



Jinnah Sindh Medical University

STUDY GUIDE	
Program	MBBS
Course Title	REPRODUCTIVE-II
Academic Year	4th Year, 2023
Introduction	This module builds on the module Reproductive 1, taught in Year-2 of MBBS, and the concepts learnt in the Foundation module. The emphasis in this module is on providing information to students regarding common conditions and diseases concerned with reproductive health, identifying the common issues in men and women, investigating them, and making decisions based on patient information. They must also know the main concepts of molecular structure, regulation and functions of hormones. While studying principles of treatment in this module, learners are advised to revise details of relevant drugs used in the maintenance and restoration of reproductive health. Students must learn the principles of management but are <i>not</i> expected to know, at this stage, details of treatment procedures; medical or surgical.
Rationale	The clinical and basic science aspects of reproductive Health are taught since Pakistan is a country with not only a very high birth rate but also with high infant and maternal mortality and morbidity rates. Our graduates need to comprehend the issues that cause such poor outcomes so that they are better able to manage the prevalent conditions.
Outcomes	By the end of the module, all the students will be able to justify the diagnosis and management plans of various reproductive diseases based on their knowledge of relevant basic sciences.
Departments Involved	<ol style="list-style-type: none">1. Pathology2. Community Medicine3. Pharmacology4. Behavioural Sciences / Psychiatry5. Urology6. Gynaecology & Obstetrics

Course Objectives	By the end of the course, the students will be able to:
<u>Lectures</u> Pathology	<p>1. Congenital anomalies of female and male genital tract; Epididymo-orchitis</p> <ul style="list-style-type: none"> Describe the various congenital anomalies of female genital tract with their important salient features Discuss developmental abnormalities and related features of the hypospadias, epispadias, phimosis & Cryptorchidism. Discuss the microorganism, pathogenesis and morphology of specific and non-specific types epididymo-orchitis <p>2. Infectious agents causing genital ulcer disease</p> <ul style="list-style-type: none"> List the important microorganism causing genital ulcer disease Discuss in detail the pathophysiology, clinical manifestation, laboratory diagnosis, treatment and prevention of: <ul style="list-style-type: none"> i. HSV 2 infection ii. HPV infection <p>1. Infectious agents causing vaginitis</p> <ul style="list-style-type: none"> List the important microorganisms causing vaginitis Briefly discuss candida infections Discuss in detail the important properties, pathophysiology, clinical manifestation, diagnosis, treatment and prevention of: <ul style="list-style-type: none"> i. Trichomonas vaginalis infection ii. Gardnerella vaginalis infection <p>4. Pelvic Inflammatory Disease (PID)</p> <ul style="list-style-type: none"> Define Pelvic Inflammatory Disease List the important microorganisms causing cervicitis and PID Discuss the risk factors, pathophysiology, morphology and clinical presentation and complications of PID Discuss the role of Staphylococcus in causing toxic shock syndrome Discuss in detail the important properties,

pathophysiology, clinical manifestation, laboratory diagnosis, treatment and prevention of Neisseria gonorrhea infection

5. Sexually Transmitted Infections (STI)

- Define STI
- List the important microorganisms causing STI
- Discuss the risk factors, pathophysiology, morphology and clinical presentation of STI's
- Discuss in detail the pathophysiology, clinical manifestation, laboratory diagnosis, and treatment of:
 - i. CMV Chlamydial infection
 - ii. Syphilis (Treponema pallidum)
- Briefly discuss the role of HIV as sexually transmitted infection

6. Non-neoplastic and neoplastic conditions of vulva and vagina

- Discuss the morphology, pathogenesis and clinical presentation of Bartholin cyst, Lichen Sclerosus, Squamous Cell Hyperplasia, Condyloma Acuminatum, Papillary Hidradenoma and Extramammary Paget Disease, Vulvar Intraepithelial Neoplasia and vulvar carcinoma
- Discuss the pathogenesis and morphology of Vaginal Intraepithelial Neoplasia and squamous cell carcinoma, Embryonal rhabdomyosarcoma

7. Non-neoplastic and neoplastic conditions of cervix

- Discuss the infections of cervix including acute & chronic cervicitis, and Endocervical Polyps
- Discuss the risk factors, pathogenesis and morphology of cervical intraepithelial lesions and cervical carcinoma
- Elaborate the role of HPV in cervical cancer,
- Discuss cervical screening methods and pap smear

8. Endometrial Hyperplasia & Functional Endometrial Disorders

- Define dysfunctional uterine bleeding (DUB)

- Classify abnormal uterine bleeding according to age group and etiology
- Discuss the etiology, pathogenesis, morphology and clinical features of abnormal uterine bleeding and Anovulatory Cycle
- Discuss the etiology, pathogenesis, morphology and clinical features of acute and chronic Endometritis, Endometriosis, adenomyosis and Endometrial Polyps
- Classify Endometrial hyperplasia
- Discuss the etiology, pathogenesis, morphology and clinical features of Endometrial hyperplasia

9. Tumors of Uterine corpus (Benign and Malignant endometrial tumors)

- Classify tumors of uterus/endometrium
- Discuss the etiology, pathogenesis, morphology and clinical features of Carcinoma of the Endometrium, Tumors of Endometrial Stroma & mixed Mullerian tumors

10. Non-neoplastic cysts and functional cyst of ovary and Polycystic Ovaries

- Discuss the follicular and luteal cysts, and their morphology
- Define Polycystic Ovaries (PCOs)
- Discuss its etiology, pathogenesis, morphology and complications

11. Ovarian Tumors - I (Tumors of ovary & fallopian tube)

- Classify Ovarian tumors
- Discuss the etiology, pathogenesis, morphology and clinical features of Serous tumors, Mucinous tumors, Endometrioid tumors, Clear cell tumors, Transitional cell tumors, Adenosarcoma and Malignant mixed Müllerian tumor, and tumors of fallopian tube

12. Ovarian Tumors - II

- Discuss the etiology, pathogenesis, morphology and clinical features of Sex Cord-Stromal Tumors, Teratoma,

Dysgerminoma, Yolk sac tumor, Mixed germ cell tumors and Metastatic Cancer

13. Testicular Tumors

- Classify testicular tumors
- Discuss the etiology, pathogenesis, morphology and clinical features of various types of testicular cancer

14. Early and late disorders of Pregnancy/ Placenta; pre-eclampsia & eclampsia

- Discuss the etiology, pathogenesis, morphology and clinical features of:
Spontaneous abortion, Ectopic pregnancy, Twin Placenta, Abnormalities of placental insertion, the disorders of placenta viz. Placenta Previa, Placental Abruptio, Placental Insufficiency, Placental Infarcts, Placenta Accreta, Placental infection, Preeclampsia and eclampsia

15. Gestational Trophoblastic Diseases

- Discuss the etiology, pathogenesis and morphology of hydatiform mole including complete, partial and invasive mole
- Explain the pathogenesis and morphology of choriocarcinoma and placental site trophoblastic tumor

16. Non-proliferative & proliferative breast diseases

- Name non proliferative and proliferative breast lesions
- Discuss the etiology, pathogenesis, morphology and clinical features of all non-proliferative and proliferative breast diseases including mastitis, duct ectasia, fat necrosis, fibrocystic change, proliferative breast lesions with and without atypia, ectasia, fat necrosis, fibrocystic change, proliferative breast lesions with and without atypia

17. Tumors of breast

- Classify Breast tumors
- Discuss the etiology, risk factors, pathogenesis, morphology, molecular profile and clinical features of various types of breast cancer

	<ul style="list-style-type: none"> Discuss risk factors, pathogenesis, morphology and clinical features of stromal tumors of breast (Fibro adenoma, Phyllo ides)
Community Medicine	<ol style="list-style-type: none"> 1. Introduction to reproductive health <ul style="list-style-type: none"> Describe Reproductive Health Explain the phases of Reproductive Health Identify the components of Reproductive Health Discuss Reproductive Health in Islam 2. Maternal care <ul style="list-style-type: none"> Describe maternal care Describe maternal mortality Explain three delay model Discuss safe motherhood initiative Identify the interventions to reduce maternal mortality 3. Infant Care <ul style="list-style-type: none"> Describe infant care Identification of ''at risk'' infant Explain the importance of breastfeeding Describe infant mortality Describe preventive measures of infant mortality 4. Integrated Management of Neonatal &Childhood Illness (IMNCI) <ul style="list-style-type: none"> Describe the components of IMNCI Discuss the role of community and family practice in IMNCI Explain the process of assessment of danger signs in IMNCI 5. Family Planning <ul style="list-style-type: none"> Describe family planning Explain methods used in family planning List the common reasons for unmet need of Family Planning (UMNFP) 6. Reproductive Tract Infections <ul style="list-style-type: none"> Classify reproductive tract infections

	<ul style="list-style-type: none"> • Discuss epidemiology of Reproductive Tract Infections • Discuss the syndromic management of reproductive tract infections • Describe the preventive measures of HIV/AIDs • Describe HIV/AIDS control Programme in Pakistan <p>7. Fertility determinants</p> <ul style="list-style-type: none"> • Differentiate between fertility and fecund ability • Describe determinants of fertility • Calculate the measures of fertility
Pharmacology	<p>1. Androgens & Anti-androgens</p> <ul style="list-style-type: none"> • Discuss classification of Androgens & Anti-androgens with their basic & Clinical pharmacology of these agents <p>2. Estrogens & Anti-estrogens</p> <ul style="list-style-type: none"> • Discuss classification of estrogens & anti-estrogens • Explain basic & clinical pharmacology of these agents <p>3. Progestin's & Anti-progestins</p> <ul style="list-style-type: none"> • Discuss classification of Progestins, Anti-progestins • Explain the basic & clinical pharmacology of these agents <p>4. Drug used in pregnancy & lactation</p> <ul style="list-style-type: none"> • Discuss the contraindicated and safer drugs in pregnancy & lactation <p>5. Contraceptive Drugs</p> <ul style="list-style-type: none"> • Discuss the classification, kinetics and dynamics of different hormonal contraceptive drugs
Behavioral Sciences/ Psychiatry	<p>1. Management of male & female sexual and reproductive dysfunction</p> <ul style="list-style-type: none"> • Describe the psychosocial issues associated with infertility • Describe ethical issues confronted by patients with infertility <p>2. Sexual and domestic violence</p> <ul style="list-style-type: none"> • List characteristics of people at increased risk for sexual assault • Describe the medical and psychosocial management of a victim of sexual as- sault
Urology	<p>1. STIs in male genital tract; including epididymitis, orchitis, prostatitis</p>

	<ul style="list-style-type: none"> Describe the etiology, pathophysiology, symptoms and signs, investigations and treatment plan for STIs in males (viz. Epididymitis, orchitis, prostatitis, gonorrhoea, non-specific urethritis, genital herpes, genital warts, syphilis and HIV) <p>2. Male sexual dysfunction</p> <ul style="list-style-type: none"> Explain the anatomy and physiology of penile erection Classify the causes of erectile dysfunction Discuss the various investigations for diagnosis of erectile dysfunction Discuss the treatment options for Erectile dysfunction including penile implant <p>3. Male Infertility</p> <ul style="list-style-type: none"> Define infertility Describe the stages of spermatogenesis and fertilization List the causes of male infertility Discuss steps of evaluation of male infertility including history, examination and investigations Describe the treatment options for the common conditions causing male infertility
Gynecology	<p>1. Female hormone in the menstrual cycle</p> <ul style="list-style-type: none"> Define primary & secondary amenorrhea, oligomenorrhea, menorrhagia, dysmenorrhea, dyspareunia, post-menopausal bleeding, post-coital bleeding, pre-menstrual syndrome Describe symptoms and signs of primary and secondary amenorrhea, and oligomenorrhea Differentiate among the three types of amenorrhea Define primary & secondary dysmenorrhea Interpret the clinical abnormalities of the menstrual cycle and its biochemical investigations <p>2. Bleeding PV and early pregnancy complications</p> <ul style="list-style-type: none"> List the most common pregnancy complications Define ectopic pregnancy Discuss differential diagnosis of acute abdomen in women

- Diagnose ectopic pregnancy, based on provided data (history, examination findings, investigation reports)
- Define abortion according to WHO criteria
- Differentiate among the various types of abortions based on data provided (history, examination findings, investigation reports)
- Describe the treatment options for each type of abortion
- Discuss the definition, etiology, risk factors and the classification of GTN
- Discuss Gestational Trophoblastic diseases/ neoplasia (molar) GTD/GTN

Physiology of normal puerperium, Puerperal disorder & Postnatal care

- Define puerperium
- Describe signs and symptoms, and management of normal and abnormal puerperium, including puerperal pyrexia and puerperal sepsis
- Recognize the risk factors for depression (postpartum blues) and the role of psychosocial support
- Identify the capacity of mother to take care of her newborn

Discuss the issues in postnatal care effectively with patient

4. Lactation management and breast care

- Discuss the benefits & complications of breastfeeding for the baby, mother, family, and country
- Discuss the role of health care provider about counseling breast feeding at term
- Explain the significance of self-breast examination and clinical examination

5. Poly-Cystic Ovary Syndrome (PCOS)

- Interpret the hormone profile report for PCOS
- Discuss the etiology, pathophysiology, diagnosis, and management options for PCOS

6. Vulvo-vaginal infections

- List the causes of vaginal discharge (candida, bacterial vaginosis, trichomonas's)
- Differentiate between a normal vaginal discharge and pathological vaginal discharge (Leucorrhea) on the basis of clinical history
- Describe symptoms, signs, investigations and treatment options for vaginal discharge due to infection
- Discuss steps of prevention and recurrence of vaginal discharge

7. Pelvic Inflammatory Disease

- Define Pelvic Inflammatory disease (PID, Post-delivery PID, Post-abortion PID, Post-Surgical PID)
- Diagnose PID based on symptoms, signs and investigation findings
- Discuss the differential diagnosis of PID and its possible complications
- Discuss the management options for acute and chronic PID

8. Sexually transmitted diseases

- Explain the etiology of Sexually Transmitted Infections (STIs)
- Discuss the principles for their effective investigation and treatment

9. UTI in Gynaecology

- Diagnose UTI in pregnant women with relation to Cystitis, Lower Urinary Tract Symptoms
- Discuss the principles for their effective investigation and treatment

10. Infertility

- Define infertility and sub-fertility
- Discuss the causes and relevant investigations of an-ovulation in women
- Interpret the reports of Semen analysis in male and fertility-related hormone profile in female

11. Benign vulval disorders

- Identify the clinical features and risk factors of various vulvovaginal conditions including Warts, Bartholin cysts, and abscess.

12. Benign tumors of the genital tract I

- Explain benign tumors of female genital tract
- Differentiate among the various types of ovarian cysts, polyps & fibroids based on their etiology, symptoms, signs and pathophysiology
- Justify the selection of investigations for ovarian cysts, polyps & fibroid uterus

13. Gynecological Investigations

- Describe the role of Hysteroscopy & Hystrosalpingiogram
- Interpret the lab investigation X-Rays & laparoscopic views of different disorders
- Identify the hard and soft copy views of X rays and contrast X-rays
- Identify the laparoscopic views of adnexal mass, ruptured and unruptured ectopic pregnancy, PID and TO mass, endometriosis, and pelvic adhesions
- Identify the hysteroscopy views (endometrial polyp, normal uterine cavity, submucous fibroid, septate uterus) including Colposcopy views of cervix
- Describe the role of ultrasound in evaluation & diagnosis of different disorders in gynae
- Discuss Point of care ultrasound (POCOS) in gynae
- Discuss Doppler ultrasound in gynae

14. Public health issues related to reproductive health

- Discuss the maternal health situation in Pakistan (Total fertility, maternal mortality, perinatal mortality, contraceptive prevalence rate)
- Discuss the important causes of maternal mortality and morbidity
- Describe maternal health services

	<ul style="list-style-type: none"> • Describe the levels of obstetric care including obstetric first aid, basic EmNOC, comprehensive EmNOC • List the basic steps of counseling in reproductive health, with emphasis on family planning • Discuss the role of contraception in population dynamics <p>15. Family planning (contraceptive) methods</p> <ul style="list-style-type: none"> • Describe the commonly used methods of family planning, and their indications • Explain their significance
Obstetrics	<p>1. Antenatal care & Assessment</p> <ul style="list-style-type: none"> • Explain the importance of routine prenatal laboratory investigations, prenatal diagnostic options (IPS, Quad screen, amniocentesis, CVS) and fetal ultrasound assessment • Explain the process/schedule of antenatal care and investigations (GDM screening, Rh prophylaxis, GBS screening, term cervical assessment) and its importance in ensuring maternal health and normal fetal growth and well-being <p>2. Antenatal investigation</p> <ul style="list-style-type: none"> • Explain the importance and process antenatal care and investigations • Interpret Rh prophylaxis, GBS screening, term cervical assessment to ensure maternal health and normal fetal growth and well being <p>3. Normal Labor</p> <ul style="list-style-type: none"> • Define labor • Explain the stages of normal labor • Describe the basic mechanisms of labor evaluation • Describe the seven cardinal movements of labor • Explain the technique of delivery, traction, and handling of infant after delivery • Define Who Labor Guide and CTG • List the uses of partograph and CTG in the management of normal labor • Interpret result of Who Labor Guide

4. Anemia in pregnancy

- Discuss the causes, sign and symptoms, investigations & management.
- Discuss fetal and maternal complications of anemia in pregnancy.

5. Preterm Labor

- Define preterm labor
- Explain indications, contraindication and complications of induction of labor
- Discuss the advantages, disadvantages of augmentation of labor
- Discuss the monitoring and management of induced and augmented labor
- Differentiate between Threatened preterm labor, Preterm pre-labor rupture of membranes and preterm labor
- Discuss the clinical features, diagnosis and management of preterm labor and preterm prelabor rupture of membranes
- Appraise the principles of diagnosis and management of Threatened preterm labor, Preterm pre-labor rupture of membranes and Preterm labor
- List the causes of IUD

6. Abnormal Labor-I (Fetal malpresentation and malposition)

- Define mal-presentation & malposition
- List the different types of mal-presentation & malposition
- Describe the causes of Breech, Transverse lie and other mal-presentations and malposition
- Describe the management options for mal-presentation and abnormal labor.

- **Abnormal Labor-II (Obstructed Labor)**
- Define obstructed labor
- List the main causes of obstructed labor
- Describe how each cause contributes to the development of this complication
- Describe the clinical signs of obstructed labor and the common maternal and fetal complications that result from uterine obstruction
- Describe the management of obstructed labor

8. Induction of Labor

- Define induction and augmentation of labor
- Explain indications, contraindications, advantages and disadvantages of induction and augmentation of labor
- Discuss the advantages, disadvantages of augmentation of labor
- Discuss the monitoring and management of induced and augmented labor
- Discuss the management of abnormal pantograph and CTG

9. Analgesia & Anesthesia in Obstetrics

- Describe analgesic techniques used in labor and cesarean delivery
- Describe different anesthetic options used in labor and cesarean delivery including the risks and benefits of general, spinal, & epidural anesthesia, pudendal nerve block, and narcotics

10. Role of ultrasound in Obstetrics

- Describe the role of Ultrasound, point of care ultrasound (POCUS), and Doppler ultrasound in Obstetrics including antepartum fetal surveillance in the normal and high risk pregnancy & evaluation of fetal growth restriction

	<p>11. Safe Motherhood</p> <ul style="list-style-type: none"> • Define Pillars of safe motherhood • Discuss components of safe motherhood • Discuss WHO strategies of safe motherhood <p>12. Respectful maternity care</p> <ul style="list-style-type: none"> • Discuss the seven principles of RMC
<u>Practical</u> Pharmacology	<p>1. Effects of different drugs on the rat uterus</p> <ul style="list-style-type: none"> • Observe the effects of the drug oxytocin on rat uterus by using power lab
<u>Tutorials</u> Pathology	<p>1. Ovarian tumors</p> <ul style="list-style-type: none"> • Discuss the etiology and morphological features of ovarian tumors <p>2. Testicular tumors</p> <ul style="list-style-type: none"> • Discuss the etiology and morphological features of testicular tumors <p>3. Breast tumors</p> <ul style="list-style-type: none"> • Discuss the etiology and morphological features of breast tumors <p>4. Lesions of Cervix</p> <ul style="list-style-type: none"> • Discuss histopathology of premalignant and malignant lesions of cervix • Discuss screening methods for cervical lesions <p>5. Lab diagnosis related to genital infection</p> <ul style="list-style-type: none"> • Discuss high vaginal swab • Discuss pH test and Whiff test
Pharmacology	<p>1. Androgens & Anti-androgens</p> <ul style="list-style-type: none"> • Explain the clinical importance of Androgen and Anti-androgens with their basic and clinical pharmacology <p>2. Estrogens & Anti-estrogens</p>

	<ul style="list-style-type: none"> • Explain the clinical importance of Estrogens & Anti-estrogens with their basic and clinical pharmacology <p>3. Progestins & Anti-progestins</p> <ul style="list-style-type: none"> • Explain the clinical importance of Progestins & Anti-progestins with their basic and clinical pharmacology <p>4. Drug used in pregnancy & Lactation</p> <ul style="list-style-type: none"> • Explain contraindicated and safer drugs in pregnancy & lactation <p>5. Contraceptive Preparations</p> <ul style="list-style-type: none"> • Explain the clinical importance of Contraceptive Preparations <p>The skills to be learnt in the clinical rotations are listed below:</p>
<p><u>Clinical Skills</u></p> <p>Gynecology</p>	<p>1. History taking</p> <p>2. Perform on patient</p> <ul style="list-style-type: none"> • Per abdominal examination <p>3. Perform on manikin (Skill lab & video)</p> <ul style="list-style-type: none"> • Per abdominal examination • Per speculum examination • Pap smear • High vaginal swab • DNC (on manikin) • Manual vacuum aspiration MVA • Forceps delivery • Foleys Observe on patient (Ward) • Mechanism of labor & normal Vaginal delivery • Pap smear • High vaginal swab • DNC <p>5. Instruments in Gynecology (in OT and video)</p> <ul style="list-style-type: none"> • Identify the following instruments: <ul style="list-style-type: none"> i. Cusco speculum

	<ul style="list-style-type: none"> II. Sims speculum III. Ayers spatula IV. Instruments of DNC & MVA V. Forceps & vacuum VI. Family planning tray <ul style="list-style-type: none"> • Discuss their uses, indications and contraindications, and complications <p>6. Investigations in Gynae: Hysteroscopic X-Rays & Laparoscopic views of different disorders (skills lab)</p> <ul style="list-style-type: none"> • Identify the hard and soft copy views of: <ul style="list-style-type: none"> i. X rays and contrast X-rays ii. Laparoscopic views (adnexal mass, ruptured and unruptured ectopic pregnancy, PID and TO mass, endometriosis, pelvic adhesions), Hysteroscopic views (endometrial polyp, normal uterine cavity, submucous fibroid, septate uterus) including Colposcopic views of cervix <p>7. Differential diagnosis of cases (mass in abdomen, bleeding P/V, vaginal discharge, importance of cervical screening, medications in pregnancy)</p> <ul style="list-style-type: none"> • Differential diagnosis of mass in abdomen • List the causes of bleeding p/v • Discuss the causes of vaginal discharge 'Explain the importance of cervical screening
Obstetrics	<ol style="list-style-type: none"> 1. Obstetrics history taking 2. Obstetric examination (Perform on patient/manikin) 3. P/A & antenatal investigations 4. Antenatal card 5. Discharge card 6. Interpretation of normal and abnormal CTG & WHO Labor guide <p>1. Instruments related to obstetrics (OT and video)</p> <ul style="list-style-type: none"> • Identify the following instruments: <ul style="list-style-type: none"> i. Instruments of C/section ii. Outlet forceps iii. Vacuum iv. Episiotomy scissors v. Fetoscope

	<ul style="list-style-type: none"> • Discuss their uses, indications and contraindications, and complications
Communication Skill	<ul style="list-style-type: none"> • Avoid the use of medical jargon while communicating with patients / their families • Present case summary/history in a logical and organized manner
Professionalism	<ul style="list-style-type: none"> • Demonstrate punctuality and regularity in all teaching sessions <p>Maintain personal hygiene at all times, especially after being in contact with</p> <ul style="list-style-type: none"> • patients <p>Demonstrate compassion and ethical behavior while dealing with patients and their families</p> <ul style="list-style-type: none"> • Demonstrate compassion and ethical behavior while dealing with patients (i.e. during history taking, examination & discussions) • Demonstrates respect for the patient based on the 7 principles
Internal Assessment	<ul style="list-style-type: none"> • Internal assessment will be according to JSMU policy. The details of internal assessment will be determined by the respective institutions. • Internal assessment carries 20% weightage in the final, end-of-year examination
Annual Examination	MCQs and OSCE/OSPE (observed + un observed)
MODULE EVALUATION	Course will be evaluated through a feedback form which will be posted on the JSMU website
REFERENCE BOOKS	<ul style="list-style-type: none"> • Robbins & Citron, Pathologic Basis of Diseases, 9th Edition • Kaplan Series of Behavioural Sciences, Psychiatry • Gynaecology by Ten Teachers • Obstetrics by Ten Teachers • Llewellyn - Jones Fundamentals of Obstetrics & Gynecology • Public Health and Community Medicine 8th Edition. Author: Ilyas, Ansari • K park's textbook of preventive and social medicine 23rd Edition • Basic & Clinical pharmacology, 15th Ed. Bertram G. Katzung

