

ZOO 303 BIOLOGY OF REPRODUCTION

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ZOO 303 : BIOLOGY OF REPRODUCTION



M. Sc. Zoology Semester III Two Credits

 [COURSE DETAILS](#)

 [Course Schedule](#)

 [Lecture 1](#)

Administrative lecture

MODULE 1

 [Endocrinology: Adult and Pediatric Google E-Book](#)

[Spermatogenesis](#)

 [Google E-book : Molecular mechanisms in Spermatogenesis](#)

 [Google e-Book Human Reproductive Biology](#)

 [Animal Reproduction Science Journal special Issue](#)

 [Lecture 2 handout](#)

 [General references for Lecture 2](#)

 [Activity 1](#)

Activity 1

- ❖ **Describe Blood-testis-Barrier. (5mks)**
- ❖ **Comment on significance of Subtentacular cells. (5mks)**

 [Activity 1 References](#)

 [Lecture 2 video link](#)

 [Lecture 3 handout](#)

 [Spermatogenesis](#)

 [Biology of Spermatogenesis and Semen](#)

 [Spermatogenesis](#)

 [Spermiation](#)

 [Release of spermatozoa into the lumen of seminiferous tubules](#)

 [Spermatogenesis](#)

 [ReviewThe Cycle of the SeminiferousEpithelium in Humans:A Need to Revisit?](#)

 [Physiology of Male Gametogenesis](#)

 [Lecture 3 Video](#)

 [Activity 2](#)

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Activity 2

- ❖ **Give detailed account of Epididymal matuartion of Spermatozoa. (5mks)**
- ❖ **Describe Leblond and Clermont Concept of wave and cycle. (5mks)**

 [Lecture 4 handout](#)

 [The Mammalian Blood-Testis Barrier: Its Biology and Regulation](#)

 [Lecture 4 video](#)

 [Activity 3](#)

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Activity 3

- ❖ **Since FSH is endocrine hormone, how do you account for its role on growing Spermatogonia?**
(5mks)
- ❖ **Comment on significance of Sperm Centrioles and its fate during and after fertilization.**
(5mks)



[Lecture 5 Handout](#)

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[Activity 4](#)

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Activity 4

- ❖ **Give general account of hormonal regulation of Male accessory organs.**
(5mks)
- ❖ **Comment on Role of Androgens and other factors during development of male reproductive system.**
(5mks)



[Lecture 6 Handout](#)

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[Semen Analysis](#)

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[Semen analysis](#)

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[Semen composition and analysis slides](#)

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[Semen component](#)

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[Activity 5](#)

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Activity 5

Color: White, opalescent	
Specific gravity: 1.028	
pH: 7.35–7.50	
Sperm count: Average about 100 million/mL, with fewer than 20% abnormal forms	
Other components: Fructose (1.5–6.5 mg/mL) Phosphorylcholine Ergothioneine Ascorbic acid Flavins Prostaglandins	From seminal vesicles (contributes 60% of total volume)
Spermine Citric acid Cholesterol, phospholipids Fibrinolysin, fibrinogenase Zinc Acid phosphatase	From prostate (contributes 20% of total volume)
Phosphate Bicarbonate Hyaluronidase	Buffers

❖ Describe the function of each component in red box. (3 mks)

❖ How & why is fructose preferred energy source for sperm. (4 mks)

❖ Discussion Topic: Utility of sperm analysis in medico-legal cases. (3 mks)

-  [Additional References for all activities](#)

 [Metabolism of spermatozoa](#)

 [Epididymis, Ejaculation and Semen](#)

 [Abstract: Fuel/Energy Sources of Spermatozoa](#)

 [Lecture 5 video](#)

 [Semen analysis](#)

 [Identification of body fluids](#)

 [Lecture 6 Video](#)

 [Lecture 7 handout](#)

 [Lecture 7 Video](#)

 [Lecture 8 handout](#)

 [Lecture 8 Video](#)

 [Lecture 9 video](#)
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MODULE II

-  [Primer for Lecture 14 handout](#)

 [Lecture 14 primer lecture video](#)

 [Lecture 14 Part I handout](#)

 [Lecture 14 part I video](#)

 [Lecture 14 part II video](#)

 [Lecture 14 part III video](#)

 [Lecture 14 Part III handout](#)

 [Lecture 14 handout last part](#)

 [Lecture 14 last part video](#)

 [Lecture 15 handout Part I](#)

 [Lecture 15 handout Part II](#)

 [Lecture 15 Part I video](#)
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 [Lecture 15 Part I video](#)

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 [Lecture 15 Part II video](#)

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 [Lecture 16 handout](#)

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 [Lecture 16 video](#)

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 [Lecture 17 handout](#)

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 [Lecture 17 video](#)

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 [Module II All Activity link](#)

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 [Lecture 18 handout](#)

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 [Lecture 18 video](#)

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 [For those who had problem submitting Module II All Activity link](#)

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 [Feedback lecture](#)

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[Topic 3](#)

[Topic 4](#)

[Topic 5](#)

[Topic 6](#)