

Quadrant II – Transcript and Related Materials

Programme: Bachelor of Science (Third Year)

Subject: Zoology

Paper Code: ZOC 108

Paper Title: Developmental Biology

Unit: I – Introduction

Module Name: Gametogenesis: Spermatogenesis

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Glossary of terms/words:

- **Diploid:** having a set of two chromosomes in the cell; e.g., humans are diploid but their gametes are haploid.
- **Gametes:** reproductive cells; haploid sperm and egg cells are located in the gonads.
- **Germ cells:** precursor cells to sperm and eggs; also called spermatogonia and oogonia in testes or ovaries, respectively; these cells are diploid in humans but undergo meiosis to produce haploid gametes.
- **Gonads:** reproductive organs; testes and ovaries; organs that produce gametes by meiosis.
- **Haploid:** when a cell has a single set of chromosomes; a contrast to diploid.
- **Meiosis:** cell division of a diploid cell into four haploid cells, which develop to produce gametes.
- **Mitosis:** the division of a cell nucleus in which the genome is copied and separated into two identical halves. It is normally followed by cell division.
- **Spermatid:** Any of the haploid cells formed by meiotic division of spermatocytes, and develops into a spermatozoon after maturational events.
- **Spermatocyte:** a male gametocyte, from which a spermatozoon develops.
- **Spermatogonium:** a cell produced at an early stage in the formation of spermatozoa, formed in the wall of a seminiferous tubule and giving rise by mitosis to spermatocytes.

- **Spermatozoon:** A mature male gamete or reproductive cell; sperm cell.
- **Spermiogenesis:** the final stage of spermatogenesis, which sees the maturation of spermatids into mature spermatozoa.