



Q1. Select the correct answer for each of the following: (100 Mark)

1. One of the following growth factors is secreted from the oocyte:

- a. Activin b. Inhibin c. AMH d. GDF9

2. An example of gonadotrophin-independent follicle growth stage is:

- a. Secondary b. Primordial c. Antral d. Preantral

3. A Follicle comprised of an oocyte surrounded by numerous layers of granulosa cells is:

- a. Primordial b. Primary d. Secondary c. Atretic

4. Anestrus is not related to one of the listed genital disorders:

- a. In active ovaries b. Luteal cystic ovary c. Persistent corpus luteum d. Follicular cystic ovary

5. Embryo Transfer involves the collection of:

- a. Fetuses b. Oocytes c. Blastocytes d. Morula

6. Oophoritis is the inflammation of:

- a. Corpus Luteum b. Oocyte c. Ovary d. Oviduct

7. Peri-glandular fibrosis and lymphoid nodules in the uterine tissue are a consequence of:

- a. Mild endometritis b. Acute endometritis c. Chronic endometritis d. Peri-metritis

8. The effective treatment of luteal cystic ovary is the administration of:

- a. FSH b. PGF2 α c. Estrogen d. hCG

9. Hypoplastic ovaries can be treated with

- a. PMSG b. FSH c. GnRH d. None

10. Which of the following disorders is related to early embryonic death:

- a. Delay ovulation b. Cystic ovary c. Ovariobursal adhesions d. Endometritis

11. In which female animal the ovulation is categorized as induced:

- a. Rats b. She-camel c. Sow d. Mare

12. The most effective antibiotic used for the intrauterine treatment is:

- a. Sulfonamide b. Oxytetracycline c. Cephalosporine d. Gentamycin

13. The development of primordial follicles is regulated by

- a. FSH b. PMSG c. GnRH d. Growth factors

14. The most accurate diagnostic method of endometritis is:

- a. Uterine cytobrush b. Uterine biopsy c. Rectal palpation d. Vaginoscopy

15. Massive infiltration of the plasma cells in the uterine tissue occurs in:

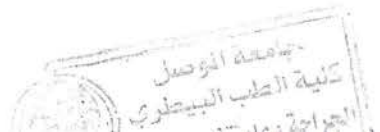
- a. Mild endometritis b. Acute endometritis c. Chronic endometritis d. Pyometra



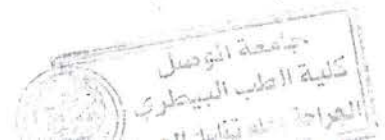
16. The predictive consequence of breeding pubertal females might be:
 a. Vaginitis b. Endometritis c. Dystocia d. Repeat breeding
17. The process of luteinization occurs under the influence of:
 a. Progesterone surge b. FSH surge c. LH surge d. GnRH surge
18. Male camels secrete a black pigment during rut by:
 a. Pineal gland b. Pole gland c. Pituitary gland d. Sweet glands
19. Identify the method that could not be applied for semen collection from stallions:
 a. Artificial vagina b. Condom c. Direct method d. Rectal massage
20. In cows, during early pregnancy the source of interferon-tau is the:
 a. Ovary b. Bloodstream c. Trophoblast d. Uterus
21. In mares, to produce luteolysis, PGF_{2α} transports to the ovary via:
 a. Countercurrent exchange b. PGF_{2α} is locally produces
 c. Systemic circulation d. Oviduct.
22. In cows, the first estrus after calving might be short and silent results in the low level of:
 a. Estrogen b. Oxytocin c. Progesterone d. FSH
23. Specify the method that could not be applied for semen collection in bull:
 a. Electroejaculation b. Condom c. Direct Method d. Rectal massage
24. The maneuvers used to correct the ventral position is called:
 a. Extension b. Traction c. Retropulsion d. Rotation
25. Which of the following signs is not related with estrum cow?
 a. Bellowing b. Increased Activity c. Paleness of vaginal mucosa d. Swelling of a vulva
26. The specific sign of successful fertilization of the cultured oocytes is the presence of:
 a. Polar body b. Pronuclei c. Sperm heads d. Sperms tails
27. During the in vitro incubation of oocytes, it is essential to provide Co₂ (5%) to:
 a. Enhance oocyte maturation b. Enhance embryonic development
 c. Enhance fertilization rate d. Control pH
28. IVF culture is started with:
 a. Zygote b. Matured oocytes c. Blastocyst d. Morula
29. The specific sign of in vitro oocytes maturation is the presence of:
 a. Sperm tail b. Pronuclei c. Sperm heads d. Polar body
30. For embryo transfer, embryos are collected from the inseminated donor cow after:
 a. day 7 b. day 15 c. day 4 d. day 10
31. Which diagnostic method is used to assess the depth of the vagina in suspected freemartins?
 a. Vaginal scope b. Ultrasonography c. Fincher's test d. Rectal examination
32. The obstetrical maneuvers used to correct the head flexion is called :
 a. Extension b. Traction c. Version d. Rotation
33. Which of the following is true regarding the clinical signs of pyometra?
 a. Systemic illness b. Repeat breeding c. Anestrus d. Short estrus



34. Which condition is specific for the inflammation of the outer layer of the uterus?
 a. Metritis b. Endometritis c. Perimetritis d. Cervicitis
35. Which of the following disorders is related to repeated irregular estrus in cows:
 a. Delay ovulation b. Follicular cystic ovary c. Hydrosalpinx d. Endometritis
36. Which condition is accompanied by the persistence of the corpus luteum, in cows?
 a. Endometritis b. Pyometra c. Salpingitis d. Cervicitis
37. The sexual activity in male camels is called:
 a. Excitement b. Estrus c. Flehmen d. Rut
38. The reproductive disorder that does not affect ovarian function is:
 a. Ovarian hypoplasia b. Freemartin c. Hermaphroditism d. White heifer disease
39. The obstetrical maneuvers used to correct the horizontal presentation is called:
 a. Extension b. Traction c. Version d. Rotation
40. Which condition is characterized by the complete absence of the ovaries?
 a. Ovarian hypoplasia b. Freemartin c. Hermaphroditism d. Segmental aplasia
41. In the case of white heifer disease, which of the following statements is true?
 a. In active ovaries b. Tubular anomalies c. Ovarian aplasia d. Cystic ovaries
42. Male camels secrete a black pigment, which attracts females because it is considered:
 a. Pheromones b. Enzyme c. Growth factors d. Hormones
43. Which of the following conditions is NOT typically a cause of pyosalpinx?
 a. Metritis b. Pyometra c. Luteal cyst d. Estrogen treatment
44. Camel's shed the peno-preputial adhesions at:
 a. Aging b. Maturity c. Birth d. Puberty
45. In camels, the ranges of estrus cycle vary from 16-30 days due to the:
 a. Spontaneous ovulation b. Anovulation c. Delay ovulation d. Induced ovulation
46. Which hormone is responsible for maintaining diestrus?
 a. Estrogen b. Progesterone c. LH d. FSH
47. One of these hormones is not used for the treatment of inactive ovaries in cows:
 a. LH b. GnRH c. PMSG d. FSH
48. The inflammation of the entire uterine wall is called:
 a. Endometritis b. Metritis c. Peri-metritis d. Chronic endometritis
49. Anestrus is unrelated to one of the listed genital disorders in cows:
 a. Inactive ovaries b. Luteal cystic ovary c. Persistent corpus luteum d. Follicular cystic ovary
50. The repeat breeder cow is characterized by:
 a. Regular estrus b. Silent estrus c. Anestrus d. Irregular estrus
51. In pregnant females, the production of PGF₂ α is blocked by:
 a. Oxytocin b. The embryo c. Estrogen d. Corpus luteum
52. In male's camel, one of these accessory genital glands is not present:
 a. Ampulla b. Prostate gland c. Seminal vesicles d. Bulbourethral glands



53. The elevation in estrogen levels during the late follicular phase leads to:
 a. Luteolysis b. Follicle growth c. Increase LH surge d. Follicle regression
54. The most obvious sign of estrus in the buffalo cow is:
 a. Homosexual behavior b. Vaginal mucous c. Standing to be mounted d. Frequent urination
55. Which organism is a known specific causative agent of endometritis?
 a. E. coli b. Brucella abortus c. Streptococcus spp. d. Fusobacterium necrophorum
56. A true hermaphroditism in female animals is characterized by?
 a. Ovarian aplasia b. Ovotestis c. Ovarian cysts d. Imperforate hymen
57. Identify the method that is not be applied for semen collection in dogs
 a. Electroejaculation b. Condom c. Artificial vagina d. Digital manipulation
58. The mitochondrial sheaths in the sperm cell located in the:
 a. Main piece b. Midpiece c. Proximal centriole d. Sperm's head
59. The source of the sticky, gelatinous material in the stallion's semen is the:
 a. bulbourethral gland b. Seminal vesicle c. Sertoli cells d. Ampulla.
60. One of the following is not an ovarian congenital anomaly:
 a. Ovotestis b. Ovarian cyst c. Ovarian Hypoplasia d. Ovarian Agenesis
61. Genetically not identical twins are:
 a. Acquired anomaly b. Congenital anomaly c. Dizygotic d. Monozygotic
62. Which one is not related to the classification of gestation periods?
 a. The ovum b. The placenta c. The fetus d. The embryo
63. The intrauterine migration of equine embryos is very important in several ways, except of:
 a. Prevents PGF_{2α} production b. Inhibits oxytocin receptors
 c. Nutrients harvesting d. Enhances placentation
64. The fetal membrane that prevents the penetration of compact materials and infection agents is:
 a. False amnion b. Chorion c. Allantoic d. Amnion
65. Which one of these hormones does the placenta not secretes:
 a. hCG b. Progesterone c. PGF_{2α} d. Estrogen
66. Which one of the following is not related to the role of yolk sac:
 a. Provide nutrients b. Gaseous exchanges c. Elimination of wastes d. Synthesis of hormones
67. The internal organs of the reproductive system are originating from:
 a. Endoderm b. Ectoderm c. Mesoderm d. Trophoblast
68. If a sperm with X chromosome fertilized the ova, the duct that develops is the:
 a. Wolffian b. Müllerian c. Both d. None
69. Towards the end of pregnancy, a smooth discoid rubber-like masses float free in allantoic fluids called:
 a. White streaks b. Cotyledons c. Caruncles d. Hippomenes
70. The equation used to determine the fetal lamb age is
 a. $X = 2.5 (CRL+21)$ b. $X = 2.5 (CRL+17)$ c. $X = 2.1 (CRL+21)$ d. $X = 2.1 (CRL+17)$



71. A fetid red-brown watery vaginal discharge can be seen in the case of:
 a. Endometritis b. Metritis c. Pyometra d. Puerperal septic metritis
72. Foley catheter is specifically used for:
 a. Urine evacuation b. Embryo transferring c. Embryo flushing d. Uterine washing
73. One of the following growth factors is secreted from the oocyte:
 a. Activin b. Inhibin c. AMH d. GDF9
74. An example of gonadotrophin-independent follicle growth stage is:
 a. Secondary b. Primordial c. Antral d. Preantral
75. In the granulosa cells, the testosterone is aromatized to oestradiol-17 β under the influence of
 a. LH b. Progesterone c. PGF2 α d. FSH
76. In camels, the ranges of estrus cycle vary from 16-30 days due to the:
 a. Spontaneous ovulation b. Anovulation c. Delay ovulation d. Induced ovulation
77. At sonography, the cavity of the active corpus luteum appears as
 a. Hypo-echogenic tissue b. Non-Echogenic c. Hyper-echogenic tissue d. Not detectable
78. Recognition of irregular- hyperechogenic amniotic membrane and placentomes locating above the fetus, might indicates to
 a. Oversized Fetus b. Dead Fetus c. Macerated fetus d. Twinning
79. The maneuvers used to correct the shoulder flexion is called:
 a. Extension b. Traction c. Retropulsion d. Rotation
80. Camel's shed the peno-preputial adhesions at:
 a. Aging b. Maturity c. Birth d. Puberty
81. At the bone interface, the ultrasound waves are?
 a. Transmitted across the interface b. Reflected c. Diffused d. Deviated
82. For estrus synchronization in cows, CIDR is allocated in the:
 a. Vulva b. Uterine horn c. Cervix d. Vagina
83. Immediately after ovulation, the ruptured follicle is called:
 a. Corpus luteum b. Corpus hemorrhagicum c. Corpus Albicans d. Atretic follicle
84. The ultrasound-guided needle used for follicle pickup reaches the ovary through the:
 a. Cervix b. Uterus c. Sub-lumber region d. Vagina
85. PGF2 α is used for estrus synchronization as it causes:
 a. Follicular growth b. luteolysis c. Ovulation d. Suppress ovarian activity
86. Semen sample might be mixed with urine when semen is collected by:
 a. Electro-ejaculator b. Trans-rectal massage c. Surgical method d. Condom
87. Before sperm counting with a hemocytometer, sperms should be:
 a. Stained with eosin b. Dried c. Killed d. Examined directly
88. Sperm with a double tail might occur during:
 a. Sperm transport through the epididymis b. Spermatogenesis c. Overheating d. Shaking

