

Subject: Embryology

Theory: 30 hours / years

Practical: no hours/ years

Units: 2 units annually

Objective: To understand the embryological development of human being

Assessment: 30 marks –mid exam.

10 marks assessment as written exam.

60 marks –final exam

Text book approved: Medical Embryology T.W.SADLER

Week no.	Lecture title	Objective
1	Cell division	understanding of types of cell division 1-mitosis 2-meiosis and their phases . Similarity and difference between them
2	Chromosomal abnormalities-2 hours	This lecture explain causes of congenital anomaly which result from chromosomal abnormality either in their number or structure .Also show examples of congenital anomaly.
3	spermatogenesis	This lecture discuss the steps of sperm formation from primordial germ cells to mature spermatozoa, hormonal control and abnormality of spermatogenesis

Week no.	Lecture title	Objective
4	oogenesis	This lecture discuss formation of oocyte and it is hormonal control .The similarity and differences between oogenesis and spermatogenesis
5	Ovarian cycle	This lecture discuss the physiology of menstrual cycle both ovarian and uterine with their hormonal control .
6	Fertilization	This lecture explain the process of fertilization and what are the main results
7	Cleavage, blastocyst formation and implantation	This lecture gives idea about definition of cleavage ,blastocyst ,and appropriate time of implantation
8	Second Week of Development: Bilaminar Germ Disc	This lecture discuss the developmental events at second week day-by-day.
9	Third week of development: Trilaminar Germ Disc	This lecture shows the most important event (gastrulation) the process that establishes all three germ layers (ectoderm , mesoderm and endoderm) in the embryo.

10	Third to eighth weeks : the embryonic period part-1	The embryonic period, or period of organogenesis , development of three layers ,ectoderm ,mesoderm and endoderm ,and derivatives.(ectoderm derivatives)
11	Third to eighth weeks : the embryonic period part- 2	The embryonic period, or period of organogenesis , development of three layers , (mesoderm and endoderm derivatives).
12	Third Month to Birth: the Fetus and Placenta/Part 1	The period from beginning of ninth week to birth is known as the fetal period .It is characterized by maturation of tissues and organs and rapid growth of the body. those lectures discuss all events of fetal period.
13	Third Month to Birth: the Fetus and Placenta/Part-2	The period from beginning of ninth week to birth is known as the fetal period .It is characterized by maturation of tissues and organs and rapid growth of the body. those lectures discuss all events of fetal period.
14	Third Month to Birth: the Fetus and Placenta/Part-3	The period from beginning of ninth week to birth is known as the fetal period .It is characterized by maturation of tissues and organs and rapid growth of the body. those lectures discuss all events of fetal period.
15	Birth defects part -1	This lecture describe the birth defects ,types of abnormalities and causes of these abnormalities
16	Birth defects part -2	This lecture discuss the principles of teratology, and teratogens associated with human malformations

Week no.	Lecture title	Objective
17	Prenatal diagnosis	This lecture explain the advantage and disadvantage of several techniques designed to detect fetal malformation, also shows fetal therapy.
18	Respiratory system	This lecture discuss formation of lung buds ,larynx, trachea and maturation of lungs
19	Digestive system part-1	Discuss the divisions of gut tube,mesentries and foregut
20	Digestive system part- 2	Discuss the divisions of gut tube, development of mid gut and hindgut, also their abnormalities
21	Cardiovascular system part-1	This lecture shows establishment and patterning of the primary heart field. Formation and position of the heart tube
22	Cardiovascular system part-2	This lecture explain development of vascular and lymphatic systems
23	Urinary system	This lecture show the normal embryonic development of urinary system. Also congenital abnormalities of the system.
24	Development of the Limbs	This lecture discuss limb growth and development and congenital abnormalities related to limbs

Week no.	Lecture title	Objective
26	Genital system / gonads	This lecture show the normal embryonic development of gonads for both male and female embryo. Also congenital abnormalities of the system.
27	External genitalia	This lecture show the normal embryonic development of external genitalia for male and female . Also congenital abnormalities of the genitalia.
28	Ear	This lecture show the normal embryonic development of ear. Also congenital abnormalities of the ear.
29	Eye	This lecture show the normal embryonic development of eye. Also congenital abnormalities of the eye.
30	Integumentary system	This lecture show the normal embryonic development of skin and its associated structures, hair, nails, and glands. . Also congenital abnormalities related to this system.

