REPRODUCTION MODULE

MBBS Year-2 (Academic Year 2019-2020)

KMU Central Curriculum Committee
Khyber Medical University, Phase V, Hayatabad | Peshawar

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List of Themes

3-Weeks

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1	Pregnancy and child birth	02
2	Infertility	01

General learning outcomes

1) Describe the development, structure and functions of bony pelvis, uterus, ovaries and perineum
2) Describe the development, structure and functions of mammary glands
3) Explain the contents and mechanism of formation of milk
4) Describe the development, structure and functions of male genital organs
5) Explain the synthesis, mechanism of action, physiological effects and regulation of sex hormones in males and females and hormones released from placenta
6) Describe the physiology of gestation and parturition
7) Describe basic statistical tests and their significance
8) Describe the concept of empathy as part of professionalism
9) Explain the steps of research evaluation, its validity and reliability

Theme-1 (Pregnancy and child birth)

Subject	**Topic**	**S. No**	**Learning objective** **At the end of this module, the students of year-2 will be able to:**
Anatomy	Bony pelvis Uterus	1	Describe the general features of bony pelvis
		2	Differentiate between male and female pelvis
		3	Classify the differences between true and false pelvis
		4	Describe the gross structure, location and relations of uterus
		5	Describe the blood supply of uterus
		6	describe the boundaries of pouch of Douglas/recto-uterine pouch and its clinical significance
		7	Describe the gross structure, location and relations of Fallopian tubes
		8	Describe the blood supply of Fallopian tubes

		9	Enlist various support mechanisms of uterus
		10	Describe the formation and components of broad ligament
		11	Discuss the clinical correlates of uterus and fallopian tubes
	Ovary	12	Describe the gross structure, location and relations of ovaries.
		13	Describe the blood supply of ovaries
		14	Name ligaments supporting the ovaries
	Pelvic floor	15	Describe the general features of sacrum
		16	Describe the special features of sacrum
		17	Name the muscles making the pelvic floor
		18	Describe their origin, insertion, nerve supply and actions of muscles of pelvic floor
		19	Describe the boundaries and contents of superficial perineal pouch
		20	Describe deep perineal pouch
		21	List the boundaries and contents of ischio-rectal (anal) fossa
		22	Give the clinical significance of ischi-orectal fossa
Embryology	Uterus	23	Describe the development of uterus
		24	Enlist the various developmental Anomalies of uterus
		25	Describe the remnants of mesonephric and Parmesonephric ducts in females
	Ovaries	26	Describe the development of ovaries
	Mammary gland	27	Describe the development of mammary gland
		28	Enlist various developmental anomalies of mammary gland along with embryological reasons
Histology	Uterus	29	Describe the microscopic structure of uterus
		30	Discuss the microscopic features of endometrium in different phases of menstrual cycle
	Ovary	31	Describe the microscopic structure of ovary
		32	Elaborate the different stages of ovarian follicle
	Mammary gland	33	Describe the microscopic features of inactive mammary gland
		34	Describe the microscopic features of mammary gland during pregnancy and lactation
Physiology	Overview of Reproductive System	35	Describe the spermatogenesis
		36	Explain the function of prostate gland

		37	Describe the composition of semen
	Functions of Testosterone	38	Relate the functions of testosterone with its secretion and metabolism
		39	Describe the intracellular mechanism of action of testosterone
		40	Relate the control of secretion of testosterone with its congenital and acquired abnormalities
	Hormonal cyclical changes of Female reproductive system	41	Describe the monthly ovarian cycle
		42	Describe the effects of gonadotropic hormones on the ovaries.
		43	Describe the functions of estrogens
		44	Describe the functions of progesterone
		45	Explain monthly endometrial cycle
		46	Describe the role of hypothalamic and Pituitary ovarian system in controlling the female hormones
		47	Define puberty, menarche and menopause.
		48	Enumerate the changes produced in puberty
	Physiological changes in Pregnancy	49	Describe the transport of fertilization ovum in the fallopian in the uterus.
		50	Explain the effects of HCG in causing persistence in pregnancy
		51	Describe the secretion of estrogen and progesterone by placenta
		52	Describe the functions of HCS
		53	Describe the maternal changes in pregnancy
		54	Describe the changes in maternal circulatory system during pregnancy.
		55	Describe the development of breast during pregnancy
	Parturition	56	Explain the process of parturition and involution of the uterus after parturition
	Milk production	57	Explain the functions of prolactin
		58	Describe the ejection or “let down” of milk.
		59	Explain the composition of milk
	Problems of prematurity	60	Describe Growth and Functional Development of the Fetus
		61	Describe adjustments of the newborn to Extra Uterine Life

		62	Discuss Special Functional Problems in the Neonates
		63	Discuss Special Problems of Prematurity
Forensic medicine	Abortion	64	Define abortion
		65	Describe the type of abortion
		66	Discuss criminal abortion and its complications
		67	Explain the findings of abortion in victims
		68	Describe the indications of therapeutic abortion
	Diagnosis and medicolegal aspects of pregnancy	69	Describe the steps of diagnosis of pregnancy
		70	Explain the medicolegal aspects of pregnancy
Community medicine	Safe motherhood and its components	71	Describe the steps of antenatal and postnatal care, family planning and emergency obstetric care
	Maternal mortality	72	Describe the causes, impact and prevention of maternal mortality in Pakistan
	Breast feeding	73	Explain the importance of breast feeding
General Surgery	Carcinoma of breast	74	Describe the etiology, pathological types and clinical presentation of carcinoma of breast

Theme-2: Infertility

Anatomy	Scrotum, Testes and male genitalia	75	Describe the anatomy of scrotum
		76	Discuss the gross anatomy of testes
		77	Describe the coverings and contents of spermatic cord
		78	Describe epididymis, ductus deferens and seminal vesicles
		79	Describe the clinical correlates of male genital system
	Female external genitalia and vaginal canal	80	Give the gross Anatomy of female external genitalia and vagina
Embryology	Genitalia	81	Describe the development of external genitalia in males
		82	Describe the development of external genitalia in females

		83	Discuss the developmental anomalies of male and female genitalia
	Gonads and genital ducts	84	Describe the development of testis
		85	Name the factors responsible for decent of testis
		86	Discuss the decent of testis
		87	Describe the developmental anomalies of testes
		88	Discuss the development of epididymis, vas deferens and seminal vesical
		89	Describe the development of vagina
		90	describe the remnants of mesonephric and parmesonephric ducts in males
Histology	Testes	91	Discuss general microscopic structure of testes
		92	Discuss seminiferous tubules
		93	Discuss different cells of seminiferous epithelium
		94	Define blood testes barrier
	Male genital ducts	95	Describe the microscopic structure of epididymis, ductus deferens and seminal vesicle
	Fallopian tube	96	Describe the microscopic structure of fallopian tube
Physiology	Male sex hormones	97	Describe the structure, secretion, mechanism of action, physiological actions and regulation of Testosterone
		98	Describe the hormonal changes occurring in puberty in males and females
	Female sex hormones	99	Describe the structure, secretion, mechanism of action, physiological actions and regulation of Estrogen and Progesterone
		100	Describe the mechanism of Ovulation
Biochemistry	Sex Hormones • Testosterone • Estrogen • Progesterone	101	Discuss the chemistry of these hormones
		102	Describe the synthesis of these hormones
		103	Discuss the enzyme deficiencies and their manifestations
		104	Describe the diagnostic role of 17-ketosteroids' excretion in urine
		105	Describe the mechanism of action of these hormones and their receptors

		106	Describe the classical and non-classical target organs of these hormones
		107	Describe the metabolic functions of these hormones
		108	Describe the regulation of these hormones especially by FSH & LH
		109	Discuss the manifestations of deficiency and excess of these hormones
		110	Discuss the andropause and menopause
		111	Discuss the role of LHRH Agonists and antagonists as well as anti-androgens
		112	Discuss the role of 5a-Reductase Inhibitors
Pharmacology	Oral contraceptives	113	Describe the types, mechanism of action and physiological effects of Estrogens and Progesterone containing oral contraceptives
Community medicine	Sexually transmitted diseases	114	Describe the types of STDs
		115	Describe the guidelines for the prevention and management of STDs
Gynaecology	Female infertility	116	Describe the causes, and investigations of female infertility
General Medicine	Male infertility	117	Describe the etiology and investigations of male infertility
		118	Describe normal semen analysis
		119	Define oligo/azoospermia

Practical work

Physiology	Pregnancy test	120	Perform pregnancy test
Histology	Ovaries	121	Describe the microscopic structure of ovaries under microscope
	Fallopian tubes	122	Describe the microscopic structure of fallopian tubes under microscope
	Uterus	123	Describe the microscopic structure of uterus under microscope
	Mammary glands	124	Describe the microscopic structure of mammary glands under microscope
	Testes and Epididymis	125	Describe the microscopic structure of Testes and Epididymis under microscope