

Syllabus for the post of

(1) Professor, Obstetrics & Gynaecology, Class-I

(Advt. No.: 51/2019-20)

(2) Associate Professor, Obstetrics & Gynaecology, Class-I

(Advt. No.: 57/2019-20) (Special Recruitment)

Marks – 200

Questions – 200

Medium - English

1. 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; 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 disease; 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.

2. 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.

3. CLINICAL OBSTETRICS

(a) Antenatal Care: Prenatal care of normal pregnancy including examination, nutrition, immunization and follow up, Identification and management of complications and complications 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). 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. National health MCH programs, social obstetrics and statistics. Examination and management of case of sexual assault.

(b) 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.

(c) 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.

(d) Operative Obstetrics: Decision-making, technique and management of complications. Vaginal instrumental delivery, Caesarian section, Obst. Hysterectomy, destructive operations, manipulations, Medical Termination of Pregnancy-safe abortion, selection of cases, technique and management of complication.

(e) 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 of fetal/neonatal malformation. Management of common neonatal problems.

4. **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), 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, Advanced Assisted Reproductive Techniques (ART), Reproductive tract Infections: prevention, diagnosis and treatment. 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. Orthopedic problems in Gynaecology. Menopause: management (HRT) and prevention of its complications. Endoscopy (Laparoscopy - Hysteroscopy): Diagnostic and simple therapeutic procedures, Pediatric, Adolescent and Geriatric Gynaecology, Advance Operative procedures.

(a) 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.

(b) Diagnostic Procedures

Obstetrics: Ultrasound and Doppler, Fetal surveillance methods – Electronic fetal monitoring and its interpretation, CVS Amniocentesis.
Gynecology: Cervical Pap smear – VIA / VILI (visual inspection with acetic acid / visual inspection with Lugol's iodine), Colposcopy, Endometrial Sampling, Cervical Biopsy, Endoscopy – Laparo & Hysteroscopy.
Sonography in infertility: Follicular study and Endometrial study.
Amniocentesis.

(c) 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. Contraceptive techniques, 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).

(d) 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.

5. Biomedical Waste Management, Environment and Health:

Concept of safe disposal of human body fluids and other materials, Universal precautions to be taken in examining and carrying surgical

procedures for the prevention of HIV and other diseases. Effect of environment of pregnancy outcome.

- 6. The Medical Termination of Pregnancy (MTP) Act, 1971**
- 7. The Medical Termination of Pregnancy Rules, 1975**
- 8. The Pre-Natal Diagnostic Techniques (Regulation and Prevention of Misuse) Act, 1994 (PNDT)**
- 9. THE PRE-NATAL DIAGNOSTIC TECHNIQUES (REGULATION AND PREVENTION OF MISUSE) RULES, 1996**
- 10. RESEARCH METHODOLOGY.**
- 11. MEDICO LEGAL ASPECTS RELEVANT TO THE DISCIPLINE.**
- 12. INDIAN MEDICAL COUNCIL (PROFESSIONAL CONDUCT, ETIQUETTE AND ETHICS) REGULATIONS, 2002.**
- 13. CURRENT TRENDS AND RECENT ADVANCEMENTS IN THE FIELD OF OBSTETRICS & GYNAECOLOGY.**