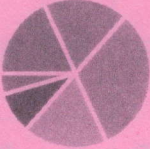
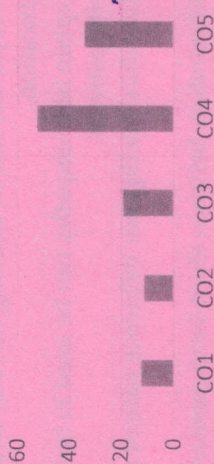


 ARKA JAIN University Jharkhand 		[06-05-2025] END SEM EXAMINATION School of Allied Health Science	
Program	Bachelor of Optometry		
Subject Name	Medical Psychology	Session	Even, 2024-2025
Semester	IV	Year	May, 2025
Time: 3 Hour Max. Marks : 70	• Start writing from 2nd page onwards; <u>don't Write on the 1st Page Backside</u>		
	• Answer all Questions of Section A (Compulsory) • Answer Any <u>Four</u> out of <u>Six</u> of Section B • Answer Any <u>Two</u> out of <u>Four</u> of Section C • Possession of <u>Mobile Phones</u> or any kind of <u>Written Material</u>, <u>Arguments with the Invigilator</u> or <u>Discussing with Co-Student</u> will comes under <u>Unfair Means</u> and will <u>Result</u> in the <u>Cancellation of the Papers</u>.		
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	QUESTIONS	Marks	COs
i	What is the primary focus of Medical Psychology in Optometry? a) To diagnose and treat ocular diseases b) To understand the psychological aspects of patient care c) To prescribe medication for ocular conditions d) To perform surgical procedures	01	CO1
ii	What is intelligence primarily associated with? a) Emotions b) Reasoning ability c) Sleep cycles d) Motor skills	01	CO1
iii	What is the goal of applying Medical Psychology principles in a clinical setting? a) To improve patient outcomes b) To reduce patient anxiety and stress c) To enhance patient education and understanding d) All of the above	01	CO2
iv	When a patient denies having a visual problem, the therapist should: a) Argue with them	01	CO2
			K3

CO- Course Outcomes,	KL- Knowledge Level,	PO – Program Outcome
CO1	Understand the concept of Medical Psychology.	
CO2	Apply concept of Medical Psychology in clinic.	
CO3	Apply concept of learning, personality and Motivation in Clinic.	
CO4	Utilize Patient-therapist relation in clinic.	
CO5	Analyze the mentality of patient for present illness.	
GRAPHICAL REPRESENTATION		
Bloom's Level wise Marks Distribution  Course Outcome Wise Marks Distribution 		

	b) Use Medical Psychology to explore emotional resistance c) Ignore the denial d) Refer to another doctor			
v	Personality influences: a) Visual acuity b) Patient communication style c) Retina structure d) Eye pressure	01	CO3	K4
vi	Motivated patients tend to: a) Delay treatment b) Adhere to clinical advice better c) Reject therapy d) Change doctors often	01	CO3	K4
vii	In a motivational context, a therapist should: a) Offer punishment b) Reinforce positive behavior c) Criticize failure d) Avoid repetition	01	CO3	K3
viii	A strong therapist-patient relationship relies on: a) Professional distance only b) Mutual respect and empathy c) Technical skill d) Hierarchical control	01	CO4	K2
ix	Which skill best supports the therapist-patient relationship? a) Persuasion b) Empathetic listening c) Medical terminology d) Speedy diagnosis	01	CO4	K2
x	Why is Medical Psychology essential in optometric care? a) For prescribing drugs b) For diagnosing mental illness c) For understanding patient reactions to visual impairment d) To avoid patient contact	01	CO1	K1
xi	Medical Psychology involves which of the following components? a) Body mechanics b) Human behavior and emotional response c) Physical strength d) Eyeglass production	01	CO1	K2

xii	Using psychological knowledge in clinics helps in: a) Reducing treatment time b) Enhancing patient cooperation c) Avoiding paperwork d) Avoiding therapy	01	CO2	K3
Section B (Answer any FOUR out of SIX) – 28 Marks (Each question Carry 07 Marks)				
Q. No.	QUESTIONS	Marks	COs	KL
2	Describe the role of medical psychology in optometry.	07	CO1	K1
3	Describe a scenario in which motivation significantly impacts patient engagement.	07	CO3	K3
4	Analyze the role of learning theories in patient education.	07	CO3	K3
5	Explain how empathy can be used to build trust with patients.	07	CO4	K3
6	How does intelligence influence patient outcomes?	07	CO4	K4
7	Differentiate between short-term memory and long-term memory.	07	CO2	K4
Section C (Answer any TWO out of FOUR) – 30 Marks (Each question Carry 15 Marks)				
Q. No.	QUESTIONS	Marks	COs	KL
8	Design a patient counselling plan to help someone for an eye examination.	15	CO4	K6
9	Evaluate the impact of psychological factors on patient outcomes.	15	CO5	K5
10	How would you establish a positive patient-therapist relationship?	15	CO4	K3
11	Discuss the role of medical psychology in addressing mental health issues in patients with visual disabilities. Explain with an example.	15	CO5	K5

10	Describe how to manage a choking infant under 1 year of age who suddenly becomes unresponsive. Include CPR and airway management steps.	10	CO2	K3
11	Design an educational program for healthcare workers to improve adherence to hand hygiene protocols in preventing the spread of antibiotic-resistant infections. What key messages and strategies would you include in the program?	10	CO4	K6

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

Course Outcomes	CO1	Understand the concept of Quality assurance of different equipment used in ophthalmic department and its management
	CO2	Understand the concept of basics of emergency care and life support skills
	CO3	Apply concept of biomedical waste management and environment safety.
	CO4	Apply concept of Infection and prevention control
	CO5	Understand the basic hospital management system

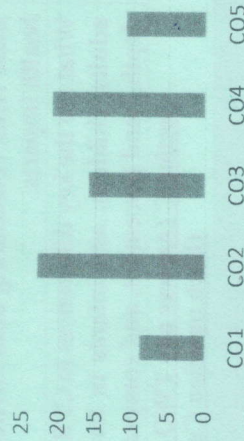
GRAPHICAL REPRESENTATION

Bloom's Level wise Marks Distribution



■ K1 ■ K2 ■ K3 ■ K4 ■ K5 ■ K6

Course outcome wise marks distribution



 ARKA JAIN University Jharkhand		 NAAC A GRADE ACCREDITED UNIVERSITY		[08-05-2025] END SEM EXAMINATION School of Allied Health Science	
Program	Bachelor of Optometry				
Subject Name	Introduction To Quality & Patient Safety				
Semester	IV		Session	Even, 2024-2025	
			Year	May, 2025	
Time: 2 Hour Max. Marks : 50	• Start writing from 2nd page onwards; <u>don't</u> Write on the 1st Page <u>Backside</u> • 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 <u>Written Material</u>, <u>Arguments with the Invigilator or Discussing with Co-Student</u> will comes under <u>Unfair Means</u> and will <u>Result</u> in the <u>Cancellation of the Papers.</u>				
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	Which of the following is a key difference between Quality Assurance (QA) and Quality Control (QC)? a) QA focuses on defect detection, while QC focuses on defect prevention. b) QA is process-oriented, while QC is product-oriented. c) QA is product-oriented, while QC is process-oriented. d) QA is only applicable to manufacturing, while QC applies to all industries.	01	CO1	K1
ii	The process of reviewing and assessing the quality of a product at different stages during production is referred to as: a) Quality Auditing b) Quality Assurance c) Quality Control d) Inspection	01	CO1	K1
iii	Which of the following is a key objective of Total Quality Management (TQM)? a) To focus only on product quality. b) To create a customer-focused culture throughout the organization. c) To improve only manufacturing processes. d) To reduce the training requirements of employees.	01	CO1	K1

iv	Which one of the following is a benefit of quality assurance? a) Lower product value b) Increased customer complaints c) Improved customer satisfaction d) More rework	01	CO1	K2
v	Which of the following best describes the hand placement for delivering chest compressions to a child during CPR? a) Two hands on the lower half of the sternum b) Two fingers just below the nipple line c) One or two hands on the lower half of the sternum depending on the size of the child d) One hand on the xiphoid process	01	CO2	K2
vi	A conscious adult is choking and unable to cough or speak. What is the next best immediate action? a) Call 911 and monitor b) Begin CPR c) Deliver 5 back blows followed by 5 abdominal thrusts d) Perform chest compressions only	01	CO2	K3
vii	During CPR, what is the ideal compression-to-ventilation ratio for a single rescuer performing CPR on an adult? a) 15:2 b) 30:2 c) 20:2 d) Continuous compressions with 1 breath every 6 seconds	01	CO2	K1
viii	Which color-coded bag is used for collecting soiled waste like dressings, bandages, cotton swabs contaminated with blood or body fluids? a) Yellow b) Red c) Blue d) White (translucent)	01	CO3	K4
ix	Which of the following personal protective equipment (PPE) combinations is appropriate when dealing with airborne infections such as tuberculosis? a) Gloves and surgical mask b) N95 respirator, gloves, and gown c) Surgical mask, gown, and goggles d) Face shield, gloves, and surgical cap	01	CO4	K2
x	What is the primary objective of a hospital infection control committee? a) Manage procurement of antibiotics	01	CO5	K2

b) Monitor staff performance -c) Prevent and control healthcare-associated infections d) Supervise construction and expansion of hospital infrastructure				
Section B (Answer any FOUR out of SIX) – 20 Marks (Each question Carry 5 Marks)				
Q. No.	QUESTIONS	Marks	COs	KL
2	Why is a Quality Management System (QMS) important for an organization? And What is meant by "continuous improvement" in quality management?	05	CO1	K2
3	How would you manage a conscious infant who is choking and unable to cough or cry, and what is the rationale for alternating techniques?	05	CO2	K3
4	Explain the difference between bactericidal and bacteriostatic antibiotics, and how each can influence resistance development.	05	CO4	K2
5	In a hospital setting, if a patient has a multidrug-resistant infection, how would you implement isolation precautions to prevent the spread of the infection to other patients?	05	CO4	K3, K5
6	Analyze the potential risks associated with the improper disposal of pharmaceutical waste and identify the treatment methods that would best mitigate these risks, considering both environmental safety and health impacts.	05	CO3	K4
7	What are the key differences in CPR technique between adults, children, and infants in terms of compression depth, hand placement, and compression	05	CO2	K3 K4
Section C (Answer any TWO out of FOUR) – 20 Marks (Each question Carry 10 Marks)				
Q. No.	QUESTIONS	Marks	COs	KL
8	Design a waste management protocol for a healthcare facility that incorporates both safe disposal and recycling (where applicable) of biomedical waste. What measures would you include to ensure both safety and compliance with regulations?	10	CO3	K6
9	Critically assess the role of healthcare workers and discuss the preparedness measures, in particular, in the face of biological, chemical, or radiological emergencies for healthcare workers.	10	CO5	K5

	ARKA JAIN University Jharkhand		[10-05-2025] END SEM EXAMINATION School of Allied Health Science		
Program	Bachelor of Optometry				
Subject Name	Basic & Ocular Pharmacology		Session	Even, 2024-2025	
Semester	IV		Year	May, 2025 *	
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 <u>Mobile Phones</u> or any kind of <u>Written Material</u>, <u>Arguments with the Invigilator</u> or <u>Discussing with Co-Student</u> will come under <u>Unfair Means</u> and will <u>Result in the Cancellation of the Papers.</u>				
	Knowledge Level (KL)	K1 : Remembering K2 : Understanding	K3 : Applying K4 : Analysing	K5 : Evaluating K6 : Creating	

Q. N	QUESTIONS	Marks	COs	KL
1 i	Which of the following is not a pharmacokinetic process? (a) Bioavailability (c) Metabolism (b) Excretion (d) Receptor binding	01	CO1	K1
ii	Drug is most absorbable if it is: (a) Non ionized (c) Water soluble (b) Ionized (d) Both B and C	01	CO2	K1
iii	 are studies of mechanisms and effects of drug action. (a) Pharmacodynamics (c) Pharmacogenomics (b) Pharmacokinetics (d) None of the above.	01	CO1	K2
iv	The rate of absorption of a drug is affected by (a) Route of drug administration (b) Solubility of the drug (c) Site of administration (d) All of the above	01	CO3	K5
v	A drug may excrete as (a) Unchanged (c) Phase II Reaction (b) Phase I Reaction (d) All of these	01	CO3	K1
vi	All are mydriatic except (a) Cyclopentolate (c) Atropine (b) Homide (d) Phenylephrine	01	CO4	K4

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

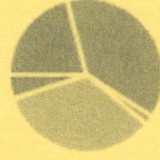
vii	Pilocarpine belongs to the class of (a) Prostaglandin (b) Beta blockers (c) cholinergic agents (d) All of them	01	CO4	K1
viii	Which drug work as a dilator (a) Paracain (b) Latanoprost (c) Tropicamide (d) All of the above	01	CO5	K1
ix	Which drug is also a part of uveitis treatment (a) Mydriatics (b) AGM (c) Anti-fungal (d) None of them	01	CO5	K2
x	Which can affect the drugs absorption (a) Poor ocular surface (b) Hypertension (c) Blood retinal barrier (d) Both A & C	01	CO1	K5
Section B (Answer any FOUR out of SIX) – 20 Marks (Each question Carry 5 Marks)				
Q. No.	QUESTIONS	Marks	COs	KL
2	Discuss in detail about general and ocular routes of drug administration	05	CO3	K1
3	Discuss about the different tear substitutes in detail	05	CO5	K2
4	Discuss about the ideal agents required for the formation of ocular drugs	05	CO2	K3
5	Explain pharmacodynamics and pharmacokinetics	05	CO1	K1
6	Enlist a table for drugs used to treat bacterial and viral eye disease	05	CO4	K4
7	Write a short note on corticosteroids and blood coagulants	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	Discuss in detail about anti glaucoma drugs, also enlist an example explained the contraindication and indication of Anti glaucoma drugs	10	CO5	K4
9	What do you understand by chemotherapy, discuss about specific chemotherapy for bacterial and viral condition	10	CO4	K1
10	What do you understand by ocular toxicology, enlist a table of drugs name with its toxic effect	10	CO4	K2
11	Discuss about different dyes used for diagnostic and therapeutic purpose	10	CO5	K1

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

CO1	Understand the basics of drugs and its different sources as well as pharmaco-dynamics andpharmacokinetics.
CO2	Understand the concept & terminologies of Pharmacology and Ocular preparations.
CO3	Understand the advantages and disadvantages of general routes of drug administration andother routes of drug administration in Ophthalmology.
CO4	Application of different pharmaceutical agents in the management of Ocular disease aswell as managing Ocular Toxicity
CO5	Analyze and applying diagnostic and therapeutic drugs in Ophthalmology

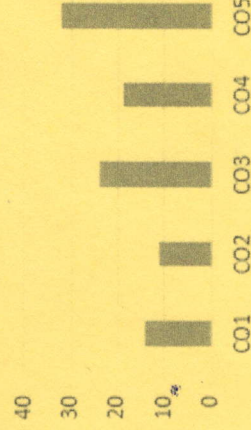
GRAPHICAL REPRESENTATION

Bloom's Level wise Marks Distribution



■ K1 ■ K2 ■ K3 ■ K4 ■ K5 ■ K6

Course Outcome Wise Marks Distribution



						[13-05-2025] END SEM EXAMINATION School of Allied Health Science	
Program		Bachelor of Optometry					
Subject Name		Pathology		Session		Even, 2024-2025	
Semester		IV		Year		May, 2025 *	
Time: 2 Hour Max. Marks : 50		• Start writing from 2nd page onwards; <u>don't Write on the 1st Page Backside</u> • 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 <u>Mobile Phones</u> or any kind of <u>Written Material</u>, <u>Arguments with the Invigilator</u> or <u>Discussing with Co-Student</u> will comes under <u>Unfair Means</u> and will <u>Result in the Cancellation of the Papers.</u>					
		K1 : Remembering K2 : Understanding		K3 : Applying K4 : Analysing		K5 : Evaluating K6 : Creating	
Knowledge Level (KL)							

Section A (Each question Carry 01 Marks from Q1-i to x) – 10 Marks					
Q. N1	QUESTIONS	Marks	COs	KL	
i	Gram staining is related to- a) Simple Staining b) Differential Staining c) Negative Staining d) Vital Staining	01	CO1	CO1	KL2
ii	Give an example of Acid fast bacilli.	01	CO1	CO1	KL2
iii	A condition in which RBC count is considered as high, may be interpreted as _____.	01	CO1	CO1	KL1
iv	Microorganisms which are harmful to their host are known as _____. a) Microbes b) Vectors c) Pathogen d) Allergen	01	CO2	CO2	KL1
v	A patient presents with a painless sore on their genitals, what diagnostic test should be performed? a) Blood test for syphilis antibodies b) Urine culture for Bacterial presence c) Throat swab d) Skin Biopsy	01	CO2	CO2	KL3
vi	Define Glycosuria.	01	CO5	CO5	KL1

vii	Which immune cell is primarily responsible for antibody production?	01	CO1	KL1
viii	Which of the following is a common bacterial infection of the eye? a) Malaria b) Conjunctivitis c) Tuberculosis d) Leprosy	01	CO1	KL2
ix	Acanthamoeba keratitis is a rare but serious eye infection caused by what type of microorganism?	01	CO1	KL3
x	A comprehensive blood test that gives an overall health and can detect any active infection is called	01	CO5	KL1
Section B (Answer any FOUR out of SIX) – 20 Marks (Each question Carry 5 Marks)				
Q. No.	QUESTIONS	Marks	COs	KL
2	Discuss the pathophysiology of Tuberculosis in brief.	05	CO2	KL3
3	Name the causative agent and manifestation signs of Hansen's disease.	05	CO2	KL3
4	Discuss a parasitic infection of eye.	05	CO1	KL4
5	Discuss the importance of urine analysis.	05	CO5	KL3
6	List the common bacteria that cause ocular infections.	05	CO1	KL1
7	Enlighten upon what 'Thrombus' is.	05	CO4	KL3
Section C (Answer any TWO out of FOUR) – 20 Marks (Each question Carry 10 Marks)				
Q. No.	QUESTIONS	Marks	COs	KL
8	Compare and contrast the pathophysiological mechanisms of bacterial and viral ocular infections.	10	CO1	KL4
9	Define Immunity. Explain different types of Immunity.	10	CO5	KL3
10	What is Inflammation? What are the important features of inflammations of the eye?	10	CO1	KL4
11	Given a case study of a patient presenting with unilateral red eye, watery discharge, and mild photophobia, analyze the potential viral etiology and the implications for management.	10	CO1	KL5
CO- Course Outcomes,			KL- Knowledge Level,	PO – Program Outcome

Course Outcomes	CO1	Understand the basic concepts of infection, Inflammation and repair
	CO2	Understand the clinical features of various diseases like Tuberculosis, Leprosy, Syphilis
	CO3	Understand the clinical features of Anemia, Leukemia, Bleeding disorders
	CO4	Understand the clinical features Circulatory disturbances like Thrombosis, Infarction, Embolism
	CO5	Analyze the urine report, blood smear
GRAPHICAL REPRESENTATION		
Bloom's Level wise Marks Distribution		
Course Outcome Wise Marks Distribution		

CO1	Understand the concept of different Ocular diseases of posterior 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 ocular diseases
CO4	Analyze the concept of clinical features of the diseases for the management of ocular diseases

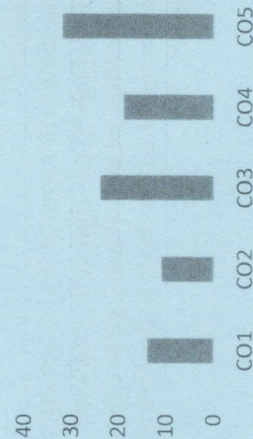
GRAPHICAL REPRESENTATION

Bloom's Level wise Marks Distribution



■ K1 ■ K2 ■ K3 ■ K4 ■ K5 ■ K6

Course Outcome Wise Marks Distribution



ARKA JAIN University
Jharkhand



[15-05-2025]
END SEM EXAMINATION
School of Allied Health
Science

Program	Bachelor of Optometry		
Subject Name	Ocular disease-2 & Glaucoma	Session	Even, 2024-2025
Semester	IV	Year	May, 2025
- 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

Time: 2 Hour
Max. Marks : 50

Section A (Each question Carry 01 Marks from Q1-i to x) – 10 Marks				
Q. N	QUESTIONS	Marks	COs	KL
i	Drusen seen in a) Retinopathy of prematurity. b) ARMD c) Diabetic retinopathy. d) Hypertensive retinopathy.	01	CO2	K5
ii	ROP can occurs- a) Birth weight <2000 gm. b) Birth weight >1500gm c) Birth weight < 1500 gm d) Birth weight > 2000gm.	01	CO5	K3
iii	Signs of Retinitis pigmentosa a) Bony-specule pigmentation. b) Arteriolar attenuation. c) Waxy-pallor of optic disc. d) All of the above.	01	CO1	K1
iv	Rod cells effected in a) Retinoblastoma. b) Retinitis pigmentosa. c) Optic atrophy. d) Macular degeneration.	01	CO1	K2
v	Example of Close globe injury- a) Rupture.	01	CO1	K1

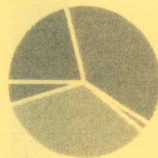
vi	b) Penetration. c) Intraocular foreign body. d) Lid laceration. According to the PH scale, PH of water is- a) 9 b) 8 c) 7 d) 6	01	CO3	K5
vii	Which type of cataract may induce secondary angle-closure glaucoma. a) Cortical cataract. b) Blue dot cataract c) Morgagnian cataract. d) Nuclear cataract.S	01	CO4	K2
viii	SICS Stands for- a) Semi incision cataract surgery. b) Small incision cataract surgery. c) Small intuition cataract surgery. d) Superficial instinct of cataract survey.	01	CO4	K4
ix	Disease that causes sudden loss of vision a) Optic neuritis b) Retinal detachment. c) Central retinal vein occlusion. d) All of the above.	01	CO4	K3
x	Principle of appalination tonometer a) Interferometry. b) Imbert -Flick's law. c) constant object size variable image size. d)None of the above.	01	CO5	K1
Section B (Answer any FOUR out of SIX) - 20 Marks (Each question Carry 5 Marks)				
Q. No.	QUESTIONS	Marks	COs	KL
2	How you will differentiate to see the clinical features of Argyll Robertson pupil, Adie's tonic pupil and Marcus gunn pupil?	05	CO3	K5
3	To see the signs, symptoms of nuclear cataract how will you evaluate? write about its management procedures?	05	CO3	K4
4	Differentiate the clinical features of PDR and NPDR?	05	CO4	K2
5	Define the clinical abnormalities of Eales's Disease?	05	CO5	K6

6	Write down types of the nystagmus? How would you describe jerky nystagmus?	05	CO5	K6
7	Write a short note about one retinal degeneration?	05	CO4	K4
Section C (Answer any TWO out of FOUR) - 20 Marks (Each question Carry 10 Marks)				
Q. No.	QUESTIONS	Marks	COs	KL
8	Write down the classification of glaucoma? And make a short note about one type of glaucoma?	10	CO4	K4
9	Draw an anatomical levelled diagram of visual pathway.	10	CO4	K6
10	Mention the preoperative evaluation tests before cataract surgery? Write down the types of cataract surgeries?	10	CO1	K1
11	Write down the types of the ocular injury? How you will evaluate to see sign and symptoms of blunt trauma (four point)? What type of chemical injury is more severe than the other (Alkali burns or Acid burns)?	10	CO2	K6

CO1	Understand about accommodation, its anomalies and their practical significance
CO2	Understand about convergence, its anomalies and their clinical significance
CO3	Have knowledge about retinoscopy and its procedure
CO4	Analyze the importance of subjective and objective refraction
CO5	Apply the theoretical knowledge on clinical practice

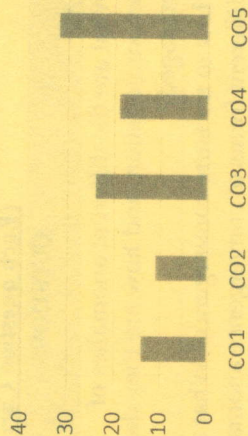
GRAPHICAL REPRESENTATION

Bloom's Level wise Marks Distribution



■ K1 ■ K2 ■ K3 ■ K4 ■ K5 ■ K6

Course Outcome Wise Marks Distribution



JGI	ARKA JAIN University Jharkhand	NAAC GRADE A ACCREDITED UNIVERSITY	[17-05-2025] END SEM EXAMINATION School of Allied Health Science
Program	Bachelor of Optometry		
Subject Name	Visual Optics 2	Session	Even, 2024-2025
Semester	IV	Year	May, 2025
Time: 2 Hour Max. Marks : 50			
Start writing from 2nd page onwards; <u>don't</u> 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 <u>Mobile Phones</u> or any kind of <u>Written Material</u>, <u>Arguments with the Invigilator</u> or <u>Discussing with Co-Student</u> will comes under <u>Unfair Means</u> and will <u>Result</u> in the <u>Cancellation of the Papers</u>.			
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. N1	QUESTIONS	Marks	COs	KL
i	Parasympathomimetic drugs cause a) Insufficiency of accommodation* b) Spasm of accommodation c) Total loss of accommodation d) None	01	CO3	K3
ii	Which of the following drugs has the least effect on accommodation? a) Tropicamide b) Homatropine c) Phenylephrine d) Cyclopentolate	01	CO1	K4
iii	Distance between near point of convergence and far point of convergence is known as a) Amplitude of convergence b) Range of convergence c) Proximal convergence d) Voluntary convergence	01	CO2	K2
iv	When a cycloplegic retinoscopy has been performed using cycloplentolate, how many dioptres should be deducted to compensate the ciliary tone? a) 1.00D b) 0.75D c) 0.50D d) 0.00D	01	CO3	K5

v	While doing retinoscopy, If the distance between patient and examiner is decreased, the distance correction needed will a) Increase b) Decrease c) Remains same d) Become zero	01	CO3	K5
vi	Dynamic Retinoscopy gives an objective refraction for a) Near vision b) Distance vision c) Both d) None	01	CO3	K4
vii	In duochrome test red becomes clear when a) Hypermetropia is fully corrected b) Hypermetropia is over corrected c) Hypermetropia is under corrected d) Myopia is over corrected	01	CO4	K4
viii	Duochrome test is based on a) Spherical aberration b) Chromatic aberration c) Both d) None	01	CO4	K2
ix	A X8 loupe has an equivalent power of _____ dioptries. a) 2 b) 8 c) 16 d) 32	01	CO5	K3
x	When correcting hypermetropia, if Plus lens placed away from eye, the required power to correct will be a) Lower b) Higher c) Same d) Higher in case of high hypermetropia	01	CO2	K2
Section B (Answer any FOUR out of SIX) – 20 Marks (Each question Carry 5 Marks)				
Q. No.	QUESTIONS	Marks	COs	KL
2	Explain the mechanism of accommodation in the human eye?	05	CO1	K2

3	Describe the procedure of the duochrome test in refraction? Define binocular balancing and explain the alternate occlusion method.	05	CO4	K4
4	How would you calculate the effective power of a spectacle lens when fitted at a different vertex distance and define types of magnification.	05	CO5	K3
5	Which cycloplegic agents are commonly used for refraction, and how do they differ?	05	CO4	K5
6	What are the various types of retinoscopy, and how do their techniques differ?	05	CO3	K1
7	What is the AC/A ratio, and how does it describe the relationship between accommodation and convergence?	05	CO1	K3
Section C (Answer any TWO out of FOUR) – 20 Marks (Each question Carry 10 Marks)				
Q. No.	QUESTIONS	Marks	COs	KL
8	What are the different anomalies of accommodation, and how are they diagnosed and managed?	10	CO1	K4
9	How to measure convergence? What are the different forms of convergence anomalies and treatment option available?	10	CO2	K5
10	What is the principle and procedure of retinoscopy? Illustrate and describe the optics of reflex movement in emmetropia, hypermetropia, and myopia during retinoscopy.	10	CO3	K5
11	How the fogging and Jackson Cross Cylinder (JCC) utilized in refining refractive error?	10	CO5	K3

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

CO1	Understand to select the tool power for grinding process
CO2	Understand about different types of materials used to make lenses and its characteristics
CO3	Understand about Spectacle frames, various Lens designs,
CO4	Analyze various dispensing spectacle lens and frames based on the glass prescription
CO5	Evaluate various facial measurements – Inter pupillary distance measurement and measuring heights (single vision, multifocal, progressives)

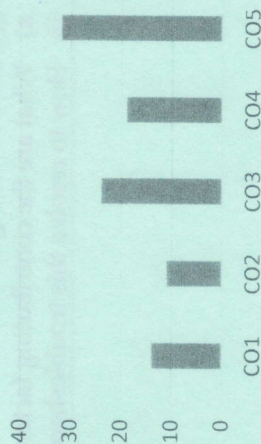
GRAPHICAL REPRESENTATION

Bloom's Level wise Marks Distribution



■ K1 ■ K2 ■ K3 ■ K4 ■ K5 ■ K6

Course Outcome Wise Marks Distribution



[20-05-2025]

END SEM EXAMINATION
School of Allied Health
Science

Program	Bachelor of Optometry		
Subject Name	Optometry Optics 2 & Dispensing Optics	Session	Even, 2024-2025
Semester	IV	Year	May, 2025
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. N1	QUESTIONS	Marks	COs	KL
i	In Industrial eye protection, the ideal lens material is: a) Polycarbonate b) CR39 c) Anti-reflecting glasses d) None of the above	01	CO2	KL2
ii	Tinting of lenses decreases the a) Transmittance b) Reflection c) Scratch resistance d) All of the above	01	CO1	KL1
iii	The toughest lens used in the industries for eye protection will be a) Crown Glass b) CR39 c) Polycarbonate d) Anti-reflecting	01	CO3	KL2
iv	In the soft design progressive addition lenses, the intermediate zone will be a) Shorter b) Longer c) Both d) None of the above	01	CO2	KL2

v	The refractive index of the CR39 is a) 1.52 b) 1.49 c) 1.00 d) 2.25	01	CO1	KL1
vi	The supra frame is type of a) Metal frame b) Plastic frame c) Semi rimless frame d) Rimless frame	01	CO1	KL1
vii	Among the glass lens materials, base material is a) CR39 b) Crown glass c) Plastic glass d) All of these	01	CO2	KL1
viii	The refractive index of the polycarbonate glass a) 1.59 b) 1.49 c) 1.00 d) 2.25	01	CO2	KL2
ix	Which type of lens is used to correcting presbyopia? a) Single lens b) Bifocals lens c) Diverging lens d) Plano lens	01	CO3	KL3
x	Which part of the frame rests on the nose for support? a) Temple tips b) Bridge c) End pieces d) Hinges	01	CO2	KL2

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

Q. No.	QUESTIONS	Marks	COs	KL
2	What is vertex distance? How will we measure vertex distance?	05	CO2	KL2
3	What is the importance of pupillary distance measurement and what does it ensures?	05	CO2	KL2
4	Write a short note on frame with labelled diagram of each part of it.	05	CO2	KL1
5	What is pantoscopic tilt? How will we measure it?	05	CO2	KL2
6	What are the advantages of high index lenses?	05	CO1	KL1

7	What are the functions of anti-reflective coating?	05	CO2	KL2
Section C (Answer any TWO out of FOUR) – 20 Marks (Each question Carry 10 Marks)				
Q. No.	QUESTIONS	Marks	COs	KL
8	Describe the different types of Bifocal lenses with suitable examples and labelled diagrams	10	CO3	KL3
9	Elaborate the specifications of Progressive addition lenses with labelled diagram	10	CO3	KL4
10	Describe the factors affecting frame selection for different face shapes and patient needs.	10	CO4	KL4
11	A 45 year old patient complains of difficulty in adapting new progressive addition lenses. They experience peripheral distortion and discomfort while using them for reading. a) What are the contributing factors? b) How to resolve this troubleshoot?	10	CO5	KL5