

MIZORAM PUBLIC SERVICE COMMISSION

**TECHNICAL COMPETITIVE EXAMINATIONS FOR RECRUITMENT TO THE POST OF
GRADE-II OF MIZORAM HEALTH SERVICE (SPECIALIST SUB-CADRE)
UNDER HEALTH & FAMILY WELFARE DEPARTMENT,
GOVERNMENT OF MIZORAM. OCTOBER, 2022**

**PAPER - II (TECHNICAL)
OBSTETRICS & GYNAECOLOGY DEPARTMENT**

Time Allowed : 3 hours

Full Marks : 200

All questions carry equal marks of 2 each.

Attempt all questions.

1. The decidua capsularis is:
(a) The decidua overlying the chorion frondosum (b) The decidua over aembryonic pole
(c) The chorion over the embryonic pole (d) The chorion over the aembryonic pole
2. The percentage of water in amniotic fluid is:
(a) 99% (b) 89%
(c) 77% (d) 60%
3. Nitabuchs layer is:
(a) Layer between cytotrophoblast and embryoblast
(b) A fibrinoid layer between cytotrophoblast and syncytiotrophoblast
(c) A fibrinoid layer between decidua and cytotrophoblast
(d) A layer between hypoblast and epiblast
4. Which factor is responsible for male sex the differentiation?
(a) TDF on the long arm of y chromosome
(b) TDF on short arm of Y chromosome
(c) Testosterone secreted by leydig cells
(d) Anti Mullerian hormone secreted from sertoli cells
5. The 2nd meiotic division in Oogenesis is started at:
(a) Time of fertilization (b) Ovulation
(c) With release of first polar body (d) During implantation
6. Choose the wrong statement- during spermiogenesis:
(a) Acrosome formation happens
(b) Condensation of nucleus
(c) Shedding of most of cytoplasm
(d) Glycoprotein coat and seminal plasma removed from acrosome
7. The hormonal change in menstrual cycle just before ovulation are all except:
(a) LH surge (b) Rise in FSH to lesser extent
(c) Rise in estrogen (d) Rise in progesterone

8. Which of the following is not a part of fallopian tube?
 - (a) Infundibulum
 - (b) Isthmus
 - (c) Intermediate part
 - (d) Interstitial part
9. The muscles inserted in perineal body are all except:
 - (a) Bulbocavernosus
 - (b) Ischiocavernosus
 - (c) Superficial transverse perineal muscle
 - (d) Levator ani
10. Which of the following is not a branch of anterior division of internal iliac artery?
 - (a) Uterine artery
 - (b) Internal pudendal artery
 - (c) Inferior gluteal artery
 - (d) Superior gluteal artery
11. Ovarian artery is a branch of:
 - (a) Abdominal aorta
 - (b) Internal iliac artery
 - (c) Renal artery
 - (d) External iliac artery
12. Superficial perineal pouch contains all except:
 - (a) Bulbocavernosus
 - (b) Pubococcygeus
 - (c) Superficial transverse perineal muscle
 - (d) Ischiocavernosus
13. Half-life of GnRH is:
 - (a) 2-4 minutes
 - (b) 2-4 hours
 - (c) 12 hours
 - (d) 24 hours
14. According to the two-cell two gonadotrophin theory, FSH acts on _____ cells and LH acts on _____ cells:
 - (a) Granulosa, Theca
 - (b) Theca, Granulosa
 - (c) Both
 - (d) Leydig cells, Sertoli cells
15. Which of the following is not the supports of the uterus?
 - (a) Transverse cervical ligament
 - (b) Broad ligament
 - (c) Pubococcygeus ligament
 - (d) Uterosacral ligament
16. which of the following is a natural estrogen:
 - (a) Ethinyl estradiol
 - (b) Conjugated equine estrogen
 - (c) Mestranol
 - (d) Estriol
17. Polyhydramnios is caused by all except:
 - (a) Maternal diabetes
 - (b) Neural tube defect
 - (c) Multiple pregnancy
 - (d) Renal disease of the fetus
18. The cardiac output increased in pregnancy by:
 - (a) 40%
 - (b) 60-80%
 - (c) 30%
 - (d) 20-30%
19. The cause of hyperpigmentation in pregnancy are all except:
 - (a) Increase melanocyte stimulating hormone
 - (b) Increased level of estrogen in pregnancy
 - (c) Increased level of testosterone in pregnancy
 - (d) Increased level of endorphin
20. Vital capacity in pregnancy:
 - (a) Increased
 - (b) Remain unchanged
 - (c) Decreased
 - (d) Increased in early pregnancy and decreased in third trimester

21. The spiral arteries in pregnancy become:
- (a) High resistance, low flow
 - (b) Low resistance, high flow
 - (c) Remain unchanged
 - (d) Become straighter
22. Fibrinogen in pregnancy:
- (a) 200-400mg/dl
 - (b) 300-600mg/dl
 - (c) 150-300mg/dl
 - (d) 500-700mg/dl
23. FSH and LH are secreted by _____ of pituitary gland:
- (a) The acidophilic staining cells
 - (b) The neutral staining cells
 - (c) The basophilic cells
 - (d) The mixed acidophilic and basophilic cells
24. The physiological changes in urinary system during pregnancy are all except:
- (a) Hydroureter
 - (b) Vesico ureteric reflux
 - (c) Increased motility of ureters
 - (d) Increased in GFR
25. Secondary villi in placental formation are:
- (a) Syncytiotrophoblast covering cytotrophoblast
 - (b) Syncytiotrophoblast covering cytotrophoblast with mesodermal core
 - (c) Syncytiotrophoblast covering cytotrophoblast with vessels in the core
 - (d) The villi that connect chorionic plane with basal plate
26. Which layer is not formed by epiblast?
- (a) Hypoblast
 - (b) Endoderm
 - (c) Ectoderm
 - (d) Mesoderm
27. Hypothalamo -pituitary gonadotropin axis is functional by:
- (a) First trimester
 - (b) 2nd trimester
 - (c) Third trimester
 - (d) As soon as conception
28. Causes of delayed puberty are all except:
- (a) Craniopharyngioma
 - (b) Congenital hydrocephalus
 - (c) Kallman syndrome
 - (d) Obesity
29. Features of Turners syndrome are all except:
- (a) Webbing of neck
 - (b) Early menarche
 - (c) Shield like chest
 - (d) Cubitus valgus
30. Following are features of kallman syndrome except:
- (a) Anosmia
 - (b) Color blindness
 - (c) Short stature
 - (d) Hypogonadism
31. Causes of precocious puberty are all except:
- (a) CAH
 - (b) Functional ovarian cyst
 - (c) Ovarian neoplasm
 - (d) Obesity
32. Which of the following will not result in hypogonadotropic hypogonadism:
- (a) Kallman syndrome
 - (b) Turner syndrome
 - (c) Craniopharyngioma
 - (d) GnRH receptor gene deficiency
33. At menarche the proportion of body fat is approximately:
- (a) 40%
 - (b) 10%
 - (c) 32%
 - (d) 22%

34. A patient with Swyer syndrome is:
- (a) Phenotype male, genotype female
 - (b) Phenotype and genotype female
 - (c) Phenotype female genotype male
 - (d) Phenotype male, genotype male
35. Uterus and tube develop from:
- (a) Mesonephric duct
 - (b) Paramesonephric duct
 - (c) Urogenital folds
 - (d) Sex cords
36. Lower vagina and bladder develop from:
- (a) Genital tubercle
 - (b) Genital ridge
 - (c) Urogenital sinus
 - (d) Labio scrotal swellings
37. Congenital uterine abnormalities can cause a:
- (a) RPL
 - (b) Cervical incontinence
 - (c) Preterm labor
 - (d) All of the above
38. Gold standard for diagnoses of uterine anomalies is:
- (a) 3D USS
 - (b) HSG
 - (c) Hysteroscopy
 - (d) CT Scan
39. The gene determining TDF is:
- (a) RSPo1
 - (b) Fox12
 - (c) Wnt4
 - (d) SRY
40. Menopause is said when there is no menstruation continuously for:
- (a) 12 months
 - (b) 6 months
 - (c) 8 months
 - (d) 10 months
41. Risk of hormone replacement therapy are all except:
- (a) Venous thromboembolism
 - (b) Gall bladder disease
 - (c) Breast cancer
 - (d) Colorectal cancer
42. Which of the following is not a bisphosphonate?
- (a) Alendronate
 - (b) Raloxifene
 - (c) Risendronate
 - (d) Ibandronate
43. Ideal treatment for vasomotor symptoms in menopause is:
- (a) Progesterone
 - (b) Systemic estrogen
 - (c) Bisphosphonate
 - (d) Calcitonin
44. Which of the following condition cause heterosexual precocious puberty in female?
- (a) Late onset CAH
 - (b) McCune Albright syndrome
 - (c) Granulosa cell tumor
 - (d) Tuberculous meningitis
45. Tanner staging on breast development are based on all except:
- (a) Enlargement of areola and breast size
 - (b) Contour change
 - (c) Breast budding
 - (d) Appearance of terminal hair
46. Which of the following do not cause Hypergonadotropic Hypogonadism?
- (a) Turner syndrome
 - (b) Iatrogenic
 - (c) Constitutional delay
 - (d) Fragile X syndrome

47. The squamo columnar junction at puberty is at:
(a) Endocervix (b) Ectoocervix
(c) At internal Os (d) Level of appearance of Nabothian follicle
48. The 1st meiosis in spermatogenesis happens with:
(a) Multiplication of spermatogonia
(b) Formation of secondary spermatocyte from primary spermatocyte
(c) Formation of spermatids
(d) Formation of mature spermatozoa
49. Cervical changes spinbarkeit is seen in:
(a) Follicular stage of menstrual cycle (b) Premenstrual phase of menstrual cycle
(c) At ovulatory time (d) Anovulatory cycle
50. Prolactin is a peptide which contains _____ Amino acids:
(a) 200 (b) 198
(c) 150 (d) 300
51. Umbilical cord has:
(a) Single artery, 2 vein (b) Single vein, 2 arteries
(c) One artery and one vein (d) 2 veins, 2 arteries
52. The following structures form the boundaries Para rectal space except:
(a) Uterine artery (b) Internal iliac artery
(c) Ureter (d) Inguinal ligament
53. The boundaries of para vesical space are all except:
(a) Obliterated hypogastric artery (b) External iliac artery
(c) Broad ligament (d) Pubic tubercle
54. Which of the following diameter is not 9.5 cm?
(a) Suboccipito bregmatic (b) Suboccipitofrontal
(c) Submentobregmatic (d) Biparietal
55. Anterior fontanelle closes by:
(a) 3 years (b) 9 months
(c) 2 years (d) 1 and half years
56. Breathing movement of fetus is seen by:
(a) 10 weeks (b) 11 weeks
(c) 14 weeks (d) 12 weeks
57. The following states about surfactant except:
(a) Produced by type 2 pneumocytes (b) Lines the alveoli
(c) No role in respiratory effort of newborn (d) 90%lipid,10%protein
58. Swallowing is seen in fetus as early as:
(a) 13 weeks (b) 20 weeks
(c) 12 weeks (d) 24 weeks
59. Which of the following is not the hematopoietic organ of fetus?
(a) Spleen (b) Thymus and lymph nodes
(c) Liver (d) Kidney

60. Following are areas of mixing of oxygenated and deoxygenated blood in fetus except:
- (a) Right atrium
 - (b) Ductus venosus
 - (c) Ductus arteriosus
 - (d) Umbilical vein
61. Which day after fertilization is primitive fetal circulation established?
- (a) 10
 - (b) 12
 - (c) 21
 - (d) 28
62. Number of stem villi at term in human placenta is:
- (a) 60
 - (b) 120
 - (c) 240
 - (d) 480
63. Which of the following is not a change in carbohydrate metabolism in pregnancy?
- (a) Hyperinsulinemia
 - (b) Postprandial hypoglycemia
 - (c) Fasting hypoglycemia
 - (d) Increased insulin response to glucose
64. Which of the following about causes of water retention in pregnancy is incorrect?
- (a) Fall in plasma osmolality
 - (b) Increased in atrial natriuretic peptide
 - (c) Less secretion of arginine vasopressin AVP
 - (d) Stimulation of Renin angiotensinogen-aldosterone system
65. Which of the following is false regarding hCG?
- (a) It is secreted by cytotrophoblast
 - (b) It acts on the same receptor as LH
 - (c) Luteotropic action
 - (d) It is a glycoprotein
66. Which of the following statement regarding normal pregnancy is incorrect?
- (a) There is leucocytosis
 - (b) There is an alteration in albumin-globulin ratio
 - (c) There is an increase in many coagulations factors
 - (d) There is an increase in platelet count
67. Following physiological changes are seen in vagina in pregnancy except:
- (a) Decreased number of navicular cells
 - (b) Jacquemer's sign
 - (c) Increased length of anterior vaginal wall
 - (d) Acidic pH
68. Palmer sign in pregnancy refers to:
- (a) Rhythmic contraction of uterus
 - (b) Pulsation in lateral fornix
 - (c) Softening of cervix
 - (d) Compressibility of isthmus
69. Which is incorrect about PAPP-A?
- (a) Produced by developing placenta
 - (b) Value increase by 7th week
 - (c) High level associated with downs syndrome
 - (d) Decrease level associated with risk for IUGR and preeclampsia
70. Renal changes in pregnancy include the following except:
- (a) Decrease in serum urea
 - (b) Decrease in creatinine clearance
 - (c) Increase in glomerular filtration rate
 - (d) Glycosuria
71. The classic teratogenic period is:
- (a) 3rd week to 10th week
 - (b) 31 -71 days
 - (c) First trimester as a whole
 - (d) 10th to 12th week

72. Following are the side effects of phenytoin use during pregnancy except:
- (a) Microcephaly
 - (b) Mental retardation
 - (c) Microcephaly
 - (d) Congenital talipes equinovarus
73. Which is correct regarding warfarin?
- (a) It interferes with synthesis of vit K dependent factors like II, VII, IX and X
 - (b) It causes cleft lip
 - (c) It increases the chance of cardiac disease of fetus
 - (d) Treatment with Warfarin is monitored with Bleeding time/clotting time
74. The maximum dose of labetalol for Hypertensive Disease of Pregnancy is:
- (a) 3000mg
 - (b) 2400mg
 - (c) 1200mg
 - (d) 5000mg
75. Which of the following is not a feature of fetal alcohol syndrome?
- (a) Shortened palpebral fissure
 - (b) Low set ears
 - (c) Fattened nasal bridge
 - (d) Long philtrum
76. Which vaccine is contraindicated in pregnancy?
- (a) Rabies
 - (b) Varicella
 - (c) Influenza
 - (d) Covid vaccine
77. Which of the following drug can be given safely in pregnancy?
- (a) Propylthiouracil
 - (b) MTX
 - (c) Warfarin
 - (d) Tetracycline
78. All drugs can be given to a mother with lupus who is in the 35th week of gestation except:
- (a) Chloroquine
 - (b) Methotrexate
 - (c) Sulfadiazine
 - (d) Prednisolone
79. Consequence of Maternal use of cocaine is:
- (a) Hydrops fetalis
 - (b) Sacral agenesis
 - (c) Cerebral infarction
 - (d) Hypertrichosis
80. Which of the following is incorrect about ACE inhibitors?
- (a) Can cause renal hypoperfusion
 - (b) Inadvertent administration in first trimester is reassured
 - (c) Leads to closure of ductus arteriosus
 - (d) It is a weak antihypertensive
81. Which of the following is not the effect of diethyl stilbesterol exposure in utero?
- (a) Uterine abnormalities
 - (b) Vaginal adenosis
 - (c) Masculinization of a female fetus
 - (d) Cryptorchidism and testicular hypoplasia
82. Oxytocin is a:
- (a) Hexapeptide
 - (b) Synthesized in the supraoptic and paraventricular nuclei of hypothalamus
 - (c) Released from anterior pituitary
 - (d) Has a diuretic hormone like effect
83. After how many seconds of intravenous injection does ergometrine work?
- (a) 30 seconds
 - (b) 40 seconds
 - (c) 35 seconds
 - (d) 50 seconds

84. Which of the following is not an effect of prostaglandin?
- (a) Bronchospasm (b) Soften the cervix
(c) Constipation (d) Nausea
85. Which of the drugs are contraindicated in pregnancy?
- (a) Tetracycline (b) Erythromycin
(c) Ampicillin (d) Chloroquine
86. Peripheral resistance in pregnancy decreases by:
- (a) 0-10% (b) 10-20%
(c) 20-30% (d) 30-40%
87. A woman presents in first trimester of pregnancy while having a mild impaired left ventricular function. Which of the following drug is not contraindicated?
- (a) Metoprolol (b) Warfarin high dose
(c) Enalapril (d) Losartan
88. After the birth of the baby, the pressure in the pulmonary artery decreases greatly. what is the cause of this?
- (a) Systemic arterial pressure increases (b) Ductus arteriosus closes
(c) Left ventricular pressure increases (d) Pulmonary vascular resistance decreases
89. When do progesterone rise to their highest concentration during female hormonal cycle?
- (a) Between ovulation and beginning of menstruation
(b) Immediately before ovulation
(c) When LH is at its highest
(d) When 12 primary follicles are developing to the antral stage
90. In the circulatory system of fetus, which of the following is greater before birth than after birth?
- (a) Arterial PO₂ (b) Right atrial pressure
(c) Aortic pressure (d) Left ventricular failure
91. Failure of ductus arteriosus closure in a 12-month-old baby will results in:
- (a) Below normal PO₂ (b) Below normal PCO₂
(c) Greater normal arterial blood pressure (d) Lower than normal pulmonary pressure
92. Which blood vessel in the fetus have the highest PO₂?
- (a) Ductus arteriosus (b) Ductus venosus
(c) Ascending aorta (d) Left atrium
93. Within minutes of birth, flow of blood through foramen ovale decreases rapidly, what is the cause of this change?
- (a) Increased formation of prostaglandinE₂ in the endocardium
(b) Increased rate of flow through the pulmonary artery
(c) Increased left atrial pressure
(d) Increased right atrial pressure
94. Estrogen is required for normal reproductive function of male. where is the principle source of estrogen synthesis in male?
- (a) Leydig cells (b) Osteoblasts
(c) Liver cells (d) Prostate cells

95. Which of the following is greater after birth than before birth?
- (a) Flow through foramen ovale (b) Pressure in the right atrium
(c) Flow through the ductus arteriosus (d) Aortic pressure
96. In order for male differentiation to occur during embryonic development, testosterone must be secreted from testes. What stimulate the secretion of testosterone during embryonic period?
- (a) LH from maternal pituitary gland (b) Human chorionic gonadotropin
(c) Inhibin from corpus luteum (d) GnRH from embryonic hypothalamus
97. A 30 yrs. woman is breastfeeding her infant. What changes would you expect?
- (a) Increased secretion of ADH from the supraoptic nuclei
(b) Increased secretion of ADH from the paraventricular nuclei
(c) Increased secretion of oxytocin from paraventricular nuclei
(d) Increase plasma level of ADH and oxytocin
98. A baby is born with a penis, a scrotum with no testes, no vagina, an XX chromosome. This condition is known as Hermaphroditism. Which of the following could cause this?
- (a) Abnormal level of HcG production by cytotrophoblast
(b) Abnormally low level of estrogen production by placenta
(c) Abnormally high level of LH in the maternal blood
(d) Abnormally high level of testosterone in maternal blood
99. pH of normal semen is:
- (a) 3.5-4.5 (b) 5.5-6.5
(c) 7.2-7.8 (d) 8.5-9.3
100. Which of the following change in puberty is influenced by the estrogen ?
- (a) Growth of acinar buds of the breast (b) Epiphyseal fusion
(c) Proliferative phase (d) All of the above

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