

REPRODUCTIVE BIOLOGY

THEORY

(CREDITS 4)

Unit 1

Reproductive Endocrinology

- 1.1 Gonadal hormones and mechanism of hormone action,
- 1.2 Steroids, glycoprotein hormones, and prostaglandins,
- 1.3 Regulation of gonadotrophin secretion in male and female;
- 1.4 Mechanism of sex differentiation.

Unit 2

Functional anatomy of male reproduction

- 1.1 Histology of male reproductive system in humans
- 1.2 Spermatogenesis: hormonal regulation;
- 1.3 Androgen synthesis and metabolism
- 1.4 Accessory glands functions;

Unit 3

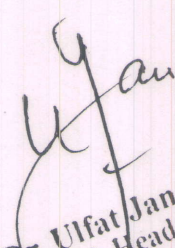
Functional anatomy of female reproduction

- 3.1 Histology of female reproductive system in humans
- 3.2 Ovary: folliculogenesis, ovulation, corpus luteum formation and regression;
Steroidogenesis and secretion of ovarian hormones;
- 3.3 Reproductive cycles and their regulation,
- 3.4 Hormonal control of implantation, gestation, foeto-maternal relationship and lactation

Unit 4

Reproductive Health

- 4.1 Infertility in male: causes, diagnosis and management
- 4.2 Infertility in female: causes, diagnosis and management
- 4.3 Assisted Reproductive Technology: sex selection, sperm banks, frozen embryos
- 4.4 In vitro fertilization, ET, EFT, IUT, ZIFT, GIFT, ICSI, PROST;


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PRACTICAL

REPRODUCTIVE BIOLOGY

(CREDITS 2)

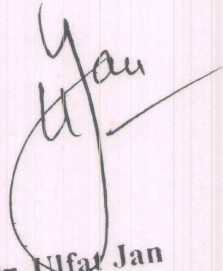
1. Examination of histological sections from photomicrographs/ permanent slides of rat/human: testis, epididymis and accessory glands of male reproductive systems; Sections of ovary, fallopian tube, uterus (proliferative and secretory stages), cervix and vagina.

3. Sperm count and sperm motility in mammal

4. Study of modern contraceptive devices

SUGGESTED READINGS

- ☐ Austin, C.R. and Short, R.V. reproduction in Mammals. Cambridge University Press.
- ☐ Degroot, L.J. and Jameson, J.L. (eds). Endocrinology. W.B. Saunders and Company.
- ☐ Knobil, E. et al. (eds). The Physiology of Reproduction. Raven Press Ltd.
- ☐ Hatcher, R.A. et al. The Essentials of Contraceptive Technology. Population Information Programme.


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