

JSS Academy of Higher Education & Research

(Deemed to be University)

Re-Accredited "A+" Grade by NAAC

Sri Shivarathreeswara Nagara Mysuru - 570015, Karnataka

Regulation & Syllabus

MS OPHTHALMOLOGY

2020

MS OPHTHALMOLOGY

Program Outcomes

A post graduate student upon successfully qualifying in the M.S. (Ophthalmology) examination should be able to:

PO1: Offer to the community, the current quality of ‘standard of care’ in ophthalmic diagnosis as well as therapeutics, medical or surgical, in most of the common situations encountered at the level of health services.

PO2: Periodically self-assess his or her performance and keep abreast with ongoing advances in the field and apply the same in the practice.

PO3: Be aware of limitations to the application of the specialty in situations, which warrant referral to more qualified centers or individuals.

PO4: Apply research and epidemiological methods during his/her practice. The post graduate student should be able to present or publish work done by him/her.

PO5: Contribute as an individual/group towards the fulfillment of national objectives regarding prevention of blindness.

PO6: Effectively communicate with patients or relatives to educate them sufficiently and give them the full benefit of informed consent to treatment and ensure compliance.

Course Outcomes:

There shall be four courses:

PAPER I: BASIC SCIENCES RELATED TO OPHTHALMOLOGY, REFRACTION & OPTICS

CO1- Describe the anatomy and physiology of eye in detail

CO2- Describe the ocular pathology and microbiology in detail and have a knowledge about the histopathology of different eye diseases. Demonstrate knowledge about the organisms causing infective eye diseases

CO3- Demonstrate knowledge about ocular pharmacology

CO5- Demonstrate knowledge about principles of refraction and practice of refraction in detail

PAPER II: CLINICAL OPHTHALMOLOGY

CO1- Demonstrate knowledge about etiology, clinical features and management of diseases of conjunctiva, sclera, cornea, eyelids and lens

CO2- Demonstrate knowledge about various types of glaucoma and be able to manage the condition

CO3- Demonstrate knowledge about diseases of Uvea and Retina and be able to provide principles for the management of those conditions

CO4- Demonstrate knowledge about diseases and management of Neuroophthalmic conditions and visual pathway

CO5- Demonstrate knowledge about different mechanisms causing ocular trauma and various ocular structures affected and principles in their management

PAPER III: SYSTEMIC DISEASES IN RELATION TO OPHTHALMOLOGY

CO1- Demonstrate knowledge about ocular manifestations in connective tissue disorders and dermatological disorders

CO2- Demonstrate knowledge about ocular manifestations in psychiatric and obstetrical conditions

CO3- Demonstrate knowledge about ocular conditions in pediatric, nephrological and neurological conditions

CO4- Demonstrate knowledge about ocular manifestations in any other systemic illness involving the body

PAPER IV: RECENT ADVANCES IN OPHTHALMOLOGY AND COMMUNITY OPHTHALMOLOGY

CO1- Demonstrate reasonable knowledge about recent advances in the field of Ophthalmic investigations, diagnosis and instrumentation

CO2- Demonstrate reasonable knowledge in the recent updates in the field of surgical innovations pertaining to ophthalmology

CO3- Demonstrate sound knowledge about blindness control programs, community outreach services and any other matter connected to community ophthalmology

Post graduate student's overall knowledge of the subject and shall include:

- I. The post graduate must be well versed with the following investigative modalities although the student may or may not perform it individually. But, she/he should be able to interpret results of the following tests:
 - i. Instruments
 - ii. Pathology specimens
 - iii. Drugs, X-rays, USG/OCT/CT/MRI Scans, etc.
 - iv. Visual fields and other ophthalmic diagnostic charts
 - v. Fundus photography
 - vi. Fluorescein angiography
 - vii. Ophthalmic ultrasound A-scan/B scan
 - viii. Automated perimetry for glaucoma and neurological lesions
 - ix. Radiological tests - X rays - Antero posterior/ Lateral viewPNS (Water's view) / Optic canal views
 - x. Localisation of intra-ocular and intra-orbital FBs
 - xi. Interpretations of -USG/ CT/ MRI Scans
 - xii. OCT and UBM
 - xiii. ERG, EOG, and VEP

II. Minor surgical procedures – Must know and perform independently

- Conjunctival and corneal foreign body removal on the slit lamp
- Chalazion incision and curettage
- Pterygium excision
- Biopsy of small lid tumours
- Suture removal- skin/conjunctival/corneal/ corneoscleral
- Tarsorrhaphy
- Subconjunctival injection
- Retrobulbar, parabulbar anaesthesia
- Posterior Sub-Tenon's injections

Artificial eye fitting

III. Surgical procedures

1. Must know and can perform independently

a. Ocular anaesthesia:
Retrobulbar anaesthesia

- Peribulbar anaesthesia
- Facial blocks- O'Brein / Atkinson/Van lint and modifications
- Frontal blocks
- Infra orbital blocks
- Blocks for sac surgery

2. Must be able to independently perform and deal with complications arising from the following surgeries :

- Lid Surgery - Tarsorrhaphy
Ectropion and entropion Lid repair following trauma Epilation
 - Destructive procedures
Evisceration with or without implant Enucleation with or without implant
 - Sac surgery
 - i. Dacryocystectomy
 - ii. Dacryocystorhinostomy
 - iii. Probing for congenital obstruction of nasolacrimal duct
 - Strabismus surgery
Recession and resection procedures on the horizontal recti.
 - Orbit surgery
Incision and drainage via anterior orbitotomy for abscess
 - Cyclocryotherapy/Cyclophotocoagulation
3. PG Students should be well conversant with use of operating microscope and must be able to perform the surgeries listed below competently under the same:
- Cataract surgery
 - i. Standard ECCE (extracapsular cataract extraction; first year) with or without IOL implantation

- ii. Small incision ECCE with or without IOL implantation and/or Phacoemulsification with PC IOL implantation
- iii. Intracapsular cataract extraction (second year)
- iv. Cataract with Phacoemulsification (third year)
- v. Secondary AC or PC IOL implantation
 - Vitrectomy/Scleral buckling
 - Intra-vitreous and intra-cameral (anterior chamber) injection techniques and doses of drugs for the same
 - Needs to know the basis of open sky vitrectomy (anterior segment) as well as management of cataract surgery complications.
 - Assisting vitrectomy and scleral buckling procedures
 - Ocular surface procedures
 - Pterygium excision with modifications
 - Conjunctival cyst excision/foreign body removal
 - Corneal foreign body removal
 - Conjunctival flap/ peritomy
 - Glaucoma
 - Trabeculectomy
 - Corneal
 - Repair of corneo - scleral perforations
 - Corneal suture removal
 - Application of glue and bandage contact lens
4. Should have performed/assisted the following microscopic surgeries
 - i. Keratoplasty Therapeutic and optical
 - ii. Glaucoma surgery
 - Pharmacological modulation of trabeculectomy
 - Trabeculectomy
 - Goniotomy
 - Glaucoma valve implant surgery
5. Desirable to be able to perform following laser procedures
 - Yag Capsulotomy
 - Laser iridotomy
 - Focal and panretinal photocoagulation
6. Should have assisted/knowledge of Keratorefractive procedures

Operations:

The PG is provided with an opportunity to perform operations both extra-ocular and intra-ocular with the assistance of the senior post graduate students and/or under the direct supervision of a faculty member. The student is provided with an opportunity

to learn special and complex operations by assisting the senior post graduate student or the faculty in operations of cases of the specialty and be responsible for the post- operative care of these cases.

In **first phase**, the post graduate student is given training in preparations of cases for operation, pre-medication and regional anaesthetic blocks. In the **next phase**, the post graduate student assists the operating surgeon during the operations. In the **third phase**, the post graduate student operates independently assisted by senior post graduate student or a faculty member. She/he is required to be proficient in some operations and show familiarity with others.

Ophthalmology Specific Learning Competencies:

A. Knowledge

Basic Medical Sciences:

- Attain understanding of the structure and function of the eye and its parts in health and disease.
- Attain understanding and application of knowledge of the structure and function of the parts of Central Nervous System and other parts of the body with influence or control on the structure and function of the eye.
- Attain understanding of and develop competence in executing common general laboratory procedures employed in diagnosis and research in Ophthalmology.

1. Clinical Ophthalmology:

Given adequate opportunity to work on the basis of graded responsibilities in outpatients, inpatient and operation theatres on a rational basis in the clinical sections from the day of entry to the completion of the training program, the students should be able to:

- Acquire scientific and rational approach to the diagnosis of ophthalmic cases presented.
- Acquire understanding of and develop inquisitiveness to investigate to establish cause and effect of the disease.
- To manage and treat all types of ophthalmic cases.
- To competently handle and execute safely all routine surgical procedures on lens, glaucoma, lid, sac, adnexa, retina and muscle anomalies.
- To competently handle all ophthalmic medical and surgical emergencies.
- To be familiar with micro-surgery and special surgical techniques.
- To demonstrate the knowledge of the pharmacological (including toxic) aspects of drugs used in ophthalmic practice and drugs commonly used in general diseases affecting the eyes.

2. Refraction:

- Acquire competence in assessment of refractive errors and prescription of glasses for all types of refraction problems.
- Acquire basic knowledge of manufacture and fitting of glasses and competence of judging the accuracy and defects of the dispensed glasses.

3. Ophthalmic super-specialties:

Given an opportunity to work on a rotational basis in various special clinics of sub-specialties of ophthalmology, if possible, the student should be able to:

- Examine, diagnose and demonstrate understanding of management of the problems of neuro-ophthalmology and refer appropriate cases to neurology and neuro-surgery.
- Examine, diagnose and demonstrate understanding of management of (medical and surgical) complicated problems in the field of (a) lens, (b) glaucoma, c) cornea, (d) retina, (e) pediatric ophthalmology, (f) oculoplasty, (g) uvea, and (I) genetic problems in ophthalmology.
- To demonstrate understanding of the manufacture, and competence in prescription and dispensing of contact lenses and ocular prosthesis.

5. **Ophthalmic pathological/microbiological/biochemical sciences**

- Be able to interpret the diagnosis in correlation with the clinical data and routine materials received in such cases.

6. **Community Ophthalmology**

Eye camps may be conducted where the PG students are posted for imparting training to according to a set methodology. The community and school surveys may also be conducted by the post graduate students.

The post graduate students are given an opportunity to participate in surveys, eye camps. They should be able to guide rehabilitation workers in the organization and training of the blinds in art of daily living and in the vocational training of the blind leading to gainful employment.

7. **Research:**

- Recognize a research problem.
- State the objectives in terms of what is expected to be achieved in the end.
- Plan a rational approach with appropriate controls with full awareness of the statistical validity of the size of the material.
- Spell out the methodology and carry out most of the technical procedures required for the study.
- Accurately and objectively record on systematic lines results and observation made.
- Analyze the data with the aid of an appropriate statistical analysis.
- Interpret the observations in the light of existing knowledge and highlight in what ways the study has advanced existing knowledge on the subject and what further remains to be done.
- Write a thesis in accordance with the prescribed instructions.
- Write at least one scientific paper as expected of International Standards from the material of this thesis.

B. Psychomotor

At the end of the course, the student should acquire following clinical skills: Essential diagnostic skills:

IV. Examination techniques along with interpretation

1. Slit lamp Examination

- i. Diffuse examination
- ii. Focal examination
- iii. Retroillumination – direct and indirect
- iv. Sclerotic scatter
- v. Specular reflection
- vi. Staining modalities and interpretation

2. **Fundus evaluation**

- Direct/Indirect ophthalmoscopy
- Fundus drawing
- 3-mirror examination of the fundus
- 78-D/90-D/60-D examination
- Amsler's charting

V. Basic investigations along with their interpretation

1. Tonometry

Tonometry - Applanation/Indentation/Non-contact

2. Gonioscopy

Gonioscopy grading of the anterior chamber angle

3. Tear/ Lacrimal function tests

- i. Staining- fluorescein and Rose Bengal
- ii. Schirmer test/tear film break up time
- iii. Syringing
- iv. Dacrocystography

4. Corneal

- Corneal scraping and cauterization
- Smear preparation and interpretation (Gram's stain /KOH)
- Media inoculation
- Keratometry - performance and interpretation
- Pachymetry
- Corneal topography - if available

5. Colour Vision evaluation

- Ishihara pseudoisochromatic plates
- Farnsworth Munsell, if available

6. Refraction

- i. Retinoscopy- Streak/ Priestley Smith
- ii. Use of Jackson's cross-cylinder
- iii. Subjective and objective refraction
- iv. Prescription of glasses

7. Diagnosis and assessment of Squint

- i. Ocular position and motility examination
- ii. Synoptophore usage
- iii. Lees screen usage
- iv. Diplopia charting
- v. Assessment of strabismus - cover tests/prisms bars
- vi. Amblyopia diagnosis and treatment
- vii. Assessment of convergence, accommodation, stereopsis, suppression

8. Exophthalmometry

Usage of Hertel's exophthalmometer - proptosis measurement

9. Contact lenses

- Fitting and assessment of RGP and soft lenses
- Subjective verification of over refraction
- Complications arising of contact lens use
- Educating the patient regarding CL usage and imparting relevant knowledge of the complications arising thereon

10. Low Vision Aids

- Knowledge of basic optical devices available and relative advantages and disadvantages of each.
- The basics of fitting with knowledge of availability & cost

C. Affective/Communication

1. Should be able to function as a part of a team, develop an attitude of cooperation with colleagues, and interact with the patient and the clinician or other colleagues to provide the best possible diagnosis or opinion.
2. Always adopt ethical principles and maintain proper etiquette in dealings with patients, relatives and other health personnel and to respect the rights of the patient including the right to information and second opinion.
3. Develop communication skills to word reports and professional opinion as well as to interact with patients, relatives, peers and paramedical staff, and for effective teaching.
4. Eye camps may be conducted where the PG students are posted for imparting training to according to a set methodology. The community and school surveys may also be conducted by the post graduate students.
5. The post graduate students are given an opportunity to participate in surveys, eye camps. They should be able to guide rehabilitation workers in the organization and training of the blinds in art of daily living and in the vocational training of the blind leading to gainful employment.

Syllabus/Course Content

Course contents:

These are only broad guidelines and are illustrative, there may be overlap between sections.

I. Basic Sciences:

1. Orbital and ocular anatomy
 - i. Gross anatomy
 - ii. Histology
 - iii. Embryology
2. Ocular Physiology
3. Ocular Pathology
4. Ocular Biochemistry
General biochemistry, biochemistry applicable to ocular function
5. Ocular Microbiology
General Microbiology, specific microbiology applicable to the eye
6. Immunology with particular reference to ocular immunology
7. Genetics in ophthalmology
8. Community Eye Health

II. Optics

- a. Basic physics of optics
- b. Applied ophthalmic optics
- c. Applied optics including optical devices
- d. Disorders of Refraction

III. Clinical Ophthalmology

- i. Disorders of the lids
- ii. Disorders of the lacrimal system
- iii. Disorders of the Conjunctiva
- iv. Disorders of the Sclera
- v. Disorders of the Cornea
- vi. Disorders of the Uveal Tract
- vii. Disorders of the Lens
- viii. Disorders of the Retina
- ix. Disorders of the Optic Nerve and Visual Pathway
- x. Disorders of the Orbit
- xi. Glaucoma
- xii. Neuro-ophthalmology
- xiii. Paediatric ophthalmology
- xiv. Ocular involvement in systemic disease
- xv. Immune ocular disorders
- xvi. Strabismus and Amblyopia
- xvii. Ocular oncology

Department resources:

OPD services, Retinopathy of prematurity screening services , 5 consultation workspace with refraction unit installed in each chamber , Orbit and Oculoplasty services , Squint clinic , Eye bank, separate Refraction room , Glaucoma clinic equipped with Humphrey field analyzer 2 and 3, Deep freezer and Laminar airflow horizontal for corneal and amniotic membrane preservation and processing respectively , Retina clinic equipped with Fundus photography camera , Optical coherence tomography Cirrus HD 500 , Anterior segment OCT , Medical retina equipped with Argon laser for treating diabetic retinopathy , well equipped minor OT, office and staff room , seminar hall for UG and PG teaching , Simulation center for ophthalmic examination demonstration

NPCB and DBCS oriented free cataract surgical camp services

School of optometry consists of well-trained optometrists and ophthalmologists with complete requirements of armamentarium of gadgets for teaching and training optometry students

Teaching and Learning Methods:

- Lectures
Demonstration and clinical discussion theory classes for UG and PG
- Journal Club
Weekly once journal research paper presentation
- Seminar
Weekly once seminars presented by post graduates
- Symposium
National and foreign faculty invitation as and when feasible
- Practical/ Clinical
Weekly clinical case presentation and discussion
- Rotational postings

Bi-annual shuffling of Postgraduates between two units

- District residency Program
Going on successfully
- Teaching skills
Whatsapp discussion, participation and presentation in local cmes and meetings,
- Research Methodology
Research methodology and applied statistical analysis by the faculty
- Logbook
Log book inspection monthly for UG and PG

Assessment

- **Formative assessment:** Department would conduct periodical formative assessments at the end of every year, both theory as well as clinical exams which would cover all the topics.
- **Summative assessment:**
 - Theory- 4 papers as per the syllabus each paper of 3 hours duration
 - **Paper I:** Basic Sciences related to Ophthalmology, Refraction & Optics
 - **Paper II:** Clinical Ophthalmology
 - **Paper III:** Systemic Diseases in Relation to Ophthalmology
 - **Paper IV:** Recent Advances in Ophthalmology and Community Ophthalmology
 - Clinicals
 - 1 long case
 - 2 short cases
 - 2 Fundus cases with labelled diagrams to be written in standard charts
 - 2 refraction cases

VIVA

Spotters- visual field, OCT, diplopia charts, fundus photos, Anterior segment photos, Investigations like Corneal topography, ERG, EOG, VEP etc charts would be provided and asked questions pertaining to them

Surgical instruments and instruments used in refraction and drugs used in ophthalmology

Pedagogy- A topic would be given and the student would be examined with regard to his teaching skills

Observation of student log book

Dissertation

Dissertation:

Every post graduate student shall carry out work on an assigned research project under the guidance of a recognized Post Graduate Teacher, the result of which shall be written up and submitted in the form of a Thesis. Work for writing the Thesis is aimed at contributing to the development of a spirit of enquiry, besides exposing the post graduate student to the techniques of research, critical analysis, acquaintance with the latest advances in medical science and the manner of identifying and consulting available literature.

Thesis shall be submitted at least six months before the Theory and Clinical / Practical examination. The thesis shall be examined by a minimum of three examiners; one internal and two external examiners, who shall not be the examiners for Theory and Clinical examination. A post graduate student shall be allowed to appear for the Theory and

Practical/Clinical examination only after the acceptance of the Thesis by the examiners. From regulations)

**Recommended Reading:
Books (latest edition)**

1. Ophthalmic Surgery: Principles and Techniques. Blackwell Science. Albert DM.
2. Principles and Practice of Ophthalmology. Albert DM, Jakobiec. W B Saunders
3. Principles & Practice of Ophthalmology. Gholam A Paymen
4. The Current American Academy of Ophthalmology Basic and Clinical Science Course (13 volumes)
5. Duke Elder's Practice of Refraction. Abrams D. Churchill Livingstone.
6. Text book of Ophthalmology. Yanoff and Duker
7. Retina. Stephen J Ryan:
8. Ophthalmic Ultrasound: Sandra Byrne and Ronald Green.
9. Cornea: Fundamentals, Diagnosis, and Management. Krachmer JH, Mannis MJ, Holland EJ. Mosby Elsevier.
10. Ophthalmology. Yanoff N, Duker JS. Mosby Elsevier.
11. Review of Ophthalmology. Friedman NJ, Kaiser PK, Trattler WB. Elsevier Saunders, Philadelphia.
12. Corneal Transplantation. Vajpayee RB. Jaypee Brothers Medical Publishers (P)Ltd, New Delhi.
13. Fundamentals of Clinical Ophthalmology Series. Coster D. Cornea. Blackwell Publishing Limited.
14. The Contact Lens Manual. A practical guide to fitting. Gasson A, Morris A J. Butterworth Heinemann Elsevier.
15. Steinert's cataract surgery.
16. Shields Text book of glaucoma
17. Smith and Nozik : Uvea
18. Rootman's diseases of the orbit
19. Eyelid, conjunctival and orbital tumors. An atlas and textbook. Shields JA, Shields CL. Philadelphia: Lippincott Williams & Wilkins.
20. Intraocular tumors. An atlas and textbook. Shields JA, Shields CL.
21. Pediatric Ophthalmology. Taylor and Hoyt: Saunders Ltd.
22. Management of Strabismus and Amblyopia. Pratt-Johnson and Tilson: Thieme Verlag.
23. Handbook of Pediatric Eye and Systemic disease. Wright, Spiegel and Thompson.
24. Binocular Vision and Ocular Motility. Theory and Management of Strabismus. Von Noorden GK. Mosby.
25. Surgical Management of Strabismus. Helveston:
26. Strabismus: A Decision Making Approach. Von Noorden and Helveston:
27. Thyroid Eye Diseases. Char DR. Williams and Wilkins, Baltimore.

28. A Manual of Systematic Eyelid Surgery. Collin JRO (ed). Churchill Livingstone, Edinburgh.
29. Refractive Surgery. Agarwal A, Agarwal A, Jacob Soosan. Jaypee.
30. LASIK Complications, Prevention and management. Gimbel HV, Penno EEA. Slack Inc.
31. Management of Complications of Refractive Surgery. Alio JL, Azar DT. Springer.
32. Quality of Vision: Essential Optics for the Cataract and Refractive Surgeon. Holladay JT. Slack Inc.
33. Ocular Pharmacology: Havener
34. Anatomy: Wolff's Anatomy of the Eye and Orbit
35. Physiology: Adler's Physiology of the Eye
36. Textbook of Ophthalmology (2 volumes). Easty DL, Sparrow JM. Oxford Oxford Medical Publications.
37. The Eye. Basic Sciences in Practice. Forrester JV, Dick AD, McMenamin PG, Lee WR. W B Saunders.
38. A Stereoscopic Atlas of Macular Diseases: Diagnosis and Treatment. Gass JDM.
39. Neuroophthalmology. Glaser JS. Lipincott Williams & Wilkins. .
40. Clinical Ophthalmic Pathology. Harry J, Misson G. Butterworth/Heinemann.
41. Inherited Retinal Diseases. A Diagnostic Guide. Jimenez Sierra JM, Ogden TE, Van Boemel GB. Mosby.
42. Clinical Ophthalmology. Kanski JJ. Butterworth/Heinemann.
43. ABC of Resuscitation. Colquhoun, M. C., Evans, T. R., Handley, A. J. BMJ Publishing Group.
44. Walsh and Hoyt's Clinical Neuroophthalmology (5 volumes). Miller NR, Newman NJ, Williams and Wilkins.
45. The human eye. Oyster CW Sinauer Associates. Sunderland. Massachusetts
46. Paediatric Ophthalmology. Taylor D. Blackwell Science.
47. Decision Making in Ophthalmology. Van Heuven WAJ, Zwann J. Mosby.
48. Parsons' Diseases of the eye. Sihota and Tandon.
49. Wills Eye Manual
50. International Council of Ophthalmology Residency Curriculum available at <http://www.icoph.org/>

Journals

03-05 international Journals and 02 national (all indexed) journals

Annexure I

Student appraisal Form:

Student appraisal form for MS Ophthalmology											
	Elements	Less than satisfactory			Satisfactory			More than satisfactory			Comments
1.Scholastic Aptitude & learning											
1.1	Has knowledge appropriate for level of training										
1.2	Participation and contribution to learning activity (e.g., Journal Club, Seminars, CME etc)										
1.3	Conduct of research and other scholarly activity assigned (e.g Posters, publications etc)										
1.4	Documentation of acquisition of competence (eg Log book)										
1.5	Performance in work based assessments										
1.6	Self-directed Learning										
2. Care of the patient											

2.1	Ability to provide patient care appropriate to level of training										
2.2	Ability to work with other members of the health care team										
2.3	Ability to communicate appropriately and empathetically with patients families and care givers										
2.4	Ability to do procedures appropriate for the level of training and assigned role										
2.5	Ability to record and document work accurately and appropriate for level of										
3. Professional attributes											
3.1	Responsibility and accountability										
3.2	Contribution to growth of learning of the team										
3.3	Conduct that is ethically appropriate										

	and respectful at all times										
4.Space for additional comments											
5. Disposition											
	Has this assessment pattern been discussed with the trainee?	Yes					No				
	If not explain.										
	Name and Signature of the assessee										
	Name and Signature of the assessor										
	Date										

Publications

Yes/ No

Remarks* _____

***REMARKS: Any significant positive or negative attributes of a postgraduate student to be mentioned. For score less than 4 in any category, remediation must be suggested. Individual feedback to postgraduate student is strongly recommended.**

SIGNATURE OF ASSESSEE SIGNATURE OF ASSESSOR SIGNATURE OF HOD