

Summary of the lectures – Embryology

General medicine 2nd year

Winter term

1. INTRODUCTION: Embryological terms. The ethical problems of Embryology. History of embryology. Blastogenesis. Fertilization and differentiation. Cleavage.
2. BLASTOGENESIS and GASTRULATION: Blastocyst, Implantation, Gastrulation. Origin of the first Germ layers.
3. NOTOGENESIS (development of notochord). The embryonic disc and its development. Mesoderm and development of somites. Mesenchyme.
4. FETAL MEMBRANES AND PLACENTA DEVELOPMENT: Amniotic sac expansion. Rotation of embryo. Amnion. Chorion. Placenta. Embryonic and fetal growth. Marks of the fetal maturity. Delivery.
5. NERVOUS SYSTEM DEVELOPMENT: Neural plate, groove and tube. Brain vesicles. Development of sense organs. The eye and inner ear.
6. CIRCULATORY SYSTEM DEVELOPMENT I.: First embryonic and extraembryonic circulation. Development of major vessels. Aortal arches. Veins.
7. CIRCULATORY SYSTEM. DEVELOPMENT II.: Heart loop. Septation of the atria and ventricles. Common cardial malformations.
8. DIGESTIVE SYSTEM DEVELOPMENT I.: Delimitation of the yolk sac. Archenteron. Stomodeum. Branchial region. Teeth. Derivatives of the branchial clefts, pouches and arches. Development of tongue.
9. DIGESTIVE and RESPIRATORY SYSTEM DEVELOPMENT: Rotation of Intestine. Liver, pancreas and spleen development. Respiratory passages and lung development.
10. URINARY SYSTEM DEVELOPMENT: Pronephros. Mesonephros. Metanephros. Urinary passages. Cloaca.
11. GENITAL SYSTEM DEVELOPMENT: Gonade. Wolffian and Müllerian ducts. External genital organs.
12. OROFACIAL REGION, SKULL and SKELETAL DEVELOPMENT: Nose. Olfactory organ. Upper and lower jaws development. Development of the secondary palate. Cleft malformations. Axial skeleton. Extremities. Skull. Muscles and skin development.