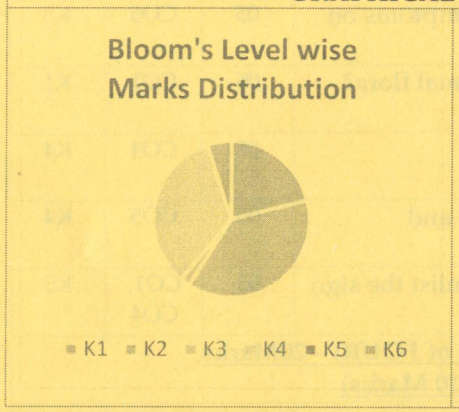
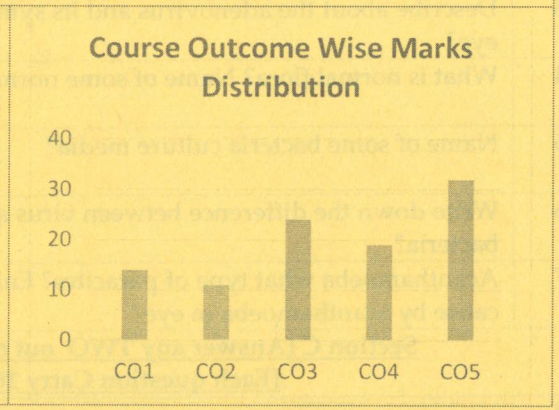
CO- Course Outcomes, **KL**- Knowledge Level, **PO** – Program Outcome

Course Outcomes	CO1	Understand about the characteristics of bacteria, viruses, fungi and parasites.
	CO2	Understand of the principles of sterilization and disinfection in hospital and ophthalmic practice.
	CO3	Understand of the pathogenesis of the diseases caused by the organisms in the human body with particular reference to the eye infections.
	CO4	Understand basic principles of diagnostic ocular Microbiology.
	CO5	Understand about the characteristics of bacteria, viruses, fungi and parasites.

GRAPHICAL REPRESENTATION





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ARKA JAIN University Jharkhand — NAAC GRADE A — ACCREDITED UNIVERSITY

END SEM EXAMINATION
School of Health & Allied Science

Program	**Bachelor of Optometry**		
Subject Name	**Ocular Microbiology**	**Semester**	**III**
		Year	**Nov/Dec 2024**
Time: 2 Hour Max. Marks : 50	• Start writing from 2nd page onwards; **don't Write on the 1st Page Backside** • **Answer all Questions of Section A (Compulsory)** • **Answer Any Four out of Six of Section B** • **Answer Any Two out of Four of Section C** • **Possession of Mobile Phones** or any kind of **Written Material, Arguments with the Invigilator or Discussing with Co-Student** will comes under **Unfair Means** and will **Result** in the **Cancellation of the Papers**.		

Knowledge Level (KL)	**K1** : Remembering	**K3** : Applying	**K5** : Evaluating
	K2 : Understanding	**K4** : Analysing	**K6** : Creating

Section A (Each question Carry 01 Mark from Q1-i to x) – 10 Marks

Q. N 1	QUESTIONS	Marks	COs	KL
i	What is infection? a) Interaction between the host and the micro organism. b) The host tries to minimize the effect of the microbe by developing a mechanism of resistance. c) An immune response that causes redness, and swelling of an area on the body or possibly tissues within the body. d) Organisms which live on living host and derive nutrition from the host without any benefit to the host.	01	CO4	K1
ii	What is immunity? a) Interaction between the host and the micro organism. b) The host tries to minimize the effect of the microbe by developing a mechanism of resistance. c) An immune response that causes redness, and swelling of an area on the body or possibly tissues within the body. d) Organisms which live on living host and derive nutrition from the host without any benefit to the host.	01	CO4	K1

iii	What is parasites? a) Interaction between the host and the micro organism. b) The host tries to minimize the effect of the microbe by developing a mechanism of resistance. c) An immune response that causes redness, and swelling of an area on the body or possibly tissues within the body. d) Organisms which live on living host and derive nutrition from the host without any benefit to the host.	01	CO4	K1
iv	What is the IgA level in tear? a) 14 mg/100ml b) 35 mg/100ml c) 25 mg/ 100ml d) 30 mg/100ml	01	CO3	K3
V	Sign of CMV retinitis- a) Cotton wool spot. b) Conjunctival hemorrhage. c) Exudates d) Pizza fundus.	01	CO3	K2
vi	RNA virus- a) Adenovirus. b) Herpes virus. c) HIV virus. d) Human papilloma virus.	01	CO1	K1
vii	In the CL solution, Tap water, swimming pool what type of protozoan can effect in eye? a) Toxoplasmosis gondi. b) Pediculosis (Pthiriasis) c) Acanthamoeba d) Candida albicans	01	CO5	K2
viii	In chlamydial trachomatis what type of sign are present in the eye? a) Pannus, Follicular conjunctivitis. b) Follicles, hyphema. c) Conjunctival congestion, Pseudomembrane. d) Hypopyon, Fuchs dystrophy.	01	CO3	K5
ix	Gram (+) cocci- a) Neisseriae b) Streptococci c) Meningococcal d) Pseudomonas aeruginosa	01	CO1	K1
x	Gram (-) bacilie- a) Neisseriae b) Streptococci c) Meningococcus d) Pseudomonas aeruginosa	01	CO1	K1

Section B (Answer any FOUR out of SIX) – 20 Marks
(Each question Carry 5 Marks)

Q. No.	QUESTIONS	Marks	COs	KL
2	What is EKC? Mention the transmission route of EKC?	05	CO3	K2
3	Describe about the adenovirus and its symptoms on eye?	05	CO5	K3
4	What is normal flora? Name of some normal flora?	05	CO1	K1
5	Name of some bacteria culture media?	05	CO4	K4
6	Write down the difference between virus and bacteria?	05	CO5	K4
7	Acanthamoeba what type of paracites? Enlist the sign cause by acanthamoeba in eye?	05	CO1, CO4	K5

Section C (Answer any TWO out of FOUR) – 20Marks
(Each question Carry 10 Marks)

Q. No.	QUESTIONS	Marks	COs	KL
8	Describe about the sterilisation process before the ocular surgeries?	10	CO2	K2
9	Describe the cell structure of bacteria? Name of the true membrane in bacterial cell structure?	10	CO5	K1
10	Enlist some ocular disease causes by staphylococci? Name of some anti-bacterial eye drops that can reduce the effect of staphylococcus?	10	CO3	K6
11	What is candida albicans? Name of some ocular disease causes by it? Write down the management of candida albicans?	10	CO3	K6

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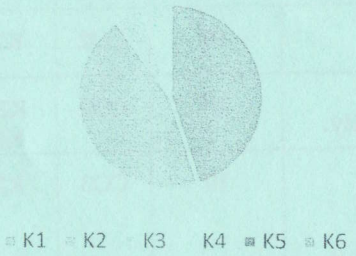
CO- Course Outcomes, KL- Knowledge Level, PO – Program Outcome

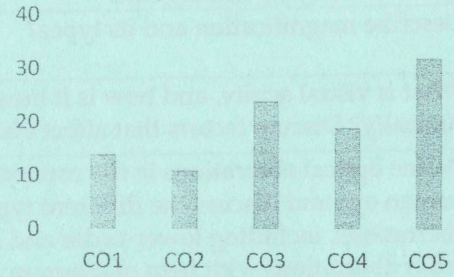
Course Outcomes	CO1	Understand about the various optical constants of the eye & their measurements
	CO2	Understand the various aspects of vision and measuring visual acuity
	CO3	Have knowledge about various optical defects of the eye
	CO4	Analyze about various refractive anomalies of the eye
	CO5	Apply all the theoretical skills on practical purpose

GRAPHICAL REPRESENTATION

Bloom's Level Wise Marks Distribution



Course Outcome Wise Marks Distribution



ARKA JAIN University Jharkhand — NAAC GRADE A ACCREDITED UNIVERSITY

END SEM EXAMINATION
School of Health and Allied Science

Program	**Bachelor of Optometry**		
Subject Name	**Visual Optics I**	**Semester**	**III**
		Year	**Nov/Dec 2024**

Time: 2 Hour
Max. Marks : 50

- Start writing from 2nd page onwards; **don't Write on the 1st Page Backside**
- **Answer all Questions of Section A (Compulsory)**
- **Answer Any Four out of Six of Section B**
- **Answer Any Two out of Four of Section C**
- **Possession of Mobile Phones** or any kind of **Written Material, Arguments with the Invigilator or Discussing with Co-Student** will comes under **Unfair Means** and will **Result** in the **Cancellation of the Papers.**

Knowledge Level (KL)	**K1 :** Remembering	**K3 :** Applying	**K5 :** Evaluating
	K2 : Understanding	**K4 :** Analysing	**K6 :** Creating

Section A (Each question Carry 01 Mark from Q1-i to x) – 10 Marks

Q. N 1	QUESTIONS	Marks	COs	KL
i	Which of the following structures provides the highest refractive power in the eye? a) Cornea b) Lens c) Aqueous humor d) Vitreous humor	01	CO1	K1
ii	Aberrations are corrected by: a) Single vision lens b) PALs c) Bifocal lens d) Double lens	01	CO3	K2
iii	At birth child is generally_____ a) Myopic b) Hypermetropic c) Emmetropic d) Emmetrpized	01	CO1	K1
iv	Accommodation in aphakic eye is: a) Present b) Absent c) +10 D d) None	01	CO4	K1

v	The refractive index of the lens is approximately: a) 1.33 b) 1.37 c) 1.42 d) 1.50	01	CO1	K1
vi	The central part of the crystalline lens is known as the: a) Capsule b) Cortex c) Nucleus d) Posterior chamber	01	CO3	K1
vii	The optical axis of the eye passes through: a) The center of the cornea and the nodal points b) The macula and the optic nerve c) The pupil and fovea d) The visual axis and corneal apex	01	CO1	K2
viii	How many cardinal points present in Schematic eye: a) 6 b) 4 c) 2 d) 1	01	CO1	K1
ix	Which of the following best describes the visual axis of the eye? a) The line connecting the center of the cornea to the center of the retina b) The line of light entering the eye c) The path of light focused on the fovea d) The line connecting the pupil to the visual target	01	CO1	K1
x	Which color vision test uses a series of colored plates with numbers or shapes embedded in colored dots? a) Farnsworth Lantern Test b) Ishihara Test c) D-15 Test d) Anomaloscope	01	CO3	K2

Section B (Answer any FOUR out of SIX) – 20 Marks
(Each question Carry 5 Marks)

Q. No.	QUESTIONS	Marks	COs	KL
2	Explain chromatic aberration and how it can influence the clarity of images perceived by the eye	05	CO3	K2
3	What is keratometry and its types. Explain the procedure.	05	CO5	K3
4	What is the Gullstrand model of the eye, and how does it help in understanding the optical system of the eye?	05	CO1	K2
5	Write a short on axis and angles of the eye with well labelled diagram.	05	CO1	K1
6	Write a short notes on vergence.	05	CO3	K2
7	What is the purpose of color vision test and its types? Explain the theory behind the color vision.	05	CO4	K2

Section C (Answer any TWO out of FOUR) – 20 Marks
(Each question Carry 10 Marks)

Q. No.	QUESTIONS	Marks	COs	KL
8	Distinguish the types of refractive error in human eye, with the help of diagram.	10	CO4	K4
9	Describe magnification and its types?	10	CO2	K1
10	What is visual acuity, and how is it measured clinically? Discuss factors that affect visual acuity.	10	CO2	K2, K4
11	Define optical aberrations in the context of the human eye and discuss the different types of aberrations, including lower-order and higher-order aberrations with help of diagram, if needed.	10	CO3	K2

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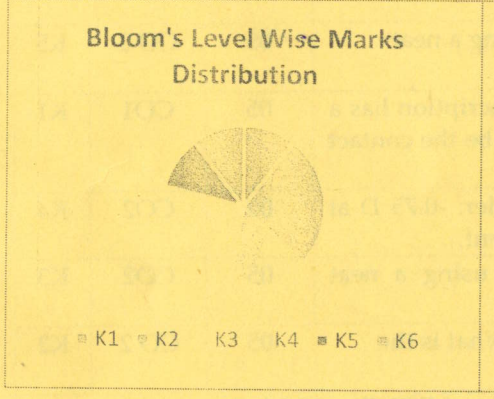
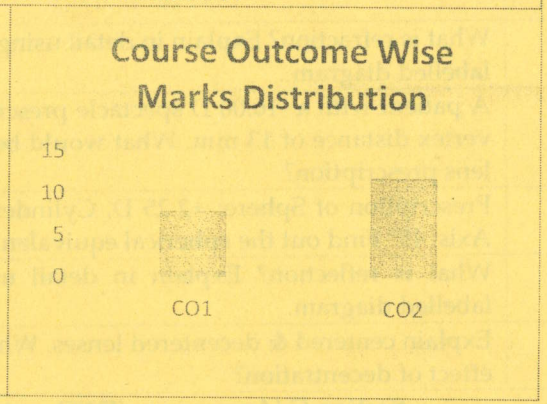
CO- Course Outcomes, **KL**- Knowledge Level, **PO** – Program Outcome

Course Outcomes	CO1	To have knowledge about various types of specialty lenses
	CO2	To have learned about types of spectacle frames and their materials and dispense the same case specifically

GRAFICAL REPRESENTATION





ARKA JAIN University
Jharkhand

NAAC GRADE A

END SEM EXAMINATION
School of Health & Allied Science

Program	Bachelor of Optometry		
Subject Name	Optometric Optics 1	Semester	III
		Year	Nov/Dec 2024
Time: 2 Hour Max. Marks : 50	• Start writing from 2nd page onwards; **don't Write on the 1st Page Backside** • **Answer all Questions of Section A (Compulsory)** • **Answer Any Four out of Six of Section B** • **Answer Any Two out of Four of Section C** • **Possession of Mobile Phones** or any kind of **Written Material, Arguments with the Invigilator or Discussing with Co-Student** will comes under **Unfair Means** and will **Result** in the **Cancellation of the Papers**.		

Knowledge Level (KL)	**K1** : Remembering	**K3** : Applying	**K5** : Evaluating
	K2 : Understanding	**K4** : Analysing	**K6** : Creating

Section A (Each question Carry 01 Marks from Q1-i to x) – 10 Marks

Q. N 1	QUESTIONS	Marks	COs	KL
i	Spherical equivalent of -1.00 + 2.00 x 135 a) +1.00 b) 0.0 c) -1.00 d) +1.5	01	CO2	K4
ii	If two prisms are used, what is the condition for dispersion without deviation? a) $\delta - \delta' = 0$ b) $\delta + \delta' = 0$ c) $\delta \times \delta'' = 0$ d) $\delta / \delta' = 0$	01	CO1	K1
iii	Mark the correct option : --- a) If the incident rays are converging then we have a real object b) If the final rays are converging then we have a real image c) The image of a virtual object is called a virtual image d) If the image is virtual, the corresponding object is called a virtual object.	01	CO2	K2
iv	Transpose +4.00 +2.00 x 105 a) +6.00 -2.00 x 105 b) +2.00 +2.00 x 15	01	CO1	K2

	c) +6.00 -2.00 x 15 d) +4.00 -2.00 x 15			
v	An object is at a distance of 30 cm in front of a concave mirror of focal length 10 cm. The image of the object will be a) Smaller in size b) Inverted c) Between the focus & the centre of curvature d) All of the above	01	CO1	K4
vi	What is the reciprocal, of half the length of radius of curvature? a) Focal length b) Curvature c) Optical centre d) Power	01	CO2	K4
vii	Coma is a result of a) Peripheral aberration b) Chromatic aberration c) Diffraction d) None of these.	01	CO1	K2
viii	A convex lens is dropped in a liquid whose refractive index is equal to the refractive index of the lens. Then its focal length will a) Become zero b) Become infinite c) Become small but not infinite d) Remain unchanged	01	CO1	K5
ix	High plus lenses tend to create what type of visual distortion around the edges of the lens? a) Pincushion distortion b) Barrel distortion c) Chromatic aberration d) None of the above	01	CO2	K3
x	The rays of different colours fail to converge at a point, after going through a converging lens. This defect is called__ a) Spherical aberration b) Distortion c) Coma d) Chromatic aberration	01	CO2	K6

Section B (Answer any FOUR out of SIX) – 20 Marks
(Each question Carry 5 Marks)

Q. No.	QUESTIONS	Marks	COs	KL
2	What is the angle of minimum of deviation? Explain.	05	CO2	K3
3	What is refraction? Explain in detail using a neat labelled diagram..	05	CO 2	K5
4	A patient with a -16.00 D spectacle prescription has a vertex distance of 13 mm. What would be the contact lens prescription?	05	CO1	K1
5	Prescription of Sphere: +2.25 D, Cylinder: -0.75 D at Axis: 45° Find out the spherical equivalent.	05	CO2	K4
6	What is reflection? Explain in detail using a neat labelled diagram.	05	CO2	K3
7	Explain centered & decentered lenses. What is the effect of decentration?	05	CO 2	K2

Section C (Answer any TWO out of FOUR) – 20 Marks
(Each question Carry 10 Marks)

Q. No.	QUESTIONS	Marks	COs	KL
8	Explain in detail about Sagittal Depth. Also derive the Sag formula.	10	CO1	K5
9	Outline the steps involved in the hand neutralization technique in all kind of lens.	10	CO2	K4
10	What is prismatic effect of a lens? Explain & derive Prentice's Rule.	10	CO2	K2
11	Explain what is Fresnel prism? State some of its advantages & disadvantages	10	CO1	K6

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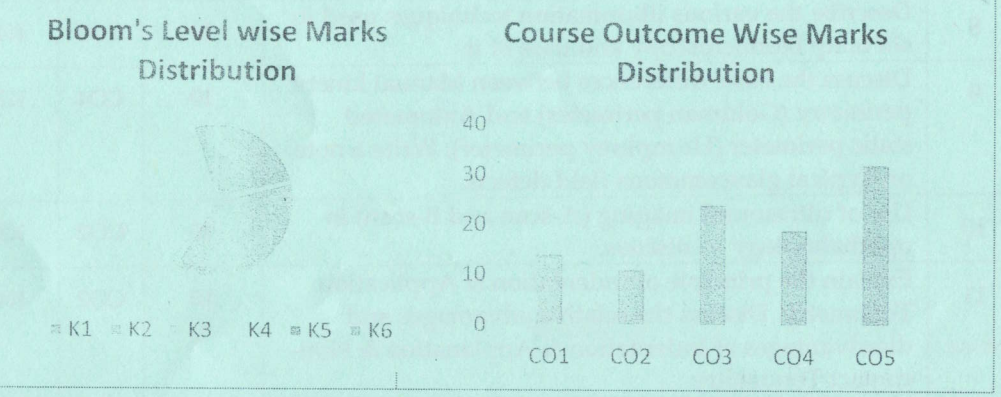
CO- Course Outcomes, **KL**- Knowledge Level, **PO** – Program Outcome

Course Outcomes	CO1	Understand and application of the refractive instrument
	CO2	Understand & design, application and use of refractive instrument use in refraction room
	CO3	Understand the optics and applying the basic functions of Ophthalmoscope
	CO4	Understand the optics and applying the basic functions and importance of examination of anterior segment
	CO5	Understand and applying the various tools to measure ocular condition

GRAPHICAL REPRESENTATION



ARKA JAIN University
Jharkhand

NAAC GRADE A

END SEM EXAMINATION
School of Health & Allied Science

Program	**Bachelor of Optometry**		
Subject Name	**Optometric Instruments**	**Semester**	**III**
		Year	**Nov/Dec 2024**
Time: 2 Hour Max. Marks : 50	• Start writing from 2nd page onwards; **don't Write on the 1st Page Backside** • **Answer all Questions of Section A (Compulsory)** • **Answer Any Four out of Six of Section B** • **Answer Any Two out of Four of Section C** • **Possession of Mobile Phones** or any kind of **Written Material, Arguments with the Invigilator or Discussing with Co-Student** will comes under **Unfair Means** and will **Result** in the **Cancellation of the Papers**.		

Knowledge Level (KL)	**K1** : Remembering	**K3** : Applying	**K5** : Evaluating
	K2 : Understanding	**K4** : Analysing	**K6** : Creating

Section A (Each question Carry 01 Marks from Q1-i to x) – 10 Marks

Q. N 1	QUESTIONS	Marks	COs	KL
i	Keratometer measures corneal a) Dioptric value b) Thickness c) Radius of curvature d) Diameter.	01	CO1	K3
ii	The focimeter is the instrument that is used to determine a) Lens dioptric value b) Lens thickness c) Lens curvature d) None of these.	01	CO2	K4
iii	In indirect Ophthalmoscopy the image is a) Real b) Magnified c) Inverted d) All of these.	01	CO3	K2
iv	The blue filter in slit lamp is used for examining a) Aqueous flare b) Hypopyon c) Fluorescein staining d) An implanted iol.	01	CO5	K4
v	Javal-Schiotz keratometer is a) Two-position keratometer b) One-position keratometer	01	CO2	K3

	c) Three-position keratometer d) None of these.			
vi	Potential Acuity meter measures: a) Color Vision b) Contrast Sensitivity c) Visual Acuity d) Glare	01	CO2	K4
vii	Principles of lensometer- a) Badal's principles. b) 1st Purkinje-Samson image. c) Total internal reflection. d) Foucault's principles.	01	CO3	K5
viii	When using the plane mirror technique during retinoscopy, which statement is not true: a) A 'with' movement is neutralized with a plus lens b) An 'against' movement is neutralized with a minus lens c) A 'with' movement always indicates hypermetropia d) An 'against' movement always indicates myopia	01	CO5	K2
ix	Normal value of the central corneal thickness is: a) 546 micron b) 646 micron c) 446 micron d) 586 micron	01	CO1	K2
x	Regarding the autorefractors, which one is correct: a) Which are currently available on the market show large variation in accuracy b) Scheiner double-pinhole principle are used in all modern autorefractors c) Modern autorefractors are useful in checking binocular muscle balance d) Accommodation and the size of the pupil cannot affect the accuracy	01	CO4	K2

Section B (Answer any FOUR out of SIX) – 20 Marks
(Each question Carry 5 Marks)

Q. No.	QUESTIONS	Marks	COs	KL
2	Discuss the principals involved, the technique used and the advantages of application Tonometry.	05	CO4	K2
3	Write the significance of MD and PSD values in a H.V.F. printout of a case of advanced glaucoma	05	CO5	K5
4	Write down a short note on A-scan ultrasonography.	05	CO4	K4
5	Different types of test charts used for different age group of patients?	05	CO1	K2
6	Explain the principle and types of retinoscopy?	05	CO3	K3
7	Illustrate what is potential acuity meter and the use	05	CO2	K1

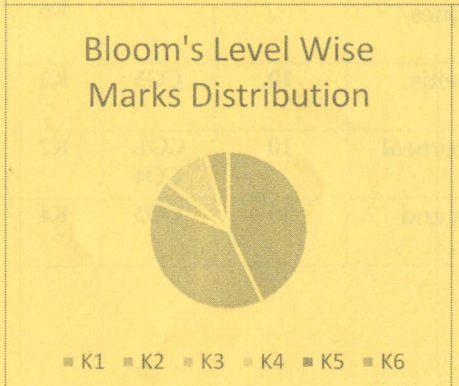
Section C (Answer any TWO out of FOUR) – 20 Marks
(Each question Carry 10 Marks)

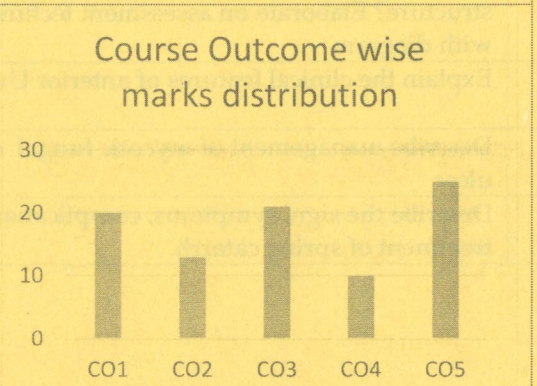
Q. No.	QUESTIONS	Marks	COs	KL
8	Describe the various illumination techniques used in slit lamp biomicroscopy and uses of it.	10	CO5	K4
9	Discuss the basic differences between Manual kinetic perimetry (Goldman perimeter) and Automated static perimeter (Humphrey perimeter). Write a note on Typical glaucomatous field defects.	10	CO4	K2
10	Use of ultrasound imaging (A-scan and B-scan) in ophthalmology – discuss.	10	CO2	K3
11	Explain the principle of Indentation & Application Tonometry. Discuss the relative advantages and disadvantages of Indentation & Applanation & Non-contact Tonometry.	10	CO2	K4

CO- Course Outcomes, KL- Knowledge Level, PO – Program Outcome

Course Outcomes	CO1	Understand the concept of different Ocular diseases of anterior segment of Eye
	CO2	Apply the concept of anatomy & Physiology of Eye while understanding the Pathology of different ocular diseases
	CO3	Utilize the concept of clinical features of the diseases for the differential diagnosis of the anterior segment diseases
	CO4	Analyze the concept of clinical features of the diseases for the management of anterior segment diseases
	CO5	Understand the concept of different Ocular diseases of anterior segment of Eye

GRAPHICAL REPRESENTATION





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END SEM EXAMINATION
School of Health and Allied Science

Program	**Bachelor of Optometry**		
Subject Name	**Ocular Disease-I**	**Semester**	**III**
		Year	**Nov/Dec 2024**

Time: 2 Hour
Max. Marks : 50

- Start writing from 2nd page onwards; **don't Write on the 1st Page Backside**
- **Answer all Questions of Section A (Compulsory)**
- **Answer Any Four out of Six of Section B**
- **Answer Any Two out of Four of Section C**
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Knowledge Level (KL)	**K1 :** Remembering	**K3 :** Applying	**K5 :** Evaluating
	K2 : Understanding	**K4 :** Analysing	**K6 :** Creating

Section A (Each question Carry 01 Mark from Q1-i to x) – 10 Marks

Q. N 1	QUESTIONS	Marks	COs	KL
i	Cloudy cornea in a new born baby is suggestive of. a) Cataract b) Refractive error c) Congenital glaucoma d) Uveitis	01	CO2	K1
ii	Bitot's spot is seen in a) Temporal conjunctiva b) Nasal conjunctiva c) Inferior conjunctiva d) Superior conjunctiva	01	CO3	K2
iii	Inflammation of glands of Molls and Zeiss causes a) Stye b) Chalazion c) Meibomitis d) none of the above	01	CO2	K1
iv	Dendritic keratitis is caused by. a) Varicella Zoster b) Herpes Simplex c) HIV d) CMV	01	CO2	K2

v	Scleritis is typically associated with. a) Rheumatoid arthritis b) Jaundice c) Cancer d) Tuberculosis	01	CO1	K1
vi	Watery discharge is observed in. a) Viral conjunctivitis b) Fungal c) Bacterial d) All of the above	01	CO3	K1
vii	MGD stands for. a) Moll Gland disorder b) Mast Cell Glandular Dystrophy c) Meibomian Gland dysfunction d) Mucopurulent gland discharge	01	CO1	K1
viii	Which of the following is a helpful protein in Blepharospasm? a) Botaxine Quinine b) Borax Yerba c) Boxin Ginseng d) Botulinum Toxin	01	CO1	K1
ix	Giant papillary conjunctivitis is a type of _____. a) Adverse drug reaction b) Bacterial infection c) Hypersensitivity d) Both b] and c]	01	CO1	K1
x	Vogt's striae are seen in _____ a) Scleritis b) Episcleritis c) K.conus d) PMD	01	CO1	K2

Section B (Answer any FOUR out of SIX) – 20 Marks
(Each question Carry 5 Marks)

Q. No.	QUESTIONS	Marks	COs	KL
2	Describe fuch's endothelial dystrophy	05	CO3	K2
3	Draw a well labelled diagram of anterior chamber as seen in a Uveitis patient under slit lamp examination	05	CO3	K3
4	Stages of corneal ulcer.	05	CO1	K2
5	What is blepharitis? What are the different types of blepharitis?	05	CO5	K1
6	Write a short note on Sjogren's syndrome	05	CO5	K1
7	Differentiate between stye and chalazion.	05	CO5	K4

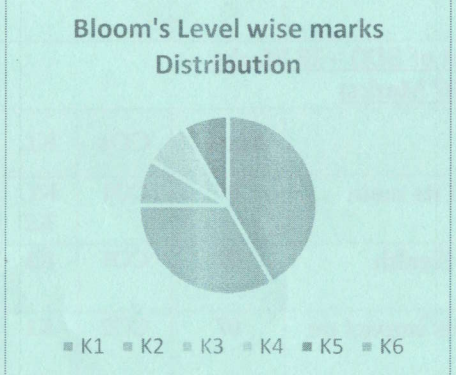
Section C (Answer any TWO out of FOUR) – 20 Marks
(Each question Carry 10 Marks)

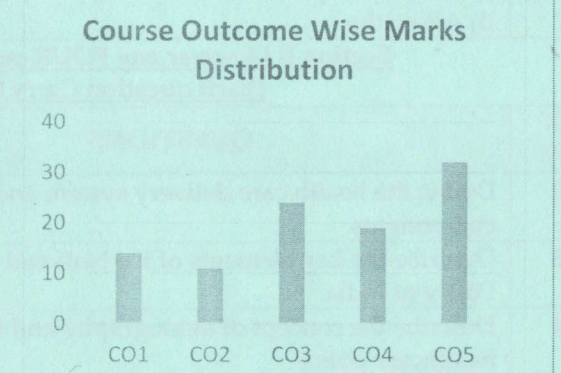
Q. No.	QUESTIONS	Marks	COs	KL
8	What is tear film and describe briefly the tear film structure? Elaborate on assessment techniques with diagram	10	CO2	K2, K6
9	Explain the clinical features of anterior Uveitis.	10	CO5	K2
10	Describe management of mycotic fungal corneal ulcer	10	CO1, CO4	K2
11	Describe the sign, symptoms, complication and treatment of spring catarrh	10	CO3	K4

CO- Course Outcomes, KL- Knowledge Level, PO – Program Outcome

Course Outcomes	CO1	Aware of traditional health care systems
	CO2	Aware of latest healthcare systems
	CO3	Knowledgeable about the telemedicine practices in India
	CO4	Understand the traditional treatment methods
	CO5	Correlates the treatment of ocular diseases using telemedicine with ocular refractive anomalies

GRAPHICAL REPRESENTATION





ARKA JAIN University
Jharkhand

NAAC GRADE A

END SEM EXAMINATION
School of Health and Allied Science

Program	**Bachelor of Optometry**		
Subject Name	**Indian Medicine and Telemedicine**	**Semester**	**III**
		Year	**Nov/Dec 2024**
Time: 3 Hour Max. Marks : 70	• Start writing from 2nd page onwards; don't Write on the 1st Page Backside • **Answer all Questions of Section A (Compulsory)** • **Answer Any Four out of Six of Section B** • **Answer Any Two out of Four of Section C** • **Possession of Mobile Phones or any kind of Written Material, Arguments with the Invigilator or Discussing with Co-Student will comes under Unfair Means and will Result in the Cancellation of the Papers.**		
Knowledge Level (KL)	**K1 :** Remembering	**K3 :** Applying	**K5 :** Evaluating
	K2 : Understanding	**K4 :** Analysing	**K6 :** Creating

Section A (Each question Carry 01 Mark from Q1-i to xii) – 12 Marks

Q. N 1	QUESTIONS	Marks	COs	KL
i	At which level of healthcare delivery are district hospitals typically categorized in India? a) Primary b) Secondary c) Tertiary d) Quaternary	01	CO1	K1
ii	What is the main role of community participation in the healthcare delivery system? a) To increase hospital infrastructure b) To encourage public health responsibility c) To privatize healthcare services d) To reduce the role of government in healthcare	01	CO1	K1
iii	Which of the following is a key feature of the healthcare system in developed countries? a) Publicly funded universal healthcare b) Reliance entirely on the private sector c) Minimal regulation of healthcare services d) High out-of-pocket expenditure	01	CO2	K1

iv	Which of the following is a common constraint faced in the implementation of national health programmes? a) Excess of healthcare workers b) Underfunding and resource shortages c) Lack of public interest in healthcare d) Over-reliance on AYUSH	01	C04	K2
v	What is the key objective of integrating AYUSH with modern medicine? a) To replace modern healthcare systems b) To reduce reliance on pharmaceuticals c) To provide complementary and alternative therapies d) To develop standalone AYUSH hospitals	01	CO2	K2
vi	Which of the following is a significant achievement in India's health sector in recent years? a) Elimination of maternal mortality b) Polio-free status c) Universal access to healthcare d) Complete eradication of tuberculosis	01	CO2	K3
vii	Which of the following is NOT considered a vital event in demography? a) Birth b) Marriage c) Migration d) Educational attainment	01	CO1	K2
viii	Which of the following best describes the term "census"? a) A survey conducted to estimate disease prevalence b) A process of recording vital statistics c) The systematic enumeration of a population d) The collection of health data in hospitals	01	CO1	K2
ix	Which of the following is an example of a non-communicable disease? a) Malaria b) Tuberculosis c) Diabetes d) Measles	01	CO1	K1
x	The plan of NRHM to protect mother is called a) Janani Suraksha Yojna b) Baal Vivah Yojna c) National student scheme d) None of the above	01	CO4	K3
xi	Teleoptometry is a branch of _____ a) Teleradiology b) Telepsychiatry c) Telemedicine d) None of the above	01	CO5	K1
xii	"Like cure Like" is a theory of a) Ayurveda b) Unani c) Homeopathy d) Allopathy	01	CO4	K1

Section B (Answer any FOUR out of SIX) – 28 Marks
(Each question Carry 07 Marks)

Q. No.	QUESTIONS	Marks	COs	KL
2	Define the health care delivery system and its main components	07	CO1	K1, K2
3	Describe the key elements of the National Health Policy of India	07	CO1	K1
4	Describe the concept of demography and its impact on healthcare policy	07	CO2	K1
5	Explain the concept of universal health coverage (UHC) and its significance in India's National Health Policy.	07	CO2	K2
6	Compare the healthcare systems of developed countries (e.g., USA or UK) with India's healthcare delivery system	07	CO2	K4
7	Discuss the role of private sector in healthcare delivery system in India.	07	CO3	K2

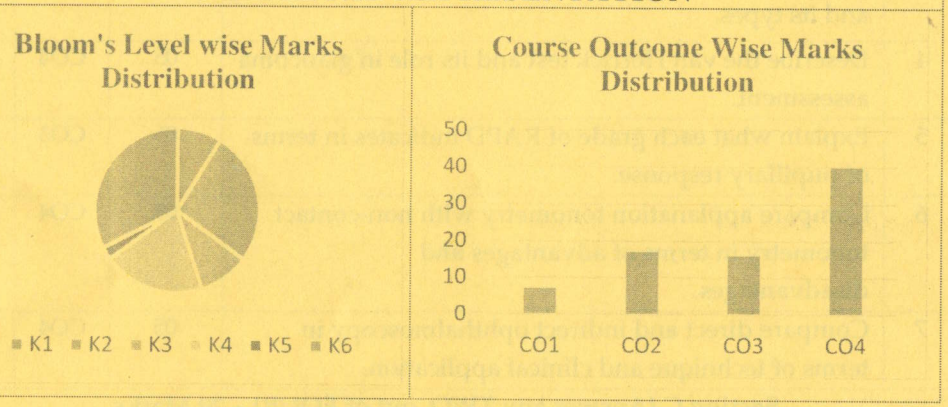
Section C (Answer any TWO out of FOUR) – 30 Marks
(Each question Carry 15 Marks)

Q. No.	QUESTIONS	Marks	COs	KL
8	Assess the role of AYUSH in promoting health and wellness, and reducing healthcare costs.	15	CO1	K5
9	Analyze the role of vital statistics (birth, death, marriage, migration) in shaping demographic trends	15	CO2	K4
10	Discuss the process of collecting and recording vital statistics in India	15	CO2	K2
11	Explain Vital life events & its impact on demography.	15	CO2	K1, K5

CO- Course Outcomes, **KL**- Knowledge Level, **PO** – Program Outcome

Course Outcomes	CO1	Understand about the process of history taking and its clinical importance
	CO2	Understand about various clinical examination tests available
	CO3	Analyse the importance of pupillary examination in the field of optometry
	CO4	Apply all the theoretical knowledge on practical field

GRAPHICAL REPRESENTATION



ARKA JAIN University Jharkhand — NAAC GRADE A ACCREDITED UNIVERSITY

END SEM EXAMINATION
School of Health & Allied Science

Program	**Bachelor of Optometry**		
Subject Name	**Clinical Examination of Visual System**	**Semester**	**III**
		Year	**Nov/Dec 2024**
Time: 2 Hour Max. Marks : 50	• Start writing from 2nd page onwards; **don't Write on the 1st Page Backside** • **Answer all Questions of Section A (Compulsory)** • **Answer Any Four out of Six of Section B** • **Answer Any Two out of Four of Section C** • **Possession of Mobile Phones** or any kind of **Written Material, Arguments with the Invigilator or Discussing with Co-Student** will comes under **Unfair Means** and will **Result** in the **Cancellation of the Papers**.		

Knowledge Level (KL)	**K1 :** Remembering	**K3 :** Applying	**K5 :** Evaluating
	K2 : Understanding	**K4 :** Analysing	**K6 :** Creating

Section A (Each question Carry 01 Mark from Q1-i to x) – 10 Marks

Q. N 1	QUESTIONS	Marks	COs	KL
i	What is the purpose of the Hirschberg test? a) To measure visual acuity b) To assess extraocular motility c) To evaluate pupillary reflexes d) To detect strabismus	01	CO3	K1
ii	Why is the Van Herrick test important in eye examinations? a) It assesses color vision b) It evaluates the anterior chamber depth c) It tests visual acuity d) It measures intraocular pressure	01	CO4	K2
iii	In a patient with suspected dry eye, which test would you prioritize? a) Tonometry b) Schirmer's test c) Slit lamp examination d) Confrontation test	01	CO2	K3
iv	Why is it important to ask about a patient's family medical history? a) To know if they live in a good environment b) To assess genetic risk factors for diseases	01	CO1	K1

	c) To establish personal connection d) To understand their personality			
v	Which of the following is a primary reason for taking a thorough patient history? a) To impress the patient with knowledge b) To determine the appropriate clinical and diagnostic procedures c) To ensure that the patient is insured d) To follow administrative guidelines	01	CO1	K3
vi	You need to conduct a comprehensive eye examination. Which order of tests would be most logical? a) Visual acuity, fundus examination, tonometry b) Tonometry, visual acuity, cover test c) Slit lamp, cover test, color vision d) Visual acuity, cover test, slit lamp examination	01	CO4	K6
vii	When considering different tests for assessing intraocular pressure, what is a key advantage of non-contact tonometry over applanation tonometry? a) It provides more accurate measurements. b) It is less invasive and more comfortable for the patient. c) It is easier to perform. d) It requires less training to administer.	01	CO4	K5
viii	When performing the cover test, what are you primarily assessing? a) Color perception b) Visual acuity c) Ocular alignment d) Pupil reaction	01	CO2	K3
ix	If a patient demonstrates a significant difference in visual acuity between their eyes, what should be your next step? a) Refer for a surgical consultation b) Perform a detailed slit lamp examination c) Conduct an Amsler test d) Conduct a full ocular motility assessment	01	CO4	K4
x	Evaluate the effectiveness of using a tonometer for assessing intraocular pressure in patients at risk for glaucoma. What is the primary benefit? a) It provides a visual assessment of the optic nerve. b) It helps in early detection and management of glaucoma. c) It requires no specialized training.	01	CO4	K5
	d) It is a quick and non-invasive procedure.			

Section B (Answer any FOUR out of SIX) – 20 Marks
(Each question Carry 5 Marks)

Q. No.	QUESTIONS	Marks	COs	KL
2	Describe key components of a comprehensive ocular history.	05	CO1	K1
3	Explain how to perform and interpret the cover test and its types.	05	CO2	K2
4	Describe the van Herrick test and its role in glaucoma assessment.	05	CO4	K3
5	Explain what each grade of RAPD indicates in terms of pupillary response.	05	CO3	K2
6	Compare applanation tonometry with non-contact tonometry in terms of advantages and disadvantages.	05	CO4	K4
7	Compare direct and indirect ophthalmoscopy in terms of technique and clinical application.	05	CO4	K6

Section C (Answer any TWO out of FOUR) – 20 Marks
(Each question Carry 10 Marks)

Q. No.	QUESTIONS	Marks	COs	KL
8	Interpret an Amsler grid test.	10	CO4	K4
9	Explain how to assess direct and consensual pupillary reactions and their significance.	10	CO3	K2
10	Develop a comprehensive assessment plan for a patient presenting with suspected corneal disease, including the specific slit lamp techniques you would use.	10	CO4	K6
11	Develop a comprehensive plan for patient evaluation that includes visual acuity, cover test, Maddox rod test, color vision, and external eye examination.	10	CO2	K6