

Rigved Foundation

Affiliated with KME Vidyapeeth Nagpur

SCHEME OF EXAMINATION & SYLLABUS OF

PARAMEDICAL DIPLOMA IN OPHTHALMIC ASSISTANT:

2 Years Diploma Course

-: REGULATION:-

REGULATION FOR VARIOUS DIPLOMA COURSES (2 YEARS) IN PARAMEDICAL SUBJECTS

The objective of the courses

1. The training of the candidate registering for various diploma (2 years) courses are aimed to carry out all routine diagnostic / therapeutic test on modern hospital laboratory
2. The Diploma course is of two years
3. Eligibility for admission in all Para medical Diploma courses except Perfusionist
 - a) The candidate must have passed 10+2 with at least 40% marks in aggregate of Physics Chemistry and Biology (P C B) and for DMLT 10 + 2 (P C B) or 10 + 2 vocational (M L T) course with at least 40% marks will also be eligible
 - b) For Diploma in Perfusion Technology (perfusionist 2 years course) The candidate shall have passed B. Sc. (BIOLOGY group) with minimum 45% marks, The University will award P G Diploma in perfusion technology
4. In case of SC/ST/OBC candidates, 5% marks relaxation will be given for the admission in above said courses
5. Weight age will be given as per university rules
6. Number of seats will be 50 in each course
7. The minimum age for admission shall be 17 years on 31 December of the Academic year of admission
8. The selection of candidate will be on the basis of the entrance examination or in the absence of entrance exam, purely on merit list prepared on the basic of marks obtained in qualifying examination
9. The admissions of students into various programs should be completed by 30th November. There shall be minimum 240 teaching days in one academic year.

10. **Attendance of students:** The student should have 75% attendance in theory and 75% attendance in practical to be eligible to appear in university examination. However, only Dean/ Principal of the college are empowered to condone 10% of attendance on valid grounds. Monthly attendance of students has to be sent to the university every month from the respective affiliated colleges.(*MPMSU)
11. **Total Course Duration:** A student has to complete the course that he/she has joined with in the double the duration of the actual time taken for the completion of the course i.e.- Four Years for all Diploma Courses.

12. **Medium of instruction and examination:** In case of diploma courses the medium of instruction will be bilingual (English or Hindi) and the medium of examination will be either English or Hindi as per the convenience of the student.
13. There will be two University Examinations in one academic session.
14. For all the Diploma courses (which is of two years duration) at the end of first year, an Internal examination will be conducted at the college level itself and the result has to be sent to the University as per the scheduled notification. (These marks will be included in the Final Transcripts), and the students are eligible to appear their final year examination at MPMSU, subject to passing in first year internal examination conducted at college level. University examination will be held at the end of Two years only.

15. Passing Marks of Examination:

- The passing marks of examination would be 50% for each subject and also in total marks obtained for both Diploma and Degree courses. The candidate has to pass in theory and practical examination separately. For theory paper the internal assessment marks, viva-voce and theory examination marks will be counted.
 - The candidate should pass separately in two heads i.e In Theory (Theory plus Viva voce plus Internal Assessment) and also in Practical (with 50% marks).
 - The candidate has to pass separately in each subject in internal assessment examination (with 50% marks) in order to be eligible to appear in university examinations.
 - Regarding Grace marks it was decided that total weightage of grace marks would be 5 (five), and that grace marks can be split between the subjects. There will not be any grace marks for the Practical examination.
 - Grace marks will not be added to total marks of the candidate. In Supplementary examination also similar pattern of grace marks will be followed.
16. Re-totaling & Re-valuation (Review) both should be allowed as per the university rules
17. Other rules regarding conduct of examination will be as per the university REGULATION/notifications
18. Permission will be given to start the courses after the permission from M P Paramedical council (Department of Medical education, Government of M. P.)
19. Syllabus and scheme of examination shall be decided by the board of studies and Academic council of the university from time to time as per guidelines from M P Paramedical council
20. In order to be an examiner a faculty member should have minimum three years of teaching experience and not below the rank of the Assit. Professor and /or. Demonstrator / Tutor
21. The examination papers (Theory) will be evaluated centrally at the university
22. The examiner who evaluates the theory copy preferably be appointed as the external for practical examinations for the said course.

23. Diploma students will be eligible for supplementary examination.

24. Various Diploma courses:

1. Anesthesia Technician
2. X-ray Technician
3. Gamma camera technician / Radiotherapy technician
4. Optometrist refractonist
5. Optometrist contract lens
6. Human nutrition
7. Dialysis technician
8. Hospital record science
9. Compounder (Allopathy)
10. Diploma in clinical Biochemistry.
11. Microbiology
12. Optometric refraction
13. Paramedical Ophthalmic Assistant
14. Cath. Lab. Technician
15. Medical Lab technology
16. Perfusion Technology (Per fusionist) (P G Diploma)

Note: FOR OTHER PROVISION WHICH ARE NOT COVERED IN THIS CURRICULUM & SYLLABUS WILL BE APPLICABLE AS PER THE UNIVERSITY REGULATION.

**SCHEME OF EXAMINATION: PARAMEDICAL
DIPLOMA IN OPHTHALMIC ASSISTANT**

FIRST YEAR: PARAMEDICAL

DIPLOMA IN OPHTHALMIC ASSISTANT EXAMINATION

S. No.	Paper	Subject	Max. Marks	Min. Passing Marks
1	Paper - I	BASIC MEDICAL SCIENCE- OPHTHALMOLOGY	100	50
2	Paper - II	OPHTHALMIC EQUIMENTS AND TECHNIQUES	100	50
3	Paper - III	OPTICS AND REFRACTION	100	50
4	Paper - IV	COMMON OCCULAR DISEASE AND COMMUNITY OPHTHALMOLOGY	100	50

(There shall be Institutional /College level theory examination as per university notification, marks to be send to University for internal assessment purposes of university examination)

**SCHEME OF EXAMINATION FOR 2ND YEAR (UNIVERSITY EXAMINATION):
PARAMEDICAL DIPLOMA IN OPHTHALMIC ASSISTANT**

There shall be university examination at the end of 2nd 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 EQUIMENTS 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 50% marks i.e. 50 marks to get pass.

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 - 1	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 very short answer Questions (<i>Answer to be given in 50-60 words</i>)	02	20
5 short answer Questions (<i>Answer to be given in 250-300 words</i>)	10	50
2 essay type Questions (<i>Answer to be given in 450-500 words</i>)	15	30
Total Marks		100

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.

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.

1 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, uvea, retina, lens and vitreous)

2) 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 fluids

3) Microbiology

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

4) Clinical pathology

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

5) 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 reactions of common ophthalmic drugs and drug abuses.
- 4) Ocular anaesthetics
- 5) Miotics and mydriatics

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

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

Paper	Subject	Theory	Internal Assessment	Practical	Total
Paper - II	OPHTHALMIC EQUIMENTS 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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PARAMEDICAL DIPLOMA IN OPHTHALMIC ASSISTANT

PAPER-II: OPHTHALMIC EQUIPMENTS AND TECHNIQUES

Syllabus Contents:-

1. 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]
- 2 Visual fields:
 - A. Lecture and 5 demonstrations
 - B. Examination.
- 3.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.
- 4.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.
- 5.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.
- 6.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.
- 7.EMERGENCY RESUSCITATION: general and ophthalmic.

**SYLLABUS & SCHEME OF EXAMINATION
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PAPER-III: OPTICS AND REFRACTION

SCHEME OF EXAMINATION

Paper	Subject	Theory	Internal Assessment	Practical	Total
Paper – III	OPTICS AND REFRACTION	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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PARAMEDICAL DIPLOMA IN OPHTHALMIC ASSISTANT

PAPER-III: OPTICS AND REFRACTION

Syllabus Contents:-

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

**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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PARAMEDICAL DIPLOMA IN OPHTHALMIC ASSISTANT

PAPER-IV: COMMON OCCULAR DISEASE AND COMMUNITY

OPHTHALMOLOGY

Syllabus Contents:-

1. 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.
2. Glaucoma.
 - a. Recognition & diagnosis.
 - b. Topometry methodology & precautions.
 - c. Role of ophthalmic assistant in early detection and follow up of glaucoma cases.
3. Squint.
 - a. Nomenclature, classification & measurement.
 - b. Cover test, Maddox rod, maddox wing & diplopia charting.
 - c. Uses of synoptophore & exercises.
 - d. Amblyopia with special emphasis on prevention.
 - e. Assessment of binocular vision.
4. Systemic disorders.
 - a. diabetes & hypertension.
5. 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.
6. Medical records.
 - a. Diseases index, alphabetic index, and numerical index major & minor surgical records.
7. 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)