



**EKLAVYA**

UNIVERSITY

ज्ञानप्राप्तये लक्ष्यसन्धानम्

Sagar Road, Damoh (MP), Bharat

01

**Eklavya University, Damoh (MP)**

**Ophthalmic Assistant**

**Syllabus 2022-23**

**School of Nursing & Paramedical Science**

# Eklavya University Damoh

## School of Nursing & Paramedical

### SCHEME OF EXAMINATION FOR 2<sup>ND</sup> YEAR (UNIVERSITY EXAMINATION): PARAMEDICAL DIPLOMA IN OPHTHALMIC ASSISTANT

There shall be university examination at the end of 2<sup>nd</sup> year curriculum of diploma in optometry and refraction

S.No.	Paper	Subject	Theory	Internal Assessment	Practical	Total
1	Paper - I	BASIC MEDICAL SCIENCE OPHTHALMOLOGY	100	100	100	300
2	Paper - II	OPHTHALMIC EQUIPMENTS AND TECHNIQUES	100	100	100	300
3	Paper - III	OPTICS AND REFRACTION	100	100	100	300
4	Paper - IV	COMMON OCCULAR DISEASE AND COMMUNITY OPHTHALMOLOGY	100	100	100	300
Total			400	400	400	1200

- N.B. 1. First year institutional /college level theory examination's awarded marks would be consider as Internal assessment marks and candidate have to get min. 50% marks in university theory examination in addition to Internal assessment marks i.e. 100 marks collectively for passing the examination
2. University Practical examination of 100 max. marks is inclusive of viva and candidate should get separate 30% marks i.e. 30 marks to get pass.

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ज्ञान प्राप्तये लक्ष्य संस्थानम्

Established by All India Council for Technical Education (AITE) Azam Ghouse Memorial Scholarship, 2010

## OPHTHALMIC ASSISTANT

### VISION STATEMENT OF EKLAVYA UNIVERSITY

Eklavya University, will transform lives and communities through learning.

### MISSION STATEMENT OF EKLAVYA UNIVERSITY

- Nurture achievers in life and careers through a value based, industry relevant and future ready education.
- Emphasize research, interdisciplinary learning, and practical hands on education.
- Equip every student with the required social and technical skills to achieve employment generation.
- Provide a holistic education deeply rooted in the ways of the traditional Gurukul system.
- Bring quality education within the reach of every individual, by committing to the achievement and maintenance of excellence in education, research and innovation.
- Create and disseminate knowledge through research and creative inquiry.
- Serve students by teaching them problem solving, leadership and teamwork skills, lateral thinking, commitment to quality and ethical behaviour.
- Create a diverse community, open to the exchange of ideas, where discovery, creativity, and personal and professional development is encouraged and can flourish.
- Contribute to the social fabric and economic health of the Bundelkhand region, the state and the country at large, by enhancing and facilitating economic empowerment, providing equal opportunities and employment generation.

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**VISION STATEMENT OF DEPARTMENT**

To establish & develop world class self reliant institute for imparting Medical and other Health Science education at under-graduate, post-graduate & doctoral levels of the global competence.

To serve & educate the public, establish guidelines & treatment protocols to be followed by treating hospitals.

**MISSION STATEMENT OF DEPARTMENT**

To practice medicine ethically in line with the global standard protocols.

To inculcate high moral, ethical and professional standards among students and to improve their overall personality as well as to inculcate compassionate behaviour.





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ESTD by Madhya Pradesh NIP Kishoreniyaya (G) Panna Avam Kanchikural Achyudesh 2020

## OPHTHALMIC ASSISTANT PROGRAMME EDUCATIONAL OBJECTIVES (PEOs)

This Diploma course is designed for students who are desirous of taking up careers in Paramedical Sciences This program is aimed at preparing well- trained, professionals who possess both intellectual and technical rigor of high calibre in the areas of Paramedical . The syllabus is wide ranging and indicates a judicious mix of the theoretical orientation and practical knowledge.

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ज्ञानं प्राप्स्ये लक्ष्यं स्थानम्

Established by Madhya Pradesh Nip Vyapariksha, Ujjain | Situated in Avantipur, Bhopal | Started in 2018

## OPHTHALMIC ASSISTANT PROGRAMME OUTCOMES (POs)

1. To help the students acquire laboratory and research skills through practical work, assignments, project reports, seminars, workshops and to acquaint them with advanced and clinical practices.
2. To equip the students with sound theoretical knowledge, professional skills and competencies required in paramedical studies.
3. To offer thorough understanding of the issues, ideas and challenges of 21st century thereby broadening the world view of the future laboratory practitioners.
4. To develop multi-tasking skills required in Pathology and Hospitals.
5. To train the students with equipments and infrastructure so that they understand the latest developments in the field.

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School of Nursing & Paramedical Science

13

## Department of Paramedical Science

SYLLABUS

OPHTHALMIC ASSISTANT

2 Years Diploma Course

Year	2 Years
Subject	BASIC MEDICAL SCIENCE OPHTHALMOLOGY
Time	75 Hrs.

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**SYLLABUS & SCHEME OF EXAMINATION  
FOR PARAMEDICAL DIPLOMA IN OPHTHALMIC ASSISTANT**

**PAPER-I : BASIC MEDICAL SCIENCE- OPHTHALMOLOGY**

**SCHEME OF EXAMINATION**

Paper	Subject	Theory	Internal Assessment	Practical	Total
Paper - I	BASIC MEDICAL SCIENCE- OPHTHALMOLOGY	100	100	100	300

The University theory examination shall be of 100 marks and question paper will be set by qualified examiner MS Ophthalmology, who shall be on the panel of examiners of internal or external, 50% shall be the minimum passing marks. Internal assessment will be of 100 marks, which would be counted in theory marks for passing university examination. For practical examination, there will be two examiner MS Ophthalmology - one internal Examiner, from the institute /college and one from other college /institute of the university from the panel of University examiners.

The pattern of University theory examination will be as under for **100 Max. Marks in question paper** and distribution of marks for questions will be as under

No. and Type of Questions	Marks for each Question	Total Marks
10 Objective Questions	02	20
5 short answer Questions (Answer to be given in 250-300 words)	10	50
2 essay type Questions (Answer to be given in 450-500 words)	15	30
<b>Total Marks</b>		<b>100</b>

**INSTRUCTIONS FOR THE CANDIDATES:** Answer all questions only in required word.

There will be only 1 single answer sheet containing 40 pages and no additional sheets would be provided to the student.

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**PARAMEDICAL DIPLOMA IN OPHTHALMIC ASSISTANT**  
**PAPER-I : BASIC MEDICAL SCIENCE-OPHTHALMOLOGY**

**Syllabus Contents:-**

Basic science ( including human physiology, pharmacy, microbiology) is relation to clinical ophthalmology.

**Unit-I Anatomy and Physiology-**

- 1) Human anatomy with special reference to special senses.
  - a) Parts of the body
  - b) Organs of special senses
- 2) Orbit and ocular adnexa (lid and lacrimal system)
- 3) Ocular muscles and cranial nerves
- 4) Gross anatomy of coats of eyeball (cornea, sclera, iris, retina, lens and vitreous)

**Unit-II Physiology of eyeball-**

- 1) Physiology of vision including colour vision
- 2) Ocular movements & binocular vision
- 3) Accommodation and convergence
- 4) Formation and circulation of aqueous & lacrimal fluid

**Unit-III Microbiology**

- 1) Introduction to the various organisms responsible for ocular diseases (bacteria, virus and fungi)
- 2) Techniques of conjunctival smears, cultures, scrapings and staining (gram and KOH)
- 3) Infections and its prevention- routes, gross infection and antisepsis and asepsis

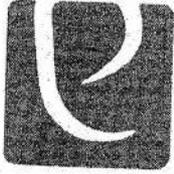
**Unit-IV Clinical pathology**

- 1) Examination of urine- gross, albumin and sugar
- 2) Preparation and staining of blood slides for DLC and malarial parasites

**Unit-V Pharmacy**

- 1) Various methods of administration of drugs in ophthalmic diseases
- 2) Preparation and dispensing of various ophthalmic drugs including fluorescein, mercurochrome, sodium sulphacetamide, homatropine, atropine, pilocarpine and antibiotic drops
- 3) Various side reaction of common ophthalmic drug and drug abuses.
- 4) Ocular anesthetics
- 5) Miotics and myriatics

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17

## Department of Paramedical Science

SYLLABUS

OPHTHALMIC ASSISTANT

2 Years Diploma Course

Year	2 Years
Subject	OPHTHALMIC EQUIPMENT AND TECHNIQUE
Time	75 Hrs.

**SYLLABUS & SCHEME OF EXAMINATION  
FOR PARAMEDICAL DIPLOMA IN OPHTHALMIC ASSISTANT**

**PAPER-II: OPHTHALMIC EQUIPMENTS AND TECHNIQUES  
SCHEME OF EXAMINATION**

Paper	Subject	Theory	Internal Assessment	Practical	Total
Paper - II	OPHTHALMIC EQUIPMENTS AND TECHNIQUES	100	100	100	300

The University theory examination shall be of 100 marks and question paper will be set by qualified examiner MS Ophthalmology, who shall be on the panel of examiners of internal or external, 50% shall be the minimum passing marks. Internal assessment will be of 100 marks, which would be counted in theory marks for passing university examination. For practical examination; there will be two examiner MS Ophthalmology - one internal Examiner, from the institute /college and one from other college /institute of the university from the panel of University examiners.

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10 Objective	02	20
5 short answer Questions (Answer to be given in 250-300 words)	10	50
2 essay type Questions (Answer to be given in 450-500 words)	15	30
<b>Total Marks</b>		<b>100</b>

**INSTRUCTIONS FOR THE CANDIDATES:** Answer all questions only in required word.  
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## PARAMEDICAL DIPLOMA IN OPHTHALMIC ASSISTANT

### PAPER-II: OPHTHALMIC EQUIPMENTS AND TECHNIQUES

#### Syllabus Contents:-

- Unit-I Vision testing**
- a. Various components of vision, principles of testing for visual acuity.
  - b. Lecture demonstration of distant vision, near vision and colour vision [ishihara]
- Visual fields:**
- A. Lecture and 5 demonstrations
  - B. Examination.
- Unit-II Ophthalmic instruments :**
- A. Name, uses and maintenance of surgical instruments.
  - B. Laying of trolley for surgery [CATARACT, glaucoma, sty, pterygium, chalazion, entropion, and squint.
  - C. Maintenance of surgical instruments.
- Unit-III Ocular surgery, fundamental of asepsis technique:**
- A. Asepsis, fumigation and sterilization of instruments.
  - B. Making of swabs sticks, pads and packing of drums and autoclaving.
- Unit-IV Ophthalmic diagnosis equipment [maintenance]:**
- A. Trial set, slit lamp, focimeter.
  - B. Synoptophore, keratometer, retinoscope and ophthalmoscope.
  - C. Examination.
  - D. Use of lensometer and neutralisation of lenses.
  - E. Transposition of lenses.
  - D. Fitting and check up of spectacles.
  - E. Maintenance of tonometer.
- Unit-V Minor surgical procedures:**
- A. Installation of eye drops and subconjunctival injection etc.
  - B. Fomentation
  - C. Irrigation.
  - D. Epilation.
  - E. Syringing.
  - F. Setting up of iv drip, Ryle's tube and enema.
- EMERGENCY RESUSCITATION: general and ophthalmic.**



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21

## Department of Paramedical Science

### SYLLABUS

### OPHTHALMIC ASSISTANT

### 2 Years Diploma Course

Years	2 Years
Subject	OPTICS AND REFRACTION
Time	75 Hrs.

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**SYLLABUS & SCHEME OF EXAMINATION  
FOR PARAMEDICAL DIPLOMA IN OPHTHALMIC ASSISTANT**

**PAPER-III: OPTICS AND REFRACTION**

**SCHEME OF EXAMINATION**

Paper	Subject	Theory	Internal Assessment	Practical	Total
Paper - III	OPTICS AND REFRACTION	100	100	100	300

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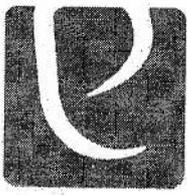
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<b>Total Marks</b>		<b>100</b>

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**PARAMEDICAL DIPLOMA IN OPHTHALMIC ASSISTANT****PAPER-III: OPTICS AND REFRACTION****Syllabus Contents:-**

- Unit-I . Physics & optics.
- a. Law of refraction & reflection spherical & cylindrical surfaces.
  - b. Optical aberrations of ophthalmic glasses.
  - c. Prisms
    - Nomenclature
    - Uses
- Unit-II . Geometrical & physiological optics.
- a. Optics of human eye and refractive errors.
  - b. Myopia, hypermetropia & its correction.
  - c. Aphakia its correction.
- Unit-III
- d. Astigmatism, presbyopia & its correction.
  - e. Lecture demonstration on measurement of accommodation & convergence.
  - f. Ophthalmic lenses.
- Unit-IV
- g. Decentering, bifocals, segment heights & transposition of lenses.
  - h. Contact lenses- uses and abuses.
  - i. Checking of spectacles.
- Unit-V
- j. Protective glasses & L.V.A.
- Retinoscopy & subjective testing.
- a. Estimating optical refractive errors including prescription of glasses.



## Department of Paramedical Science

### SYLLABUS

### OPHTHALMIC ASSISTANT

### 2 Years Diploma Course

<b>Years</b>	<b>2 Years</b>
<b>Subject</b>	<b>COMMON OCCULAR DISEASE AND COMMUNITTY OPHTHALMOLOGY</b>
<b>Time</b>	<b>75 Hrs.</b>

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**SYLLABUS & SCHEME OF EXAMINATION  
FOR PARAMEDICAL DIPLOMA IN OPHTHALMIC ASSISTANT**

**PAPER-IV: COMMON OCCULAR DISEASE AND COMMUNITY  
OPHTHALMOLOGY**

**SCHEME OF EXAMINATION**

Paper	Subject	Theory	Internal Assessment	Practical	Total
Paper - IV	COMMON OCCULAR DISEASE AND COMMUNITY OPHTHALMOLOGY	100	100	100	300

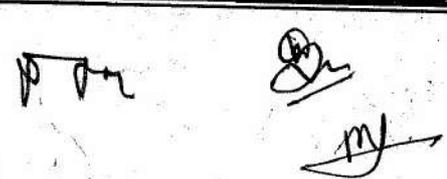
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<b>Total Marks</b>		<b>100</b>

**INSTRUCTIONS FOR THE CANDIDATES:** Answer all questions only in required word.

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**PARAMEDICAL DIPLOMA IN OPHTHALMIC ASSISTANT**

**PAPER-IV: COMMON OCCULAR DISEASE AND COMMUNITY  
OPHTHALMOLOGY**

**Syllabus Contents:-**

- Unit-I**      .. Common eye diseases.
- a. Types of conjunctivitis including trachoma.
  - b. Corneal ulcers & opacities.
  - c. Iritis & cataract.
  - d. Lids & lacrimal sac. And eye emergencies.
  - e. Chemical & radiational injuries including prevention, first aid & treatment.
  - f. Mechanical injuries, prevention first & treatment.
- Unit-II**      i. Glaucoma.
- a. Recognition & diagnosis.
  - b. Topometry methodology & precautions.
  - c. Role of ophthalmic assistant in early detection and follow up of glaucoma cases.
- Unit-III**    i. Squint.
- a. Nomenclature, classification & measurement.
  - b. Cover test, Maddox rod, maddox wing & diplopia charting.
  - c. Uses of synoptophore & exercises.
  - d. Anisometropia with special emphasis on prevention.
  - e. Assessment of binocular vision.
- Unit-IV**    i. Systemic disorders.
- a. diabetes & hypertension.
- ii. Nursing care of ophthalmic patients.
- a. Pre-operative preparation, cutting of lashes, preparation eye and ocular bandaging.
  - b. Bed making and laying trolley for dressing.
- i. Medical records.
- a. Diseases index, alphabetic index, and numerical index major & minor surgical records.
- Unit-V**    i. Health education.
- a. National plan for control of blindness.
  - b. Screening of school children for eye problems.
  - c. Survey methodology.
  - d. Functioning of eye bank( collection, preservation, transportation & publicity)
  - e. Rehabilitation of blind & vocational training for blind.
  - f. Role of ophthalmic assistants in eye camps.
  - g. Examination( final assessment)

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