

**KARNATAKA VETERINARY, ANIMAL AND FISHERIES SCIENCES
UNIVERSITY, BIDAR**

Post Graduate Entrance Examinations : 2021-22

PhD in Veterinary Gynaecology & Obstetrics

Subject Code: P05

HALL TICKET NO. :

Date: 10th May 2022

Max Marks : 100

Duration : 2 Hrs.

Choose the correct answer from the four options given under each question and fill the relevant circle with black ball point pen in the OMR Sheet.

Note: 1) Do not use pencil for marking on the OMR Sheet.

2) Marking on the OMR sheet for more than one option for a question will be rendered invalid.

1. Notable difference in reproduction of animals from that of women.
 - a. Seasonality
 - b. Gestation period
 - c. Menopause
 - d. Labour.
2. Who authored the text book “Veterinary Reproduction and Obstetrics ”
 - a. David E. Noakes, Timothy J. Parkinson and Gary C.W. England (2019)
 - b. Hafez and Hafez
 - c. Stephen J. Roberts
 - d. John Edward Mendis
3. In which of the following condition caruncles are found irregular and cauliflower like.
 - a. Fetal ascites
 - b. Fetal anasarca
 - c. Hydramnion
 - d. Hydrallantois
4. Swedish scientist cautioned the hazards likely to occur by use of substandard bulls
 - a. Lagerlof
 - b. Settergren
 - c. Blom
 - d. Einarson

5. One of the important complications of infusing irritants like Lugol's solution intra uterine
 - a. Endometritis
 - b. Metritis
 - c. Mucometra
 - d. Pyometra
6. In calves, at what age the earliest sign of follicular growth is detected by ultrascan
 - a. 2 weeks
 - b. 20 weeks
 - c. 40 weeks
 - d. 60 weeks
7. The commonest form of infertility in cows under Indian conditions
 - a. Endometritis
 - b. Cystic ovaries
 - c. Anestrus
 - d. Repeat breeding
8. Simple, cost effective and more practical means of managing RFM cases in bovines.
 - a. Manual removal
 - b. Non manual and no local treatment
 - c. Non manual and intensive local treatment
 - d. Manual removal and intensive local treatment
9. Who questioned the validity of classification of abnormal sperm into Primary and Secondary?
 - a. A R Rao, 1971
 - b. E. Blom, 1954
 - c. Nil's Lagerlof, 1934
 - d. I. Settergren, 1989
10. The first cloned mammal "Dolly" was produced by the following technology.
 - a. Embryonic cell nuclear transfer
 - b. Somatic cell nuclear transfer
 - c. Intra cytoplasmic sperm transfer
 - d. Gamete intra fallopian transfer
11. Threshold numbers of neutrophils in endometrial cytological smears impair the fertility
 - a. > 5%
 - b. > 10%
 - c. > 15%
 - d. > 20%
12. In sheep ovulation is not preceded by behavioural estrus
 - a. End of breeding season
 - b. Peak breeding season
 - c. Onset of breeding season
 - d. Non breeding season

13. Which of the following condition is poorly studied?
- Prolonged estrus
 - Attainment of sexual maturity
 - Onset of Puberty
 - Repeat breeding
14. The condition has a strong hereditary predisposition
- Prepartum vaginal prolapse
 - Uterine eversion
 - Schistosomus reflex
 - Bulldog fetus
15. The valid classification of abnormal sperm
- Primary, secondary and tertiary
 - Primary and secondary
 - Major and minor
 - Compensable and uncompensable
16. Up on clinical investigation the uterine horns of a parous cow are felt thin and quite narrow. What is your diagnosis?
- Long standing ovarian inactivity
 - Sclerosed endometritis
 - Persisting CL
 - Recently calved
17. Sensitivity of corpus luteum to this hormone increases with its age
- Oxytocin
 - Estradiol
 - eCG
 - PGF₂ α
18. Why repeated administration of gonadotropins not advisable?
- Expensive and No benefit
 - Higher centers become refractory
 - Production of anti hormone antibodies
 - Involves economic losses
19. It is easy to manage this condition
- Vaginal prolapse
 - Uterine eversion
 - Prolapse of rectum
 - Prolapse of bladder

20. The Scientist who was awarded Nobel Prize in medicine for the development of in vitro fertilization.
- a. Ian Gordon
 - b. Ian Wilmut
 - c. Robert Edwards
 - d. Indira Hinduja
21. An example for non hereditary specific sperm abnormality
- a. Pear shaped head
 - b. Diadem defect
 - c. Knobbed sperm defect
 - d. Decapitated sperm defect
22. It diagnoses subclinical endometritis effectively
- a. White side test
 - b. Metricheck device
 - c. Rectal palpation
 - d. Endometrial cytology
23. Origin of post ovulatory vaginal discharge of blood (hemorrhage)
- a. Caruncular area
 - b. Non caruncular area
 - c. Entire endometrial area
 - d. Sub mucosal areas
24. One of the factors limiting the success rate of oestrus synchronization protocols under Indian conditions, in particular
- a. Zebu inheritance
 - b. Exotic inheritance
 - c. High plane of nutrition
 - d. Stressful conditions
25. Common form of dystocia in canine species
- a. Uterine inertia
 - b. Postural
 - c. Positional
 - d. Longer gestation
26. Which governs the frequency of PPD?
- a. Pear heads
 - b. Testicular pathology
 - c. Epididymal dysfunction
 - d. Dead sperm

27. Scientist that coined the term “Theriogenology”
- Sloss
 - Benesch
 - Campbel
 - Bartlett
28. Gestation period in a bitch bearing single fetus
- Normal
 - Longer
 - Shorter
 - (b) and (c)
29. Which one of the Oestrus synchronizing protocols is the best for true anoestrus condition?
- Estrogen based
 - Progesterone based
 - PGF₂ α based
 - GnRH based
30. Stain used for studying sperm head abnormalities
- Eosin negrosine stain
 - Eosin
 - Giemsa stain
 - Carbol fuchsine - eosin
31. Proinflammatory molecule(s)
- Arachidonic acid
 - LTB₄
 - PGF₂ α
 - Eicosanoid acids
32. How do you ascertaining sperm tail abnormalities?
- Eosin negrosine stain
 - Williams stain
 - Giemsa stain
 - Buffered formal saline
33. Administering progesterone hormone is useless
- Prepartum vaginal prolapse
 - Cystic ovaries
 - Repeat breeding
 - Luteal deficiency
34. Heaviest obstetrical instrument
- Thygesen’s fetotome
 - Obstetrical chain
 - Calving rope
 - Cammerer’s torsion fork

35. One of the implications of luteal cyst
- Adrenal virilism
 - Nymphomania
 - Repeat breeding
 - Atrophy of tubular tract
36. Frequency of pseudopregnancy in canines
- 2-5%
 - 25%
 - 50%
 - Every non pregnant
37. Longest and shortest stage of cycle of seminiferous epithelium, respectively
- 1 and 5
 - 2 and 6
 - 3 and 8
 - 4 and 1
38. What is your opinion on the apprehensions for use of Oxytocin to induce milk letdown in milch animals?
- Incorrect
 - Correct
 - No idea
 - Partly correct
39. In sows the rate of stillbirths is acceptable
- $\leq 5\%$
 - 5 - 10%
 - $\leq 25\%$
 - $\leq 35\%$
40. The stage of embryo when transition from maternal to zygotic control of development (MZT) in cow embryos occur.
- Pronuclear stage
 - 2-Cell stage
 - 8- 16-cell stage
 - Blastocyst stage
41. Who proved the fertilizing capacity of sperm?
- Spallanzani
 - Dumas
 - Hoek
 - Lagerloff

42. Gestation period of crossbred cattle
- = Zebu
 - = Exotic
 - < Zebu
 - > Zebu
43. The term defines the reduction in the population of spermatogonia
- Testicular atrophy
 - Testicular Degeneration
 - Testicular Hypoplasia
 - Testicular Aplasia
44. Who authored the text book 'Diagnostic and Therapeutic Techniques in Animal Reproduction'?
- Benesch, 1923
 - Morrow, 1980
 - Lagerloff, 1934
 - Zemjanis, 1970
45. Simple and cost effective, but confirmative method of pregnancy diagnosis in bovines
- Rectal examination
 - Ultra scan
 - Punnyakoti
 - Non return
46. Treatment has no vale
- Hydrometra
 - Uterine atrophy
 - Virilism
 - COD
47. The term that denotes the product of conception
- Conception
 - Conceptus
 - Embryo
 - Fetus
48. Spices (domestic) that produces the highest sperm concentration
- Avian
 - Bovine
 - Ovine
 - Wild
49. Average volume of human ejaculate
- 10ml
 - 0.5 ml
 - 5ml
 - 2ml

50. Who performed successfully the first embryo transfer in mammals (Rabbits)?
- Walter, 1890
 - Willadsen, 1890
 - Sir Walter Heap, 1890
 - Wilmut, 1890
51. What does the symbol 't' (tau) in bIFN-t denote?
- Immune molecule
 - Interferon
 - Trophoblast
 - Lymphoblast
52. The optimum mean CCI for an organized farm
- 45 days
 - 65 days
 - 85 days
 - 105 days
53. Which animal shows Cervical Star of pregnancy?
- Camel
 - Cow
 - Mare
 - Mithun
54. The concentration of eosin in combined vital stain solution when mixed in 1:3 (E:N) proportion
- 1%
 - 1.25%
 - 1.67%
 - 0.25%
55. The possible complication likely be encountered when an advanced case of Hydrallantois is aborted
- Maternal mortality
 - Hypovolaemic shock
 - Metritis
 - Repeat breeding
56. Ovarian bursa is well developed in one of the following domestic animals
- Camel
 - Mare
 - Elephant
 - Bitch

57. Find out the possible number of inseminations performed in a commercial cattle farm by taking CCI as 105 days
- 2
 - 4
 - 3
 - 6
58. Weight of fetal membranes in relation to that of calf born
- 8-10%
 - 0.8-1%
 - 5%
 - 0.5%
59. One of the most interesting features of male reproduction
- Spermatogonial population maintained
 - Mates females in estrus
 - Produce billions of sperm
 - Epididymis processes sperm
60. The term describes insertion of a gene in to a plant or animal for production of desired protein (therapeutic proteins, monoclonal antibodies etc).
- Bioengineering
 - Bio Pharming
 - Cloning technology
 - IVF
- 61 What is the role of 'Coolidge Effect'?
- Enhances sexual output
 - Depletes reserves
 - Exhausts bull
 - Enhances productive life
62. The key determinant for life time performance of cow
- Age at puberty
 - Fertility
 - Cycle length
 - Gestation period
63. Bovine embryo assumes 'L' shape at this stage of pregnancy
- 12-18 days of gestation
 - 70-80 days of gestation
 - 35-40 days of gestation
 - 100-120 days of gestation

64. The scientist who is an authority on gonadal hypoplasia
- Settergreen
 - Bane
 - Lagerloff
 - Rao A R
65. The term defines persistent erection in the absence of sexual stimulation
- Paraphimosis
 - Phimosis
 - Erectile state
 - Priapism
66. Why is sexual rest suggested to a long standing repeater cow?
- High titers of anti sperm antibodies
 - Presence of infection
 - Unfavourable uterine environment
 - Presence of inflammation
67. What is the stage of cycle if Vaginal Exfoliated Cytological smears reveal cells displaying well defined angular borders and faded nucleus?
- Proestrus
 - Estrus
 - Metestrus
 - Diestrus
68. Simple and cost effective approach to detect estrus in bovines
- Vaginal cytology
 - Ultra scan
 - Increased frequency of observations
 - Teasing by teaser bull
69. Non luteolytic function of $\text{PGF}_{2\alpha}$
- Proinflammatory
 - Oxytocic
 - Vaso constriction
 - Luteal death
70. The cells that behave like stem cells
- Inner Cell Mass
 - Trophoblast cells
 - Fluid present in blastocyst
 - Outer cell layer

71. In male dogs preputial lavage / swabbing is considered for drawing a confirmative diagnosis on one of the following.
- Balanoposthitis
 - Sertoli cell tumor
 - Leydig cell tumor
 - Preputial papilloma
72. Find out the correct statement which is relevant to sperm population in female tract
- Superior sperm population increasing with every increase in the distance from the site of insemination
 - Inferior sperm population increasing with every increase in the distance from the site of insemination
 - Maximum numbers of fertile sperm found in cervix
 - Maximum numbers of fertile sperm found at site of deposition
73. How do you interpret the presence of short and broad heads (sperm) in semen samples?
- Physiological variants
 - Major sperm abnormality
 - Degenerative change
 - Seriously impair fertility
74. The art of Pump Handle technique
- Reposition of everted uterus
 - Direction of traction
 - Epidural anaesthesia
 - AI
75. What is your opinion for use of epidurin in bovine emergencies?
- Drug of choice
 - Useful
 - Highly useful
 - Limited value
76. Metabolic fuel for ruminant fetus.
- Glucose
 - Sucrose
 - Lactose
 - Fructose
77. Which of the following condition, though rare in occurrence is associated to fetal maceration
- Mummification
 - Fetal death
 - Dystocia
 - Abortion

78. Optimum osmolarity of media for oocyte maturation (mosmols)
- a. 270 - 285
 - b. 170 - 185
 - c. 370 - 385
 - d. 70 - 85
79. The interval from thawing to insemination.
- a. 10minutes
 - b. Immediately
 - c. 15 minutes
 - d. As short as possible
80. The relationship between Sertoli cell population and sperm producing capacity
- a. Inversely proportional
 - b. Highly variable
 - c. Unrelated
 - d. Directly proportional
81. Choose an appropriate answer which relates to the increase in cellular mass of Corpus luteum over a period of 10-12 days following ovulation.
- a. Twofold increase
 - b. Fivefold increase
 - c. Tenfold increase
 - d. Twentyfold increase
82. In ruminants just prior to the time of luteal regression, the population of endometrial oxytocin receptors are elevated by how many fold.
- a. 5 fold
 - b. 50 fold
 - c. 500 fold
 - d. 5000 fold
83. The phase of follicular dynamics at which high FSH, Low LH, No Inhibin and No estradiol concentrations are observed
- a. Recruitment
 - b. Selection
 - c. Dominance
 - d. Atresia
84. Age of puberty is the earliest in the following condition in gilt.
- a. 2 to 3 gilts housed together
 - b. 15 - 20 gilts housed together
 - c. 15-20 gilts housed together and exposed to a boar
 - d. Individual rearing system

85. By default unfertilized eggs are blocked at utero-tubal junction
- Bitch and queen
 - Ewe and doe
 - Cow
 - Mare
86. Characteristic feature of Cumulus oophorus
- Granular appearance
 - Compact mass
 - Solid ball
 - Gel like
87. One of the most important events of MRP in mare
- Secretes $\text{PGF}_{2\alpha}$
 - Trans uterine migration of embryo
 - Secrets PGE
 - Secrete E_2
88. Who authored the text book “Veterinary Reproduction and Obstetrics ”
- David E. Noakes, Timothy J. Parkinson and Gary C.W. England (2019)
 - Hafez and Hafez
 - Stephen J. Roberts
 - John Edward Mendis
89. Which of the following condition is produced by a single autosomal recessive gene with incomplete penetration in cow?
- Ovarian Hypoplasia
 - Freemartin
 - Cystic ovaries
 - Hermaphrodite
90. Number of corpora present in the endometrium of Sow and Mare
- 10 - 40
 - 40 - 80
 - 80 -120
 - 0
91. Who is the first person to describe the theory of reproduction?
- Spallanzani
 - Dumas
 - Settergren
 - Aristotle

92. Which of the following condition develops from the remnants of the mesonephric ducts.
- a. Hermaphroditism
 - b. WHD
 - c. Cystic dilation of ducts
 - d. Parovarian cysts
93. Who coined the term “Maternal Recognition of Pregnancy”
- a. Short, 1969
 - b. Smith Renolds, 1969
 - c. Van Edward King, 1969
 - d. Christ Wolfs Everest, 1969
94. Length of vagina in a freemartin
- a. One and half times of normal animal
 - b. Less than normal animal
 - c. One half of normal animal
 - d. One third of normal animal
95. In bovines, the frequency of physiological retention of foetal membranes
- a. 2-5%
 - b. 50%
 - c. 75%
 - d. 100%
96. In swine, fetal mummification is commonly seen and is characteristic of infection with
- a. Herpes Viruses
 - b. SMEDI viruses
 - c. Brucella suis
 - d. Leptospirosis
97. Which clinical condition is associated with either defective endometrium or defective fetus?
- a. Hydrops of allantois and hydrops of amnion, respectively
 - b. Hydrops of amnion and hydrops of allantois, respectively
 - c. Both hydrops of allontois and hydrops of amnion
 - d. All hydrosy conditions of fetus
98. These cells are highly sensitive to radiation effect
- a. Spermatogonia
 - b. Spermatids
 - c. Sertoli cells
 - d. Spermatocytes

99. How do you classify placentation of sow and maare?
- a. Cotyledonary, syneptheliochorial, deciduate
 - b. Diffuse, epitheliochorial, indeciduate
 - c. Diffuse, epitheliochorial, deciduate
 - d. Zonary, endotheliochorial, adeciduate
100. Large amounts of cytoplasm that forms into lobe after spermiation
- a. Annulus
 - b. Proximal droplet
 - c. Distal droplet
 - d. Regaud's body
