia
  - c) Polycoria
  - d) None of these









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**5<sup>th</sup> Semester End Term Examination: Dec - 2022.**

**Subject : Contact Lens I**  
**Course : B. Optometry**  
**Full Marks : 50**

**Roll No: .....**  
**Time : 2 Hours.**

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**PART - A**

**Multiple Choice Questions**

[10x1=10]

- i) The components of care and maintenance
  - a) Daily cleaner
  - b) Rinsing solution
  - c) Lubricants
  - d) All of the above
- ii) Purpose of care and maintenance
  - a) Clean lenses and good comfort
  - b) Good vision
  - c) Safe lens wear
  - d) All of the above
- iii) Wearing RGP lens should provide
  - a) Good visual acuity with comfort
  - b) No ocular insult
  - c) No facial appearance
  - d) All of the above
- iv) The degree of fluorescein pooling can be graded as
  - a) Slightly steep
  - b) Steep
  - c) Very steep
  - d) All of the above
- v) Ideal lens movement during fitting assessment is
  - a) Smooth
  - b) Rocky
  - c) Apical
  - d) All of the above



- vi) Dynamic fitting assessment is done by observing
- a) Decentration & stability
  - b) Movement after blinking
  - c) Movement in lateral gaze
  - d) All of the above
- vii) Post fitting assessment is done by assessing
- a) Dynamic fit
  - b) Static fit
  - c) Vision assessment
  - d) All of the above
- viii) Preliminary measures for RGP
- a) HVID
  - b) Radius of curvature
  - c) Lid tonicity
  - d) All of the above
- ix) Patient selection criteria for RGP
- a) High motivation of patient
  - b) Moderate to high refractive error
  - c) Corneal toricity
  - d) All of the above
- x) RGP lens fabrication techniques
- a) Lathing
  - b) Molding
  - c) Both a & b.
  - d) None of the above

#### PART - B

Answer any FOUR out of SIX

[4x5=20]

2. Write a short note on history of contact lens
3. What is back and front vertex power?
4. What is magnification?
5. What is accommodation?
6. What is convergence?
7. What is vertex distance?

#### PART - C

Answer any TWO out of FOUR

[2x10=20]

8. Discuss optics of contact lenses.
9. Describe the properties of contact lens materials
10. Discuss indication and contraindications of contact lenses
11. Discuss insertion and removal techniques of contact lens practice