

Embryo final - full revision test bank
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1. Which phase of the ovarian cycle is also known as the follicular phase?

- A. Preovulatory phase
- B. Ovulation
- C. Postovulatory phase
- D. Menstrual phase

2. Which hormone does the hypothalamus secrete to control the ovarian cycle?

- A. Follicle-stimulating hormone (FSH)
- B. Luteinizing hormone (LH)
- C. Gonadotropin-releasing hormone (GnRH)
- D. Estrogen

3. What is the role of follicle-stimulating hormone (FSH) in the ovarian cycle?

- A. Induces ovulation
- B. Induces maturation of primary follicle into Graffian follicle
- C. Secretes progesterone
- D. Maintains the corpus luteum

4. Which of the following is not a phase of the ovarian cycle?

- A. Preovulatory phase
- B. Ovulation
- C. Luteal phase
- D. Menstrual phase

5. What hormone induces the final maturation of Graffian follicle and ovulation?

- A. Follicle-stimulating hormone (FSH)
- B. Luteinizing hormone (LH)
- C. Estrogen
- D. Progesterone

6. What happens to the ruptured follicle after ovulation?

- A. It becomes a primordial follicle
- B. It becomes an atretic follicle
- C. It converts into a corpus luteum
- D. It degenerates completely

7. What does the corpus luteum secrete? (mainly)

- A. Estrogen
- B. Progesterone
- C. Follicle-stimulating hormone (FSH)
- D. Luteinizing hormone (LH)

8. Which hormone is responsible for the proliferative phase of the uterine cycle?

- A. Estrogen
- B. Progesterone
- C. Follicle-stimulating hormone (FSH)
- D. Luteinizing hormone (LH)

9. During the preovulatory (follicular) phase, what inhibits the secretion of FSH by the pituitary gland?

- A. Luteinizing hormone (LH)
- B. Progesterone
- C. Estrogen
- D. Graffian follicle

10. What is not a role of luteinizing hormone (LH) in ovulation?
- A. Stimulates collagenous activity resulting in digestion of collagen fibers
 - B. Increases prostaglandin activity resulting in ovarian contraction
 - C. Stimulates the release of secondary oocyte
 - D. Inhibits the formation of the corpus luteum
11. What occurs as a result of the rupture of the mature Graafian follicle during ovulation?
- A. Release of estrogen
 - B. Release of FSH
 - C. Release of secondary oocyte
 - D. Formation of corpus luteum
12. During the post-ovulatory (luteal) phase, what is the role of the corpus luteum?
- A. Secrete estrogen
 - B. Secrete progesterone
 - C. Stimulate follicle development
 - D. Inhibit luteinizing hormone (LH)
13. What is the function of progesterone secreted by the corpus luteum?
- A. Stimulate the release of FSH
 - B. Stimulate the release of LH
 - C. Inhibit the secretory phase of the uterine cycle
 - D. Promote the secretory phase of the uterine cycle
14. What happens to the corpus luteum if fertilization does not occur?
- A. It degenerates into corpus albicans
 - B. It transforms into corpus luteum of pregnancy
 - C. It secretes human chorionic gonadotropin (hCG)
 - D. It maintains progesterone levels till labor
15. What hormone maintains the corpus luteum of pregnancy until the 4th month of pregnancy?
- A. Estrogen
 - B. Progesterone
 - C. Human chorionic gonadotropin (hCG)
 - D. Luteinizing hormone (LH)
16. What structure secretes progesterone after the 4th month of pregnancy?
- A. Corpus luteum
 - B. Placenta
 - C. Ovary
 - D. Fallopian tube
17. How many phases does the uterine (menstrual) cycle pass through?
- A. One
 - B. Two
 - C. Three
 - D. Four
18. During the secretory phase of the menstrual cycle, the endometrium is formed of which two layers?
- A. Stratum functional and Stratum basalis
 - B. Stratum functional and Stratum compactum
 - C. Stratum basalis and Stratum compactum
 - D. Stratum functional and Stratum spongiosum

19. Which layer of the endometrium is shed during menstruation?

- A. Stratum functional
- B. Stratum basalis
- C. Stratum compactum
- D. Stratum spongiosum

20. What causes the degeneration and expulsion of the superficial part of the endometrium during the menstrual phase?

- A. Increased progesterone level
- B. Decreased estrogen level
- C. Increased estrogen level
- D. Constriction of basal arteries

21. What happens to the endometrium at the end of the menstrual phase?

- A. It becomes thicker
- B. It becomes thinner
- C. It remains unchanged
- D. It regenerates the uterine glands

22. During which phase of the menstrual cycle does the endometrium gradually regenerate and thicken?

- A. Menstrual phase
- B. Proliferative phase
- C. Secretory phase
- D. Ovulatory phase

23. Which hormone is primarily responsible for the thickening of the endometrium during the proliferative phase?

- A. Estrogen
- B. Progesterone
- C. Follicle-stimulating hormone (FSH)
- D. Luteinizing hormone (LH)

24. During which phase of the menstrual cycle do the arteries of the endometrium become spiral and the mucous glands become long, tortuous, and distended with secretion?

- A. Menstrual phase
- B. Proliferative phase
- C. Secretory phase
- D. Ovulatory phase

25. What is the main source of progesterone hormone during the secretory phase of the menstrual cycle?

- A. Developing follicle
- B. Corpus luteum
- C. Hypothalamus
- D. Anterior pituitary

26. What happens to the corpus luteum if fertilization does not occur?

- A. It transforms into corpus luteum of pregnancy
- B. It continues to secrete progesterone
- C. It degenerates, leading to a drop in progesterone hormone
- D. It secretes estrogen instead of progesterone

27. What is the consequence of the drop in progesterone hormone if fertilization does not occur?(2 answers)

- A. Vasoconstriction of spiral arteries
- B. Vasodilation of spiral arteries
- C. Ischemia of the functional layer of the endometrium
- D. Formation of the decidua

28. What happens to the corpus luteum if fertilization occurs?

- A. It transforms into corpus luteum of pregnancy
- B. It degenerates completely
- C. It stops secreting progesterone
- D. It secretes estrogen instead of progesterone

29. What is the decidua in pregnancy?

- A. The outer layer of the embryo
- B. The inner layer of the embryo
- C. The endometrium of pregnancy
- D. The placenta

30. What are the three parts of the decidua?

- A. Decidua basalis, decidua capsularis, decidua parietalis
- B. Decidua externa, decidua interna, decidua media
- C. Decidua major, decidua minor, decidua magna
- D. Decidua superficialis, decidua profundus, decidua centralis

31. During which period of prenatal development does organogenesis occur?

- A. Germinal period
- B. Embryonic period
- C. Fetal period
- D. None of the above

32. At what stage of prenatal development do the three germ layers differentiate into organs and systems?

- A. Germinal period
- B. Embryonic period
- C. Fetal period
- D. None of the above

33. When does the fetal period begin?

- A. 1st 2 weeks
- B. 3-8 weeks
- C. From beginning of 9th week to birth
- D. None of the above

34. During which period is the fetus more susceptible to congenital anomalies?

- A. Germinal period
- B. Embryonic period
- C. Fetal period
- D. Both A and B

35. When does the appearance of external features of the fetus occur?

- A. Germinal period
- B. Embryonic period
- C. Fetal period
- D. None of the above

36. Where does fertilization occur?

- A. Uterus
- B. Cervix
- C. Ampulla of the uterine tube
- D. Ovary

37. What is the first step of the process of fertilization?

- A. Penetration of the zona pellucida
- B. Capacitation of the sperms
- C. Fusion of the sperm and ovum
- D. Formation of the zygote

38. Where does the capacitation of the sperms occur?

- A. Uterus
- B. Cervix
- C. Ampulla of the uterine tube
- D. Ovary

39. What is the function of acrosomal enzymes during fertilization?

- A. They remove the glycoprotein coat covering the sperm
- B. They bind to the zona pellucida
- C. They penetrate the corona radiata
- D. They facilitate only one sperm to penetrate zona

40. What is the function of the enzymes released from the cortical granules during the cortical reaction?

- A. Change the binding sites on the zona pellucida
- B. Prevent entry of more sperm
- C. Make the plasma membrane impermeable to other sperm
- D. All of the above

41. What chromosomal anomaly is represented by Klinefelter syndrome?

- A. $44 + XXY$
- B. $44 + XO$
- C. $45 + XY$
- D. $45 + XX$

42. What is the characteristic feature of Klinefelter syndrome?

- A. Rudimentary ovaries
- B. Rudimentary testis
- C. No sex maturation
- D. No chromosome anomaly

43. Which chromosomal anomaly is represented by Turner syndrome?

- A. $44 + XXY$
- B. $44 + XO$
- C. $45 + XY$
- D. $45 + XX$

44. What is the characteristic feature of Turner syndrome? 2 answers

- A. Rudimentary ovaries
- B. Rudimentary testis
- C. No sex maturation
- D. No chromosome anomaly

45. What chromosomal anomaly is represented by Down syndrome? 2 answers

- A. 44 + XXY
- B. 44 + XO
- C. Trisomy of chromosome 21
- D. 45 + XX

46. How many mechanisms are involved in the transport of the zygote from the lateral 1/3 of the uterine tube to the uterine cavity?

- A. One
- B. Two
- C. Three
- D. Four

47. What is the function of muscular peristalsis of the uterine tube during zygote transport?

- A. Secretion of fluid
- B. Nourishment of the zygote
- C. Movement of the cilia
- D. Contraction to propel (move) the zygote

48. Which structure is responsible for the motion of the cilia during zygote transport?

- A. Uterine tube
- B. Zygote
- C. Tubal mucosa
- D. Uterine cavity

49. What role does the secretion of fluid play in zygote transport?

- A. Providing nourishment to the zygote
- B. Acting as a vehicle for the zygote
- C. Stimulating muscular peristalsis
- D. None of the above
- E. All of the Above except C

50. What is formed as a result of cleavage of the zygote?

- A. Morula and blastocyst
- B. Embryo and trophoblast
- C. Zygote and embryoblast
- D. Trophoblast and embryoblast

51. What is the morula composed of?

- A. 4 blastomeres
- B. 8 blastomeres
- C. 16 blastomeres
- D. 32 blastomeres

52. What are the two cell groups present in the blastocyst?

- A. Trophoblast and embryoblast
- B. Morula and blastomere
- C. Endometrium and embryoblast
- D. Trophoblast and blastomere

53. What does the embryonic pole of the blastocyst refer to?

- A. The pole adjacent to the uterine endometrium
- B. The pole away from the uterine endometrium
- C. The pole adjacent to the trophoblast
- D. The pole away from the trophoblast

54. What term describes implantation occurring in the lower segment of the uterus?

- A. Tubal pregnancy
- B. Ovarian pregnancy
- C. Abdominal pregnancy
- D. Placenta previa

55. Which type of placenta previa occurs when the placenta partially covers the cervix?

- A. Placenta previa partialis
- B. Placenta previa marginalis
- C. Placenta previa centralis
- D. Placenta previa totalis

56. Which of the following is an abnormal site of implantation outside the uterus?

- A. Tubal pregnancy
- B. Placenta previa
- C. Ovarian pregnancy
- D. Placenta accreta

57. The placenta reaches the margin of the cervix but does not cover it. What is the term used for this condition?

- A. Partialis
- B. Marginalis
- C. Centralis
- D. Totalis

58. What term is used to describe the condition where the placenta overlies the internal os of the uterus?

- A. Placenta previa centralis
- B. Placenta previa partialis
- C. Placenta previa marginalis
- D. Placenta accreta

59. Which of the following is NOT an abnormal site of implantation outside the uterus?

- A. Abdominal pregnancy
- B. Ovarian pregnancy
- C. Tubal pregnancy
- D. Placenta

60. What is the term used for implantation occurring in the fallopian tube cavity?

- A. Tubal pregnancy
- B. Ovarian pregnancy
- C. Abdominal pregnancy
- D. Placenta previa

61. What changes occur in the embryoblast during the second week of pregnancy?

- A. Formation of the trilaminar germ disc
- B. Formation of the bilaminar germ disc
- C. Formation of the primary yolk sac
- D. Formation of the amniotic cavity

62. Which structure forms the roof of the amniotic cavity?

- A. Hypoblast
- B. Epiblast
- C. Syncytiotrophoblast
- D. Aminoblast

63. What is the floor of the amniotic cavity formed by?

- A. Hypoblast
- B. Epiblast
- C. Syncytiotrophoblast
- D. Cytotrophoblast

64. What changes occur in the trophoblast during the second week of pregnancy? 2 answers

- A. Formation of the syncytiotrophoblast
- B. Formation of the cytotrophoblast
- C. Formation of the bilaminar germ disc
- D. Formation of the trilaminar

65. What is the term used for the loose tissue between the cytotrophoblast externally and the yolk sac internally?

- A. Embryonic mesoderm
- B. Extraembryonic mesoderm
- C. Trophoblastic mesoderm
- D. Endodermal mesoderm

66. What structure forms as cavities appear and coalesce in the extra-embryonic mesoderm?

- A. Extra-embryonic coelom
- B. Amniotic cavity
- C. Chorionic cavity
- D. Trophoblastic cavity

67. How is the extraembryonic mesoderm divided by the extra-embryonic coelom?

- A. Into amniotic and chorionic cavities
- B. Into somatopleuric and splanchnopleuric mesoderm
- C. Into embryonic and extraembryonic mesoderm
- D. Into trophoblastic and endodermal mesoderm

68. Which part of the extraembryonic mesoderm lines the cytotrophoblast?

- A. Extraembryonic somatopleuric mesoderm
- B. Extraembryonic splanchnopleuric mesoderm
- C. Embryonic mesoderm
- D. Trophoblastic mesoderm

69. What is the future umbilical cord called?

- A. Extraembryonic coelom
- B. Connecting stalk
- C. Chorionic cavity
- D. Amniotic cavity

70. What gives rise to finger-like processes called chorionic villi?

- A. Amnion

- B. Chorion
- C. Yolk sac
- D. Allantois

71. What fills the spaces between the chorionic villi?

- A. Fetal blood
- B. Maternal blood
- C. Amniotic fluid
- D. Uterine secretions

72. What are the components of secondary chorionic villi?

- A. Syncytiotrophoblast only
- B. Syncytiotrophoblast and cytotrophoblast
- C. Syncytiotrophoblast, cytotrophoblast, and core of mesoderm
- D. Syncytiotrophoblast, cytotrophoblast, and blood capillaries

73. Which part of the chorion enlarges to form the fetal part of the placenta?

- A. Chorion frondosum
- B. Chorion laeve
- C. Chorion capsularis
- D. Chorion basalis

74. What happens to the chorionic villi adjacent to decidua capsularis? 2 answers

- A. They enlarge to form the fetal part of the placenta
- B. They form the chorion frondosum
- C. They form the chorion laeve
- D. They atrophy

75. What is gastrulation?

- A. The formation of the bilaminar embryonic disc
- B. The transformation of the trilaminar germ disc to form a bilaminar embryonic disc
- C. The transformation of the bilaminar embryonic disc to form a trilaminar germ disc
- D. The formation of the prochordal plate

76. During invagination, what happens to the cells of the epiblast?

- A. They form the endoderm
- B. They form the ectoderm
- C. They migrate between the ectoderm and endoderm to form the mesoderm
- D. All of the above

77. Where does invagination occur?

- A. Prochordal plate
- B. Cloacal membrane
- C. Primitive streak
- D. Notochord

78. What is the significance of the notochord?

- A. It acts as a temporary axial skeleton
- B. It forms the endoderm
- C. It forms the ectoderm
- D. It forms the mesoderm

79. Which germ layer gives rise to the epidermis of the skin and the nervous system?

- A. Endoderm

- B. Ectoderm
- C. Mesoderm
- D. Neural crest

80. What structures are derived from the neural tube?

- A. Liver and pancreas
- B. Brain & spinal nerves
- C. Ganglia
- D. Middle ear and Eustachian tube

81. Which part of the body is derived from the ectoderm?

- A. Most of the gastrointestinal tract
- B. External auditory meatus
- C. Parenchyma of the palatine tonsils
- D. Parenchyma of the liver

82. Which germ layer gives rise to the parenchyma of the palatine tonsils, thyroid, liver, and pancreas?

- A. Endoderm
- B. Ectoderm
- C. Mesoderm
- D. Neural crest

83. What structures are derived from the neural crest?

- A. Most of the urinary bladder and urethra
- B. Nasal epithelium
- C. Cranial nerves
- D. Septum between ascending aorta and pulmonary trunk

84. Which part of the mesoderm gives rise to the pericardial, pleural, and peritoneal cavities?

- A. Intermediate mesoderm
- B. Lateral plate mesoderm
- C. Somites
- D. Somitomeres

85. What structures are derived from somitomeres?

- A. Skeletal muscles of the face, jaws, and throat
- B. Dermis of the skin
- C. Vertebral column
- D. Striated muscles

86. What does the dorso-lateral part of the mesoderm divide into?

- A. Dermatome and myotome
- B. Sclerotome and dermatome
- C. Myotome and sclerotome
- D. Dermatome and sclerotome

87. Which part of the mesoderm forms the vertebral column?

- A. Somites
- B. Somitomeres
- C. Somatic mesoderm
- D. Splanchnic mesoderm
-

88. What type of muscles are derived from the somatic mesoderm?

- A. Smooth muscles
- B. Striated muscles

- C. Cardiac muscles
- D. Visceral layer of serous

89. What is the proximal part of the allantois responsible for?

- A. Formation of the apex of the heart
- B. Formation of the apex of the brain
- C. Formation of the apex of the urinary bladder
- D. Formation of the apex of the liver

90. What is the distal part of the allantois called, and what does it connect to?

- A. Ureter, connects to the kidneys
- B. Urachus, connects to the yolk sac
- C. Urethra, connects to the urinary bladder
- D. Umbilicus, connects to the placenta

91. What happens to the extra-embryonic part of the allantois inside the umbilical cord? 2 answers

- A. It forms the apex of the urinary bladder
- B. It becomes obliterated
- C. It connects to the yolk sac
- D. It forms the umbilical vessels

92. What type of vessels do the allantoic vessels form?

- A. Umbilical vessels
- B. Pulmonary vessels
- C. Coronary vessels
- D. Hepatic vessels

93. What leads to the formation of head and tail folds during folding of the embryonic disc?

- A. Lateral folding
- B. Cephalo-caudal folding
- C. Umbilical folding
- D. Axial folding

94. What leads to the formation of lateral folds during folding of the embryonic disc?

- A. Cephalo-caudal folding
- B. Head and tail folds
- C. Lateral folding
- D. Umbilical folding

95. What changes occur in the shape of the embryonic disc as a result of folding?

- A. It becomes flattened
- B. It becomes spherical
- C. It becomes cylindrical
- D. It becomes triangular

96. What surrounds the embryo almost completely after folding?

- A. Amniotic cavity
- B. Chorionic cavity
- C. Yolk sac cavity
- D. Allantoic cavity
-

97. What happens to a large part of the yolk sac cavity as a result of folding?

- A. It remains outside the body of the embryo
- B. It becomes obliterated

- C. It forms the primitive gut lined by endoderm

- D. It forms the amniotic cavity

98. What are the parts of the gut formed as a result of folding?

- A. Foregut, midgut, hindgut

- B. Proctodeum, stomodeum

- C. Ectoderm, mesoderm, endoderm

- D. Buccopharyngeal membrane, septum transversum

99. What does the buccopharyngeal membrane become after folding?

- A. Cephalic

- B. Midgut

- C. Hindgut

- D. Stomatodeum

100. What is the depression between the forebrain swelling and pericardial swelling called?

- A. Proctodeum

- B. Stomatodeum

- C. Foregut

- D. Hindgut