



MAHATMA GANDHI UNIVERSITY
of
MEDICAL SCIENCES & TECHNOLOGY
JAIPUR

Syllabus

MS – OBSTETRICS & GYNAECOLOGY

(3 Years Post Graduate Degree Course)

Notice

1. Amendment made by the Medical Council of India in Rules/Regulations of Post Graduate Medical Courses shall automatically apply to the Rules/Regulations of the Mahatma Gandhi University of Medical Sciences & Technology (MGUMST), Jaipur.
2. The University reserves the right to make changes in the syllabus/books/guidelines, fees-structure or any other information at any time without prior notice. The decision of the University shall be binding on all.
3. The Jurisdiction of all court cases shall be Jaipur Bench of Hon'ble Rajasthan High Court only.

RULES & REGULATIONS
MS OBSTETRICS & GYNAECOLOGY (9220)
(3 Years Post Graduate degree course)

TITLE OF THE COURSE:

It shall be called Master of Surgery.

ELIGIBILITY FOR ADMISSION:

No candidate of any category (including NRI quota) shall be eligible for admission to MD/MS courses, if he or she has not qualified NEET PG (MD/MS) conducted by National Board of Examinations or any other Authority appointed by the Government of India for the purpose.

(1) General Seats

- (a) Every student, selected for admission to postgraduate medical course shall possess recognized MBBS degree or equivalent qualification and should have obtained permanent Registration with the Medical Council of India, or any of the State Medical Councils or should obtain the same within one month from the date of his/her admission, failing which the admission of the candidate shall be cancelled;
- (b) Completed satisfactorily one year's rotatory internship or would be completing the same before the date announced by the University for that specific year as per MCI rules after passing 3rd professional MBBS Part II Examination satisfactorily.
- (c) In the case of a foreign national, the Medical Council of India may, on payment of the prescribed fee for registration, grant temporary registration for the duration of the postgraduate training restricted to the medical college/institution to which he/she is admitted for the time being exclusively for postgraduate studies; however temporary registration to such foreign national shall be subject to the condition that such person is duly registered as medical practitioner in his/her own country from which he has obtained his basic medical qualification and that his degree is recognized by the corresponding Medical Council or concerned authority.

(2) NRI Seats

- (a) Students from other countries should possess passport, visa and exchange permits valid for the period of their course of study in this Institution and should also observe the regulations of both central and state governments regarding residential permits and obtain no-objection certificate from the same.
- (b) The candidate should have a provisional "Student Visa". If he comes on any other visa and is selected for admission, he will have to first obtain a student visa from his country and then only he will be allowed to join the course. Therefore it is imperative to obtain provisional student visa before coming for Counseling.
- (c) This clause is applicable to NRI/Foreign Students only.

CRITERIA FOR SELECTION FOR ADMISSION:

(1) NRI Quota

15% of the total seats are earmarked for Foreign National / PIO / OCI/ NRI / Ward of NRI/NRI sponsored candidates who would be admitted on the basis of merit obtained in NEET PG or any other criteria laid down by Central Government/MCI.

(2) Remaining Seats (Other than NRI Quota Seats)

- (a) Admissions to the remaining 85% of the seats shall be made on the basis of the merit obtained at the NEET conducted by the National Board of Examinations or any other Authority appointed by the Government of India for the purpose.

(b) The admission policy may be changed according to the law prevailing at the time of admission.

COUNSELING/INTERVIEW:

- (1) Candidates in order of merit will be called for Counseling/Interview and for verification of original documents and identity by personal appearance.
- (2) Counseling will be performed and the placement will be done on merit-cum-choice basis by the Admission Board appointed by the Government of Rajasthan.

RESERVATION:

Reservation shall be applicable as per policy of the State Government in terms of scheduled caste, scheduled tribe, back ward class, special back ward class, women and handicapped persons.

ELIGIBILITY AND ENROLMENT:

Every candidate who is admitted to MD/MS course in Mahatma Gandhi Medical College & Hospital shall be required to get himself/herself enrolled and registered with the Mahatma Gandhi University of Medical Sciences & Technology after paying the prescribed eligibility and enrolment fees.

The candidate shall have to submit an application to the MGUMST for the enrolment/eligibility along with the following original documents with the prescribed fees (upto November 30 of the year of admission without late fees and upto December 31 of the year of admission with late fees) –

- (a) MBBS pass Marks sheet/Degree certificate issued by the University (Ist MBBS to Final MBBS)
- (b) Certificate regarding the recognition of medical college by the Medical Council of India.
- (c) Completion of the Rotatory Internship certificate from a recognized college.
- (d) Migration certificate issued by the concerned University.
- (e) Date of Birth Certificate
- (f) Certificate regarding registration with Rajasthan Medical Council / Medical Council of India / Other State Medical Council.

REGISTRATION

Every candidate who is admitted to MD/MS course in Mahatma Gandhi Medical College & Hospital shall be required to get himself/herself registered with the Mahatma Gandhi University of Medical Sciences & Technology after paying the prescribed registration fees.

The candidate shall have to submit an application to the MGUMST for registration with the prescribed fees (upto November 30 of the year of admission without late fees upto December 31 of the year of admission with late fees).

DURATION OF COURSE:

The course shall be of 3 years duration from the date of commencement of academic session.

PERIOD OF TRAINING:

The period of training for obtaining Post graduate degrees (MD/MS) shall be three completed years including the period of examination.

MIGRATION:

No application for migration to other Medical Colleges will be entertained from the students already admitted to the MD/MS course at this Institute.

METHODS OF TRAINING FOR MD/MS:

Method of training for MD/MS courses shall be as laid down by the Medical Council of India.

ONLINE COURSE IN RESEARCH METHODS

- i. All postgraduate students shall complete an online course in Research Methods to be conducted by an Institute(s) that may be designated by the Medical Council of India by way of public notice, including on its website and by Circular to all Medical Colleges. The students shall have to register on the portal of the designated institution or any other institute as indicated in the public notice.
- ii. The students have to complete the course by the end of their 2nd semester.
- iii. The online certificate generated on successful completion of the course and examination thereafter, will be taken as proof of completion of this course
- iv. The successful completion of the online research methods course with proof of its completion shall be essential before the candidate is allowed to appear for the final examination of the respective postgraduate course.
- v. This requirement will be applicable for all postgraduate students admitted from the academic year 2019-20 onwards

ATTENDANCE, PROGRESS AND CONDUCT:

(1) Attendance:

- (a) 80% attendance in each course is compulsory. Any one failing to achieve this, shall not be allowed to appear in the University examination.
- (b) A candidate pursuing MD/MS course shall reside in the campus and work in the respective department of the institution for the full period as a full time student. No candidate is permitted to run a clinic/work in clinic/laboratory/ nursing home while studying postgraduate course. No candidate shall join any other course of study or appear for any other examination conducted by this university or any other university in India or abroad during the period of registration. Each year shall be taken as a unit for the purpose of calculating attendance.
- (c) Every candidate shall attend symposia, seminars, conferences, journal review meetings, grand rounds, CPC, CCR, case presentation, clinics and lectures during each year as prescribed by the department and not absent himself / herself from work without valid reasons. Candidates should not be absent continuously as the course is a full time one.

(2) Monitoring Progress of Studies- Work diary/Log Book:

- (a) Every candidate shall maintain a work diary in which his/her participation in the entire training program conducted by the department such as reviews, seminars, etc. has to be chronologically entered.
- (b) The work scrutinized and certified by the Head of the Department and Head of the Institution is to be presented in the University practical/clinical examination.

(3) Periodic tests:

There shall be periodic tests as prescribed by the Medical Council of India and/ or the Board of Management of the University, tests shall include written papers, practical/clinical and viva voce.

(4) Records:

Records and marks obtained in tests will be maintained by the Head of the Department and will be made available to the University when called for.

THESIS:

- (1) Every candidate pursuing MD/MS degree course is required to carry out work on research project under the guidance of a recognized post graduate teacher. Then such a work shall be submitted in the form of a Thesis.
- (2) The Thesis is aimed to train a postgraduate student in research methods & techniques.
- (3) It includes identification of a problem, formulation of a hypothesis, designing of a study, getting

acquainted with recent advances, review of literature, collection of data, critical analysis, comparison of results and drawing conclusions.

- (4) Every candidate shall submit to the Registrar of the University in the prescribed format a Plan of Thesis containing particulars of proposed Thesis work within six months of the date of commencement of the course on or before the dates notified by the University.
- (5) The Plan of Thesis shall be sent through proper channel.
- (6) Thesis topic and plan shall be approved by the Institutional Ethics Committee before sending the same to the University for registration.
- (7) Synopsis will be reviewed and the Thesis topic will be registered by the University.
- (8) No change in the thesis topic or guide shall be made without prior notice and permission from the University.
- (9) The Guide, Head of the Department and head of the institution shall certify the thesis. Three printed copies and one soft copy of the thesis thus prepared shall be submitted by the candidate to the Principal. While retaining the soft copy in his office, the Principal shall send the three printed copies of the thesis to the Registrar six months before MD/MS University Examinations. Examiners appointed by the University shall evaluate the thesis. Approval of Thesis at least by two examiners is an essential pre-condition for a candidate to appear in the University Examination.
- (10) Guide: The academic qualification and teaching experience required for recognition by this University as a guide for thesis work is as laid down by Medical Council of India/Mahatma Gandhi University of Medical Sciences & Technology, Jaipur.
- (11) Co-guide: A co-guide may be included provided the work requires substantial contribution from a sister department or from another institution recognized for teaching/training by Mahatma Gandhi University of Medical Sciences & Technology, Jaipur/Medical Council of India. The co-guide shall be a recognized postgraduate teacher.
- (12) Change of guide: In the event of a registered guide leaving the college for any reason or in the event of death of guide, guide may be changed with prior permission from the University.

ELIGIBILITY TO APPEAR FOR UNIVERSITY EXAMINATION:

The following requirements shall be fulfilled by every candidate to become eligible to appear for the final examination:

- (1) Attendance: Every candidate shall have fulfilled the requirement of 80% attendance prescribed by the University during each academic year of the postgraduate course. (as per MCI rules)
- (2) Progress and Conduct: Every candidate shall have participated in seminars, journal review meetings, symposia, conferences, case presentations, clinics and didactic lectures during each year as designed by the department.
- (3) Work diary and Logbook: Every candidate shall maintain a work diary for recording his/her participation in the training program conducted in the department. The work diary and logbook shall be verified and certified by the Department Head and Head of the Institution.
- (4) Every student would be required to present one poster presentation, to read one paper at a National/State Conference and to have one research paper which should be published/accepted for publication/ sent for publication to an indexed journal during the period of his/her post graduate studies so as to make him/her eligible to appear at the Post Graduate Degree Examination.
- (5) Every student would be required to appear in and qualify the Pre-University Post graduate degree Mock examination. Post graduate students who fail to appear in or do not qualify the Pre-University Post graduate degree Mock examination shall not be permitted to appear in the final examination of the University.

The certification of satisfactory progress by the Head of the Department/ Institution shall be based on (1), (2), (3), (4) and (5) criteria mentioned above.

ASSESSMENT:

- (1) The progress of work of the candidates shall be assessed periodically by the respective guides and report submitted to the Head of the Institution through the Head of the Department at the end of every six months. The assessment report may also be conveyed in writing to the candidate who may also be advised of his/her shortcomings, if any.
- (2) In case the report indicate that a candidate is incapable of continuing to do the work of the desired standard and complete it within the prescribed period, the Head of the Institution may recommend cancellation of his/her registration at any time to the University.
- (3) Formative Assessment:
 - (a) General Principles
 - i. The assessment is valid, objective, constructive and reliable.
 - ii. It covers cognitive, psychomotor and affective domains.
 - iii. Formative, continuing and summative (final) assessment is also conducted.
 - iv. Thesis is also assessed separately.
 - (b) Internal Assessment
 - i. The internal assessment is continuous as well as periodical. The former is based on the feedback from the senior residents and the consultants concerned. Assessment is held periodically.
 - ii. Internal assessment will not count towards pass/fail at the end of the program, but will provide feedback to the candidate.
 - iii. The performance of the Postgraduate student during the training period should be monitored throughout the course and duly recorded in the log books as evidence of the ability and daily work of the student.
 - iv. Marks should be allotted out of 100 as under
 - 1) Personal Attributes - 20 marks
 - a. Behavior and Emotional Stability: Dependable, disciplined, dedicated, stable in emergency situations, shows positive approach.
 - b. Motivation and Initiative: Takes on responsibility, innovative, enterprising, does not shirk duties or leave any work pending.
 - c. Honesty and Integrity: Truthful, admits mistakes, does not cook up information, has ethical conduct, exhibits good moral values, loyal to the institution.
 - 2) Clinical Work - 20 marks
 - a Availability: Punctual, available continuously on duty, responds promptly on calls and takes proper permission for leave.
 - b Diligence: Dedicated, hardworking, does not shirk duties, leaves no work pending, does not sit idle, competent in clinical case work up and management.
 - c Academic Ability: Intelligent, shows sound knowledge and skills, participates adequately in academic activities and performs well in oral presentation and departmental tests.
 - d Clinical Performance: Proficient in clinical presentations and case discussion during rounds and OPD work up. Preparing Documents of the case history/examination and progress notes in the file (daily notes, round discussion, investigations and management) Skill of performing bed side procedures and handling emergencies.
 - 3) Academic Activities - 20 marks
Performance during presentation at Journal club/ Seminar/Case discussion/Stat meeting and other academic sessions. Proficiency in skills as mentioned in job responsibilities.
 - 4) End of term theory examination - 20 marks
End of term theory examination conducted at end of 1st, 2nd year and after 2 years 9 months.

- 5) End of term practical examination - 20 marks
 - a. End of term practical/oral examinations after 2 years 9 months.
 - b. Marks for personal attributes and clinical work should be given annually by all the consultants under whom the resident was posted during the year. Average of the three years should be put as the final marks out of 20.
 - c. Marks for academic activity should be given by the all consultants who have attended the session presented by the resident.
 - d. The Internal assessment should be presented to the Board of examiners for due consideration at the time of Final Examinations.
 - e. Yearly (end of 1st, 2nd & 3rd year) theory and practical examination will be conducted by internal examiners and each candidate will enter details of theory paper, cases allotted (2 long & 2 short) and viva.
 - f. Log book to be brought at the time of final practical examination.

APPOINTMENT OF EXAMINERS:

Appointment of paper setters, thesis evaluators, answer books evaluators and practical & viva voce examiners shall be made as per regulations of the Medical Council of India.

SCHEME OF EXAMINATION:

Scheme of examination in respect of all the subjects of MD/MS shall be as under :

- (1) The examination for MD/MS shall be held at the end of three Academic Years.
- (2) Examinations shall be organized on the basis of marking system.
- (3) The period of training for obtaining MD/MS degrees shall be three completed years including the period of examination.
- (4) The University shall conduct not more than two examinations in a year for any subject with an interval of not less than 4 months and not more than 6 months between the two examinations.
- (5) The examinations shall consist of:
 - (a) Thesis :
 - i. Thesis shall be submitted at least six months before the main Theory examinations.
 - ii. 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/Practical.
 - iii. In departments where besides the two earmarked practical/clinical examiners no one else is a qualified P.G. teacher, in that case the Thesis shall be sent to the third external examiner who shall actually be in place of the internal examiner.
 - iv. Only on the acceptance of the thesis by any two examiners, the candidate shall be eligible to appear for the final examination.
 - v. A candidate whose thesis has been once approved by the examiners will not be required to submit the Thesis afresh, even if he/she fails in theory and/or practical of the examination of the same branch.
 - vi. In case the Thesis submitted by a candidate is rejected, he/she should be required to submit a fresh Thesis.
 - (b) Theory papers:
 - i. There shall be four theory papers.
 - ii. Out of these, one shall be of Basic Sciences and one shall be of Recent Advances.
 - iii. Each theory paper examination shall be of three hours duration.
 - iv. Each theory paper shall carry maximum 100 marks.
 - v. The question papers shall be set by the External Examiners.
 - vi. There will be a set pattern of question papers.
Every question paper shall contain three questions. All the questions shall be compulsory,

having no choice.

Question No. 1 shall be of long answer type carrying 20 marks.

Question No. 2 shall have two parts of 15 marks each. Each part will be required to be answered in detail.

Question No. 3 shall be of five short notes carrying 10 marks each.

- vii. The answer books of theory paper examination shall be evaluated by two External and two internal examiners. Out of the four paper setters, the two paper setters will be given answer books pertaining to their papers and the answer books of the remaining two papers will be evaluated by two Internal Examiners. It will be decided by the President as to which paper is to be assigned to which Internal Examiner for evaluation.
 - viii. A candidate will be required to pass theory and practical examinations separately in terms of the governing provisions pertaining to the scheme of examination in the post graduate regulations. The examinee should obtain minimum 40% marks in each theory paper and not less than 50% marks cumulatively in all the four papers for degree examination to be cleared as “passed” at the said Degree examination.
- (c) Clinical/ Practical & Oral examinations:
- i. Clinical/Practical and Oral Examination of 400 marks will be conducted by at least four examiners, out of which two (50%) shall be External Examiners.
 - ii. A candidate will be required to secure at least 50% (viz. 200/400) marks in the Practical including clinical and viva voce examinations.
- (6) If a candidate fails in one or more theory paper(s) or practical, he/she shall have to reappear in the whole examination i.e. in all theory papers as well as practical.

GRACE MARKS

No grace marks will be provided in MD/MS examinations.

REVALUATION / SCRUTINY:

No Revaluation shall be permitted in the MD/MS examinations. However, the student can apply for scrutiny of the answer books as per University Rules.

GUIDELINES FOR COMPETENCY BASED POSTGRADUATE TRAINING PROGRAMME FOR MS IN OBSTETRICS AND GYNAECOLOGY (9220)

Preamble:

The purpose of PG education is to create specialists who would provide high quality health care and advance the cause of science through research & training.

The purpose of MS Obstetrics and Gynaecology is to standardize Obstetrics & Gynaecology teaching at Post Graduate level throughout the country so that it will benefit in achieving uniformity in undergraduate teaching as well and resultantly creating competent Obstetrician and Gynaecologist with appropriate expertise.

The purpose of this document is to provide teachers and learners illustrative guidelines to achieve defined outcomes through learning and assessment. This document was prepared by various subject-content specialists. The Reconciliation Board of Academic Committee has attempted to render uniformity without compromise to purpose and content of the document. Compromise in purity of syntax has been made in order to preserve the purpose and content. This has necessitated retention of “domains of learning” under the heading “competencies”.

SUBJECT SPECIFIC LEARNING OBJECTIVES

Programme Objectives

The **goal** of the MS course in Obstetrics and Gynaecology is to produce a competent Obstetrician and Gynaecologist who can:

- Provide quality care to the community in the diagnosis and management of Antenatal, Intra-natal and Post-natal period of normal and abnormal pregnancy and labor.
- Provide effective and adequate care to a pregnant woman with complicated pregnancy.
- Provide effective and adequate care to a normal and high risk neonate.
- Perform obstetrical ultrasound in normal and abnormal pregnancy including doppler.
- Manage effectively all obstetrical and gynecological emergencies and if necessary make appropriate referrals.
- Provide quality care to the community in the diagnosis and management of gynaecological problems including screening, and management of all gynecological cancers including during pregnancy.
- Conduct a comprehensive evaluation of infertile couple and have a broad based knowledge of assisted reproductive techniques including – ovulation induction, *in vitro* fertilization and intra-cytoplasmic sperm injection, gamete donation, surrogacy and the legal and ethical implications of these procedures.
- Provide counseling and delivery of fertility regulation methods including reversible and irreversible contraception, emergency contraception etc.
- Provide quality care to women having spontaneous abortion or requesting medical termination of pregnancy (MTP) and manage their related complications.

SUBJECT SPECIFIC COMPETENCIES

A. Cognitive Domain

At the end of the MS Course in Obstetrics and Gynaecology, the student should have acquired knowledge in the following:

- Recognizes the health needs of women and adolescents and carries out professional obligations in keeping with principles of National Health Policy and professional ethics
- Has acquired the competencies pertaining to Obstetrics and Gynaecology that are required to be practiced in the community and at all levels of health system
- On genetics as applicable to Obstetrics.
- On benign and malignant gynecological disorders.
- On Gynecological Endocrinology and infertility.
- On interpretation of various laboratory investigations and other diagnostic modalities in Obstetrics & Gynecology.
- On essentials of Pediatric and adolescent Gynecology.
- On care of postmenopausal women and geriatric Gynecology.
- On elementary knowledge of female breast & its diseases.
- On vital statistics in Obstetrics & Gynecology.
- Anesthesiology related to Obstetrics & Gynecology.
- Reproductive and Child Health, family welfare & reproductive tract infections.
- STD and AIDS & Government of India perspective on women's health related issues.
- Medico-legal aspects in Obstetrics & Gynecology.
- Asepsis, sterilization and disposal of medical waste.
- Be able to effectively communicate with the family and the community
- Is aware of the contemporary advances and developments in medical sciences as related to Obstetrics and Gynaecology.
- Maintain medical records properly and know the medico-legal aspects in respect of Obstetrics & Gynecology
- Understands the difference between audit and research and how to plan a research project and demonstrate the skills to critically appraise scientific data and literature
- Has acquired skills in educating medical and paramedical professionals

Ethical and Legal Issues:

The post graduate student should understand the principles and legal issues surrounding informed consent with particular awareness of the implication for the unborn child, postmortem examinations consent to surgical procedures including tubal ligation/vasectomy, parental consent and medical certification, research and teaching and properly maintain medical records.

Risk Management:

The post graduate student should demonstrate a working knowledge of the principles of risk management and their relationship to clinical governance and complaints procedures.

Confidentiality:

The post graduate student should:

- Be aware of the relevant strategies to ensure confidentiality and when it might be broken.
- Understand the principles of adult teaching and should be able to teach common practical procedures in obstetrics and gynaecology and involved in educational programme in obstetrics and gynaecology for medical and paramedical staff.
- Be abreast with all recent advances in obstetrics and gynaecology and practice evidence based medicine.

Use of information technology, audits and standards:

The post graduate student should:

- Acquire a full understating of all common usage of computing systems including the principles of data collection, storage, retrieval, analysis and presentation.

- Understand quality improvement and management and how to perform, interpret and use of clinical audit cycles and the production and application of clinical standards, guidelines and protocols.
- Understand national health programmes related to obstetrics and gynaecology and should be aware of all the Acts and Laws related to specialty.

Health of Adolescent Girls and Post-Menopausal Women

The student should :

- Recognize the importance of good health of adolescent and postmenopausal women.
- Identification and management of health problems of post-menopausal women.
- Understanding and planning and intervention program of social, educational and health needs of adolescent girls and menopausal women.
- Education regarding rights and confidentiality of women's health, specifically related to reproductive function, sexuality, contraception and safe abortion.
- Geriatric problems.

Reproductive Tract and 'HIV' Infection

- Epidemiology of RTI and HIV infection in Indian women of reproductive age group.
- Cause, effect and management of these infections.
- HIV infections in pregnancy, its effects and management.
- Relationship of RTI and HIV with gynaecological disorders.
- Planning and implementation of preventive strategies.

Medico-legal Aspects

- Knowledge and correct application of various Acts and Laws while practicing Obstetrics and Gynaecology, particularly MTP Act and sterilization, Preconception and P.N.D.T. Act.
- Knowledge of importance of proper recording of facts about history, examination findings, investigation reports and treatment administered in all patients.
- Knowledge of steps recommended for examination and management of rape cases.
- Knowledge of steps taken in the event of death of a patient.

B. Affective domain

- 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.
- 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.
- 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.

C. Psychomotor domain

At the end of the course, the student should acquire following clinical & operative skills and be able to:

Operative Skills in Obstetrics and Gynaecology

- Adequate proficiency in common minor and major operations, post-operative management and management of their complications.
- Operative procedures which must be done by P G students during training period:

(in graded manner - assisting, operating with senior person assisting, operating under supervision)

(Operations MUST BE DONE/OBSERVED during PG training programme and log book maintained)

1. **Obstetrics:** Venesection, culdocentesis Conduct normal deliveries Episiotomy and its repair
 - Application of forceps and ventouse (10).
 - Carry out caesarian section delivery (10 must be done)
 - Manual removal of placenta
 - Management of genital tract obstetrical injuries.
 - Post partum sterilization/Minilap tubal ligation (20 must be done)
 - Medical termination of pregnancy - various methods (20 must be done)

2. **Gynaecology:** Endometrial / cervical biopsy.
Dilatation and curettage
Coldocentesis, Colpotomy
 - Opening and closing of abdomen (10 must be done)
 - Operations for pelvic organ prolapse
 - Ovarian cyst operation
 - Operation for ectopic pregnancy
 - Vaginal and abdominal hysterectomy

Operations must be OBSERVED and/or ASSISTED when possible:

- Internal podalic version
- Caesarea Hysterectomy
- Internal iliac artery ligation
- Destructive obstetrical operations
- Tubal microsurgery
- Radical operations for gynaec malignancies
- Repair of genital fistulae
- Operations for incontinence
- Myomectomy, Laparoscopic and hysteroscopic surgery

Diagnostic Procedures

- Interpretation of x-rays - Twins, common fetal malformations / mal-presentations, abnormal pelvis (pelvimetry), Hysterosalpingography
- Sonographic pictures at various stages of pregnancy - normal and abnormal pregnancies, Fetal biophysical profile, common gynaecological pathologies.
- Amniocentesis
- Fetal surveillance methods - Electronic fetal monitoring and its interpretation
- Post-coital test
- Vaginal Pap Smear
- Colposcopy
- Endoscopy - Laparo and Hystero-scopy.

Health of Adolescent Girls and Post-Menopausal Women

- Provide advice on importance of good health of adolescent and postmenopausal women.
- Identification and management of health problems of post-menopausal women.

- Planning and intervention program of social, educational and health needs of adolescent girls and menopausal women.
- Provide education regarding rights and confidentiality of women's health, specifically related to reproductive function, sexuality, contraception and safe abortion.
- Provide advice on geriatric problems.

Reproductive Tract and 'HIV' Infection

- Provide advice on management of RTI and HIV infections in Indian women of reproductive age group.
- Provide advice on management of HIV infections in pregnancy, relationship of RTI and HIV with gynaecological disorders.
- Planning and implementation of preventive strategies.

Medico-legal Aspects

- Correct application of various Acts and Laws while practicing obstetrics and gynaecology, particularly MTP Act and sterilization, Preconception and P.N.D.T. Act.
- Implement proper recording of facts about history, examination findings, investigation reports and treatment administered in all patients.
- Implement the steps recommended for examination and management of rape cases.
- Follow proper procedures in the event of death of a patient.

Environment and Health

- Follow proper procedures in safe disposal of human body fluids and other materials.
- Follow proper procedures and universal precautions in examination and surgical procedures for the prevention of HIV and other diseases.

Syllabus

Course Contents:

Paper I

Basic Sciences

- Normal and abnormal development, structure and function (female and male) urogenital system and female breast.
- Applied Anatomy of genito-urinary system, abdomen, pelvis, pelvic floor, anterior abdominal wall, upper thigh (inguinal ligament, inguinal canal, vulva, rectum and anal canal).
- Physiology of spermatogenesis.
- Endocrinology related to male and female reproduction (Neurotransmitters).
- Anatomy and physiology of urinary and lower GI (Rectum / anal canal) tract.
- Development, structure and function of placenta, umbilical cord and amniotic fluid.
- Anatomical and physiological changes in female genital tract during pregnancy.
- Anatomy of fetus, fetal growth and development, fetal physiology and fetal circulation.
- Physiological and neuro-endocrinal changes during puberty, adolescence, menstruation, ovulation, fertilization, climacteric and menopause.
- Biochemical and endocrine changes during pregnancy, including systemic changes in cardiovascular, hematological, renal hepatic, renal, hepatic and other systems.
- Biophysical and biochemical changes in uterus and cervix during pregnancy and labor.
- Pharmacology of identified drugs used during pregnancy, labour, post-partum period in reference to their absorption, distribution, excretion, (hepatic) metabolism, transfer of the drugs across the placenta, effect of the drugs (used) on labor, on fetus, their excretion through breast milk.

- Mechanism of action, excretion, metabolism of identified drugs used in the management of Gynaecological disorder.
- Role of hormones in Obstetrics and Gynaecology.
- **Markers in Obstetrics & Gynaecology** - Non-neoplastic and neoplastic diseases
- Pathophysiology of ovaries, fallopian tubes, uterus, cervix, vagina and external genitalia in healthy and diseased conditions.
- Normal and abnormal pathology of placenta, umbilical cord, amniotic fluid and fetus.
- Normal and abnormal microbiology of genital tract. Bacterial, viral and parasitical infections responsible for maternal, fetal and gynaecological disorders.
- Humoral and cellular immunology in Obstetrics & Gynaecology.
- Gametogenesis, fertilization, implantation and early development of embryo.
- Normal Pregnancy, physiological changes during pregnancy, labor and puerperium.
- Immunology of pregnancy.
- Lactation.

Medical Genetics

- Basic medical genetics including cytogenetics.
- Pattern of inheritance
- Chromosomal abnormalities - types, incidence, diagnosis, management and recurrence risk.
- General principles of Teratology.
- Screening, counseling and prevention of developmental abnormalities.
- Birth defects - genetics, teratology and counseling.

Paper II

Clinical obstetrics

1. Antenatal Care:

- Prenatal care of normal pregnancy including examination, nutrition, immunization and follow up.
- Identification and management of complications and complicated of pregnancy – abortion, ectopic pregnancy, vesicular mole, Gestational trophoblastic Diseases, hyperemesis gravidarum, multiple pregnancy, antipartum hemorrhage, pregnancy induced hypertension, preeclampsia, eclampsia, Other associated hypertensive disorders, Anemia, Rh incompatibility, diabetes, heart disease, renal and hepatic diseases, preterm - post term pregnancies, intrauterine fetal growth retardation,
- Neurological, hematological, dermatological diseases, immunological disorders and other medical and surgical disorders/problems associated with pregnancy, Multiple pregnancies, Hydramnios, Oligoamnios.
- Diagnosis of contracted pelvis (CPD) and its management.
- High-risk pregnancy
 - Pregnancy associated with complications, medical and surgical problems.
 - Prolonged gestation.
 - Preterm labor, premature rupture of membranes.
 - Blood group incompatibilities.
 - Recurrent pregnancy wastage.
- Evaluation of fetal and maternal health in complicated pregnancy by making use of diagnostic modalities including modern ones (USG, Doppler, Electronic monitors) and plan for safe delivery for mother and fetus. Identifying fetus at risk and its management. Prenatal diagnostic modalities including modern ones.

- Infections in pregnancy (bacterial, viral, fungal, protozoan)
 - Malaria, Toxoplasmosis.
 - Viral – Rubella, CMV, Herpes, HIV, Hepatic viral infections (B, C etc)
 - Sexually Transmitted Infections (STDs)
 - Mother to fetal transmission of infections.
- Identification and management of fetal malpositions and malpresentations.
- Management of pregnancies complicated by medical, surgical (with other specialties as required) and gynecological diseases.
 - Anemia, hematological disorders
 - Respiratory, Heart, Renal, Liver, skin diseases.
 - Gastrointestinal, Hypertensive, Autoimmune, Endocrine disorders.
 - Associated Surgical Problems.
- Acute Abdomen (surgical emergencies - appendicitis and GI emergencies). Other associated surgical problems.
 - Gynaecological disorders associate with pregnancy - congenital genital tract developmental anomalies, Gynaec pathologies - fibroid uterus, Ca Cx, genital prolapse etc.
 - Prenatal diagnosis (of fetal problems and abnormalities), treatment – Fetal therapy
 - M.T.P, PC & P.N.D.T Act etc
- National health MCH programs, social obstetrics and vital statistics
- Recent advances in Obstetrics.

2. Intra-partum care:

- Normal labor - mechanism and management.
- Partographic monitoring of labor progress, recognition of abnormal labor and its appropriate management.
- Identification and conduct of abnormal labor and complicated delivery - breech, forceps delivery, caesarian section, destructive operations.
- Induction and augmentation of labor.
- Management of abnormal labor - Abnormal pelvis, soft tissue abnormalities of birth canal, mal-presentation, mal-positions of fetus, abnormal uterine action, obstructed labor and other distocias.
- Analgesia and anaesthesia in labor.
- Maternal and fetal monitoring in normal and abnormal labor (including electronic fetal monitoring).
- Identification and management of intrapartum complications, Cord presentation, complication of 3rd stage of labor - retained placenta, inversion of uterus, rupture of uterus, post partum hemorrhage.

3. Post Partum

- Complication of 3rd stage of labor retained placenta, inversion of uterus, post partum hemorrhage, rupture of uterus, Management of primary and secondary post-partum hemorrhage, retained placenta, uterine inversion. Post-partum collapse, amniotic fluid embolism
- Identification and management of genital tract trauma - perineal tear, cervical/vaginal tear, episiotomy complications, rupture uterus.
- Management of critically ill woman.
- Post partum shock, sepsis and psychosis.
- Postpartum contraception.
 - Breast feeding practice; counseling and importance of breast-feeding. Problems in breast-

feeding and their management, Baby friendly practices.

- Problems of newborn - at birth (resuscitation), management of early neonatal problems.
- Normal and abnormal purpura - sepsis, thrombophlebitis, mastitis, psychosis. Hematological problems in Obstetrics including coagulation disorders. Use of blood and blood components/products.

4. **Operative Obstetrics:**

- Decision-making, technique and management of complications.
- Vaginal instrumental delivery, Caesarian section, Obst. Hysterectomy, destructive operations, manipulations (External/internal podalic version, manual removal of placenta etc)
- Medical Termination of Pregnancy - safe abortion - selection of cases, technique and management of complication. MTP law.

5. **New Born**

- Care of new born: Normal and high risk new born (including NICU care).
- Asphyxia and neonatal resuscitation.
- Neonatal sepsis - prevention, detection and management.
- Neonatal hyper - bilirubinemia - investigation and management.
- Birth trauma - Detection and management.
- Detection and management of fetal/neonatal malformation.
- Management of common neonatal problems.

Paper III

Clinical Gynaecology and Fertility Regulation

- Epidemiology and etiopathogenesis of gynaecological disorders.
- Diagnostic modalities and management of common benign and malignant gynaecological diseases (diseases of genital tract):
 - Fibroid uterus
 - Endometriosis and adenomyosis Endometrial hyperplasia
 - Genital prolapse (uterine and vaginal)
 - Cervical erosion, cervicitis, cervical polyps, cervical neoplasia. Vaginal cysts, vaginal infections, vaginal neoplasia (VIN) Benign Ovarian pathologies
 - Malignant genital neoplasia - of ovary, Fallopian tubes, uterus, cervix, vagina, vulva and Gestational Trophoblastic diseases, Cancer Breast.
- Diagnosis and surgical management of clinical conditions related to congenital malformations of genital tract. Reconstructive surgery in gynaecology.
- Intersex, ambiguous sex and chromosomal abnormalities.
- Reproductive endocrinology: Evaluation of Primary/secondary Amenorrhea, management of Hyperprolactinemia, Hirsutism, Chronic an-ovulation, PCOD, thyroid and other endocrine dysfunctions.
- Infertility - Evaluation and management
 - Methods of Ovulation Induction
 - Tubal (Micro) surgery
 - Management of immunological factors of Infertility
 - Male infertility
 - Obesity and other Infertility problems.
 - **Introductory knowledge of Advanced Assisted Reproductive Techniques (ART)**
- Reproductive tract Infections: prevention, diagnosis and treatment.
 - STD

- HIV
- Other Infections
- Genital Tuberculosis.
- Principles of radiotherapy and chemotherapy in gynaecological malignancies. Choice, schedule of administration and complications of such therapies.
- Rational approach in diagnosis and management of endocrinal abnormalities such as: menstrual abnormalities, amenorrhea (primary/secondary), dysfunctional uterine bleeding, polycystic ovarian disease, hyperprolactinemia (galactorrhea), hyperandrogenism, thyroid - pituitary - adrenal disorders, menopause and its treatment (HRT).
- Urological problems in Gynaecology - Diagnosis and management.
 - Urinary tract infection
 - Urogenital Fistulae
 - Incontinence
 - Other urological problems
- Orthopedic problems in Gynaecology.
- Menopause: management (HRT) and prevention of its complications.
- Endoscopy (Laparoscopy - Hysteroscopy)
 - Diagnostic and simple therapeutic procedures (PG students must be trained to do these procedures)
 - Recent advances in gynaecology - Diagnostic and therapeutic
 - Pediatric, Adolescent and Geriatric Gynaecology
 - **Introduction to Advance Operative procedures.**

Operative Gynaecology

- Abdominal and Vaginal Hysterectomy
- Surgical Procedures for genital prolapse, fibromyoma, endometriosis, ovarian, adenexal, uterine, cervical, vaginal and vulval pathologies.
- Surgical treatment for urinary and other fistulae, Urinary incontinence
- Operative Endoscopy

Family Welfare and Demography

- Definition of demography and its importance in Obstetrics and Gynaecology
- Statistics regarding maternal mortality, perinatal mortality/morbidity, birth rate, fertility rate.
- Organizational and operational aspects of National health policies and programs, in relation to population and family welfare including RCH.
- Various temporary and permanent methods of male and female contraceptive methods.
- Knowledge of in contraceptive techniques (including recent developments).
 - Temporary methods
 - Permanent Methods.
 - Recent advances in contraceptive technology
- Provide adequate services to service seekers of contraception including follow up.
- Medical Termination of Pregnancy: Act, its implementation, providing safe and adequate services.
- Demography and population dynamics.
- Contraception (fertility control)

Male and Female Infertility

- History taking, examination and investigation.
- Causes and management of male infertility.

- Indications, procedures of Assisted Reproductive Techniques in relation to male infertility problems.

Paper – IV : Recent Advances in Obstetrics & Gynaecology

TEACHING AND LEARNING METHODS

Postgraduate Training

Teaching methodology should be imparted to the students through:

- Lectures, seminars, symposia, Inter- and intra- departmental meetings (clinic-pathological, Radio-diagnosis, Radiotherapy, Anaesthesia, Pediatrics/ Neonatology), maternal morbidity/mortality meetings and journal club. ***Records of these are to be maintained by the department.***
- By encouraging and allowing the students to attend and actively participate in CMEs, Conferences by presenting papers.
- Maintenance of log book: Log books shall be checked and assessed periodically by the faculty members imparting the training.
- Writing thesis following appropriate research methodology, ethical clearance and good clinical practice guidelines.
- The postgraduate students shall be required to participate in the teaching and training programme of undergraduate students and interns.
- A postgraduate student of a postgraduate degree course in broad specialities/super specialities would be required to present one poster presentation, to read one paper at a national/state conference and to present one research paper which should be published/accepted for publication/sent for publication during the period of his postgraduate studies so as to make him eligible to appear at the postgraduate degree examination.
- Department should encourage e-learning activities.

Practical and Clinical Training

- Emphasis should be self learning, group discussions and case presentations.
- Student should be trained about proper History taking, Clinical examination, advising / ordering relevant investigations, their interpretation and instituting medical / surgical management by posting students in OPD, specialty clinics, wards, operation theaters, Labor room, family planning clinics and other departments like anesthesiology, neonatology, radiology/ radiotherapy. **Students should be able to perform and interpret ultra - sonography in Obstetrics and Gynaecology, NST, Partogram**

Rotations:

- Details of 3 years posting in the PG programme (6 terms of 6 months each)
 - a. **Allied posts should be done during the course** – for 8 weeks
 - i. Neonatology - 2 weeks
 - ii. Anaesthesia - 2 weeks
 - iii. Radiology/Radiotherapy - 2 weeks
 - iv. Surgery - 2 weeks
 - v. Oncology - 2 weeks
 - b. Details of training in the subject during resident posting
The student should attend to the duties (Routine and emergency):
 - Out patient Department and special clinics
 - Inpatients
 - Operation Theater
 - Labor Room

Writing clinical notes regularly and maintains records.

- 1st term - Working under supervision of senior residents and teaching faculty.*
2nd & 3rd term- Besides patient care in O.P.D., wards, Casualty and labor room, carrying out minor operations under supervision and assisting in major operation.
4th 5th & 6th term - Independent duties in management of patient including major operations under supervision of teaching faculty

c. Surgeries to be done during PG training. **(Details in the Syllabus)**

During the training programme, patient safety is of paramount importance; therefore, skills are to be learnt initially on the models, later to be performed under supervision followed by performing independently; for this purpose, provision of surgical skills laboratories in medical colleges is mandatory.

ASSESSMENT

FORMATIVE ASSESSMENT, during the training includes

Formative assessment should be continual and should assess medical knowledge, patient care, procedural & academic skills, interpersonal skills, professionalism, self directed learning and ability to practice in the system.

General Principles

Internal Assessment should be frequent, cover all domains of learning and used to provide feedback to improve learning; it should also cover professionalism and communication skills. The Internal Assessment should be conducted in theory and clinical examination.

Quarterly assessment during the MS training should be based on following educational activities:

1. Journal based / recent advances learning
2. Patient based /Laboratory or Skill based learning
3. Self directed learning and teaching
4. Departmental and interdepartmental learning activity
5. External and Outreach Activities / CMEs

The student to be assessed periodically as per categories listed in postgraduate student appraisal form **(Annexure I)**.

SUMMATIVE ASSESSMENT, ie., assessment at the end of training

The summative examination would be carried out as per the Rules given in POSTGRADUATE MEDICAL EDUCATION REGULATIONS, 2000.

Postgraduate Examination shall be in three parts:

1. Thesis

Every post graduate student shall carry out work on an assigned research project under the guidance of a recognised 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.

2. Theory Examination:

The examinations shall be organised on the basis of 'Grading' or 'Marking system' to evaluate and

to certify post graduate student's level of knowledge, skill and competence at the end of the training. The examination for M.D./ MS shall be held at the end of 3rd academic year. An academic term shall mean six month's training period.

There should be four theory papers, as given below:

Paper I: Applied Basic sciences.

Paper II: Obstetrics including social obstetrics and Diseases of New Born

Paper III: Gynaecology including fertility regulation

Paper IV: Recent Advances in Obstetrics & Gynaecology

3. **Clinical/Practical & oral/viva voce Examination: shall be as given below:**

a) **Obstetrics:**

Clinical

- Long Case: 1 case
- 2 cases with different problems
- Short Case/ Spot Case: 1 case

Viva voce including:

- Instruments
- Pathology specimens
- Drugs and X-rays, Sonography etc.
- Dummy Pelvis

b) **Gynaecology:**

Clinical

- Long Case: 1 case
- 2 cases with different problems
- Short Case/ Spot Case: 1 case

Viva including:

- Instruments
- Pathology specimens
- Drugs and X-rays, Sonography etc.
- Dummy Planning

Recommended Reading:

Books (latest edition)

Obstetrics

- William Textbook of Obstetrics
- High risk Obstetrics - James
- High risk pregnancy - Ian Donal
- Text book of Operative Obstetrics - Munro Kerr.
- Medical disorder in pregnancy - De Sweit
- High risk pregnancy - Arias
- A text book of Obstetrics - Thrnbull
- Text book of Obstetrics - Holland & Brews.
- Manual of Obstetrics - Daftary & Chakravarty

Gynaecology

- Text book of Gynaecology - Novak

- Text book of Operative Gynaecology - Te-lindes
- Text book of operative gynaecology - Shaws
- Text book of Gynaecology and Reproductive Endocrinology - Speroft
- Text book of Obstetrics & Gynaecology - Dewhurst
- Manual of Gynaecological Oncology - Disai
- Text book of Gynaecology – Jaeffcot

Journals

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

**Postgraduate Students Appraisal Form
Pre / Para /Clinical Disciplines**

Name of the Department/Unit :

Name of the PG Student :

Period of Training: FROM.....TO.....

Sr. No.	Particulars	Not satisfactory	Satisfactory	More Than Satisfactory	Remarks
		1 2 3	4 5 6	7 8 9	
1.	Journal based/recent advances learning				
2.	Patient based/Laboratory or Skill based learning				
3.	Self directed learning and teaching				
4.	Departmental and interdepartmental learning activity				
5.	External and Outreach Activities/CMEs				
6.	Thesis/Research work				
7.	Log Book Maintenance				

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
ASSEESSEE

SIGNATURE OF
CONSULTANT

SIGNATURE OF HOD

MS-9221

MODEL PAPER

Obst.Gynae-I

**MS Examination Month, Year
OBSTETRICS & GYNAECOLOGY**

Paper – I
Applied Basic Sciences
(Basic Sciences & Medical Genetics)

Time : Three Hours
Maximum Marks : 100

Attempt all questions
All the parts of one question should be answered at one place in sequential order.
Draw diagrams wherever necessary

- Q.1 Describe HPO axis. Enumerate the conditions affecting it in causation of amenorrhoea and give work up of primary amenorrhoea. 20
- Q.2 Discuss the following : 2×15 = 30
(a) Describe phases of parturition.
(b) Antepartum fetal surveillance.
- Q.3 Write short notes on : 5×10 = 50
(a) Precocious puberty
(b) PUL
(c) (i) Graffian follicle
(ii) Development of ovary
(d) Current recommendations for use of HRT in menopausal women
(e) WHO ten steps for breast feeding

MS Examination Month, Year
OBSTETRICS & GYNAECOLOGY

Paper – II

Obstetrics Including Social Obstetrics and Diseases of New Born
(Clinical & Operative Obstetrics & New Born)

Time : Three Hours

Maximum Marks : 100

Attempt all questions

All the parts of one question should be answered at one place in sequential order.

Draw diagrams wherever necessary

- Q.1 What are the recent guidelines for diagnosis and management of GDM by NHM Government of India. How will you do pre-conceptional counseling in such patients. 20
- Q.2 Discuss the following : 2×15 = 30
(a) TOLAC - Guidelines, prerequisites and its conduction.
(b) What are the changes in the renal system during pregnancy? Describe management of acute pylonephritis in pregnancy.
- Q.3 Write short notes on: 5×10 = 50
(a) Describe normal and abnormal trophoblastic invasion with its consequences.
(b) Discuss complications of multifetal gestation
(c) RAADP
(d) NIPT
(e) What are the risk factors for shoulder dystocia and how will you manage it.

MS Examination Month, Year
OBSTETRICS & GYNAECOLOGY

Paper – III
Gynaecology Including Fertility Regulation
(Clinical & Operative Gynaecology, Fertility Regulation, Family Welfare & Demography & Infertility)

Time : Three Hours
Maximum Marks : 100

Attempt all questions
All the parts of one question should be answered at one place in sequential order.
Draw diagrams wherever necessary

- Q.1 What are the various screening methods for ovarian carcinoma? How will you manage early stage high risk ovarian malignancy? 20
- Q.2 Discuss the following : 2x15=30
(a) What is two cell two gonadotrophin theory of steroid biosynthesis.
(b) What are the causes of VVF. Describe the principles of management of VVF alongwith pre & post operative care of women undergoing VVF repair.
- Q.3 Write short notes on : 5x10 = 50
(a) Syndromic management of vaginal discharges.
(b) Differential diagnosis of non cancerous vulval ulcers.
(c) (i) Evaluation of endometrial pathology in infertile women.
(ii) Factors responsible for success of reversal of tubal sterilization.
(d) Hysteroscopy - indications, safety guidelines and complications.
(e) Describe Bethesda system of pap smear reporting.

MS-9224

MODEL PAPER

Obst.Gynae-IV

**MS Examination Month, Year
OBSTETRICS & GYNAECOLOGY**

**Paper – IV
Recent Advances in Obstetrics & Gynaecology**

**Time : Three Hours
Maximum Marks : 100**

Attempt all questions
All the parts of one question should be answered at one place in sequential order.
Draw diagrams wherever necessary

- Q.1 Discuss comparative analysis of various prostaglandins used in obstetrics. 20
- Q.2 Describe the following : 2×15 = 30
(a) Genital tuberculosis - Clinical features, diagnosis and management according to recent government of India guidelines.
(b) Intrapartum fetal surveillance.
- Q.3 Write short notes on : 5×10 = 50
(a) Role of immunotherapy in various gynaecological cancers
(b) Fetal therapy
(c) (i) Role of Chattisgarh balloon in managing atonic PPH.
(ii) ARSH programme
(d) (i) NSV
(ii) GATHER approach in family planning programme
(e) Non oral hormonal contraceptive