

**Syllabus for the preliminary test for the recruitment on the post of Gynaecologist (Specialist Service), Class I in Gujarat Health and Medical Services**

**Marks – 200**

**Questions - 200**

**Medium -English**

**[Advt No- 121/2019-20]**

**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 (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 foetus, foetal growth and development, foetal physiology and foetal 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, haematological, 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, labor, 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 foetus, their excretion through breast milk. Mechanism of action, excretion, metabolism of identified drugs used in the management of Gynaecological disorders. Role of hormones in Obstetrics and Gynaecology.

**Markers in Obstetrics and Gynaecology-** non-neoplastic and neoplastic diseases. Patho-physiology 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 foetus.

Normal and abnormal microbiology of genital tract. Bacterial, viral and parasitical infections responsible for maternal, foetal and gynaecological disorders. Humoral and cellular immunology in Obstetrics and Gynaecology. Gametogenesis, fertilization, implantation and early development of embryo. Normal pregnancy, physiological changes during pregnancy, labor and purperium. 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 counselling

## **3. 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, Anaemia, Rh incompatibility, diabetes, heart disease, renal and hepatic diseases, preterm post-term pregnancies, intrauterine foetal growth retardation. Neurological, haematological, dermatological diseases, immunological disorders and other medical and surgical disorders/problems associated with pregnancy, multiple pregnancies, Hydramnios, Oligiamnios. 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 foetal 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 foetus. Identifying foetus at risk and its management. Infections in pregnancy. (Bacterial, viral, fungal, protozoal) 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 malposition's and malpresentations. Management of pregnancies complicated by medical, surgical (with other specialties as required) and gynaecological diseases. Anaemia, haematological disorders Respiratory, Heart, Renal, Liver, skin diseases. Gastro Intestinal, Hypertensive, Auto immune, Endocrine disorders. Associated Surgical Problems. Acute Abdomen (surgical emergencies appendicitis and GI emergencies), other associated surgical problems. Gynaecological disorders associated with pregnancy - congenital genital tract developmental anomalies, Gynaecological pathologies - fibroid uterus, CaCx, genital prolapse etc. Prenatal diagnosis (of foetal problems and abnormalities), treatment – Fatal therapy M.T.P, P.N.D.T Act etc. National Health MCH programs, Social obstetrics and vital statistics. Recent advances in Obstetrics.

#### **4. Intrapartum care:**

Normal labor, mechanism and management. Petrographic monitoring of labor progress, recognition of abnormal labor and its appropriate management. Identification and conduct of abnormal labor and complicated delivery - breech, forceps delivery, caesarean 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 foetus, abnormal uterine action, obstructed labor and other distocias. Analgesia and anaesthesia in labor. Maternal and foetal monitoring in normal and abnormal labor (including electronic foetal 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 haemorrhage.

**5. 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 haemorrhage, 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 a critically ill woman. Post-partum shock, sepsis and psychosis. Post-partum contraception. Breast feeding practice; counseling and importance of breast-feeding. Problems in breast-feeding and their management, Baby friendly practices. Problems of new-born at birth (resuscitation), management of early neonatal problems. Normal and abnormal puerperium - sepsis, thrombophlebitis, mastitis, psychosis. Haematological problems in Obstetrics including coagulation disorders. Use of blood and blood components/products.

**6. New Born:**

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

**7. Clinical Gynaecology**

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, Ca 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 hyper prolactinemia, 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, hyper prolactinemia (galactorrhoea), hyper androgenism, 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. Orthopaedic 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 Paediatric, adolescent and geriatric Gynaecology (Introduction to) Advance Operative procedures.

#### **8. 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.

**9. Family Welfare Planning 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 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).

**10. Male and Female Infertility:**

History taking, examination and investigation. Causes and management of male infertility. Introductory knowledge indications, procedures of Assisted Reproductive, Techniques in relation to male infertility problems.

**11. Indian Medical Council (Professional Conduct, Etiquette and Ethics) Regulations, 2002.**

**12. Current Trends and Recent Advancements in Gynaecology.**