Paper Code: 25
SUBJECT: Neonatology

SUMMARY: 3.00 Hours
Time: 3.00 Hours

The candidate fill the Question Paper Booklet No. on Answer Sheet carefully after opening the Paper Seal / Polythene bag. Candidate himself shall be responsible for any error.

INSTRUCTIONS FOR CANDIDATES

1. Answer all questions.
2. All questions carry equal marks.
3. Only one answer is to be given for each question.
4. If more than one answers are marked, it would be treated as wrong answer.
5. Each question has four alternative responses marked serially as 1, 2, 3, 4. You have to darken only one circle or bubble indicating the correct answer on the Answer Sheet using BLUE BALL POINT PEN.
6. The OMR Answer Sheet is inside this Test Booklet. When you are directed to open the Test Booklet, take out the Answer Sheet and fill in the particulars carefully with blue ball point pen only.
7. 1/3 part of the mark(s) of each question will be deducted for each wrong answer. A wrong answer means an incorrect answer or more than one answers for any question. Leaving all the relevant circles or bubbles of any question blank will not be considered as wrong answer.
8. Mobile Phone or any other electronic gadget in the examination hall is strictly prohibited. A candidate found with any of such objectionable material with him/her will be strictly dealt as per rules.
9. Please correctly fill your Roll Number in O.M.R. Sheet. 5 marks can be deducted for filling wrong or incomplete Roll Number.

Warning: If a candidate is found copying or if any unauthorized material is found in his/her possession, P.R. would be lodged against him/her in the Police Station and he/she would liable to be prosecuted. Department may also debar him/her permanently from all future examinations.

Do not open this Test Booklet until you are asked to do so.
1. Which of the following is not a feature of Hemodynamic Significant Patent Ductus Arteriosus (HSPDA)?
   (1) Bowing of intertribal septum to right with enlarged left atrium and left ventricle
   (2) Transductal diameter >3 mm
   (3) Left atrial/ aortic root width ratio >1.6:1
   (4) Retrograde diastolic flow >50% of forward flow.

2. Most common non renal cause of systemic hypertension in premature newborn is?
   (1) Umbilical artery catheterisation
   (2) Broncho pulmonary dysplasia
   (3) Drugs
   (4) Patent ductus arteriosus

3. Which of the following is not an ultrasound finding for biliary atresia?
   (1) Triangular cord sign
   (2) Gallbladder ghost triad
   (3) Larger hepatic vein caliber
   (4) Hepatic artery to portal vein diameter ratio >0.45

4. Which one is not a clinically proven strategy for primary prevention of NEC.
   (1) Antenatal Glucocorticoids
   (2) Standardised feeding regimen
   (3) Probiotics
   (4) Erythropoietin

5. Match the following, regarding Biomedical waste management.
   a. Yellow 1. Non Infected Waste
   b. Black 2. Syringes & Gloves
   c. Blue 3. Body Parts
   d. White 4. Needles & sharps
   (1) a : 1, b : 2, c : 3, d : 4
   (2) a : 4, b : 1, c : 3, d : 2
   (3) a : 3, b : 1, c : 2, d : 4
   (4) a : 2, b : 1, c : 4, d : 3

6. Which of the following is not a candidate for surrogacy in India as per surrogacy bill 2019.
   (1) Indian married couple
   (2) Indian origin married couple
   (3) Indian single woman (Only widow or divorcee)
   (4) Indian single man (only Widower or divorcee)
7. A baby is having Hypocalcemia, Hyperphosphatemia, low vitamin D and High PTH. What is the most probable diagnosis?
(1) Renal rickets
(2) Pseudohypoparathyroidism
(3) High phosphate feeding
(4) Hyperparathyroidism

8. Match the following:
 a. Urea cycle defect
 b. Organic acidemia
 c. Non Ketotic Hyperglycemia
 d. Mitochondriopathy
 (1) a : 1, b : 2, c : 3, d : 4
 (2) a : 3, b : 1, c : 3, d : 2
 (3) a : 3, b : 3, c : 2, d : 4
 (4) a : 2, b : 4, c : 1, d : 3

9. Match the following:
 a. Necrotising enterocolitis
 b. Periventricular Leucomalacia
 c. Intra ventricular haemorrhage
 d. Perinatal asphyxia
 (1) a : 1, b : 2, c : 3, d : 4
 (2) a : 3, b : 4, c : 2, d : 1
 (3) a : 3, b : 1, c : 2, d : 4
 (4) a : 2, b : 4, c : 1, d : 3

10. A newborn baby develop shock on day 3 of life. Investigations showed hyponatremia, hyperkalemia and hypoglycaemia. Most probable diagnosis is?
(1) Renal Failure
(2) Panhypopituitarism
(3) Coaractation of aorta
(4) Congenital adrenal hyperplasia
11. Match the disease and brain area involvement.

   a. Perinatal asphyxia
   b. Kerincterus
   c. Hypoglycemia
   d. Hypocarbia

(1)  a : 2, b : 1, c : 4, d : 3
(2)  a : 3, b : 4, c : 2, d : 1
(3)  a : 3, b : 1, c : 2, d : 4
(4)  a : 2, b : 4, c : 1, d : 3

12. All of the following have similar tone abnormality, except?

   (1) Myopathy
   (2) Periventricular Leucomalacia
   (3) Pradder willi syndrome
   (4) Hypothyroidism

13. Match the following :
   a. HIDA scan
   b. EC scan
   c. Fluoride scan
   d. B scan

   1. Islet cell hyperplasia/Insulinaoma
   2. Extra hepatic Biliary atresia
   3. Posterior segment of eyeball
   4. Renal function

   (1)  a : 2, b : 1, c : 4, d : 3
   (2)  a : 3, b : 4, c : 2, d : 1
   (3)  a : 2, b : 4, c : 1, d : 3
   (4)  a : 1, b : 4, c : 2, d : 3

14. Pick up the true statement.

   (1) Blood pressure = Stroke volume * Heart rate
   (2) Left to right shunt is normal in ductus in fetus
   (3) Contractility of heart is independent of preload and after load
   (4) Fetes heart doesn’t start pumping blood until 18-20 weeks
15. Which of the following action is not appropriate when caring for parents immediately after death of their baby?

(1) Autopsy discussion
(2) Allowing mother to spend time with her dead baby
(3) Discuss about planning for future pregnancy
(4) Providing room for bereavement

16. Oligohydroamnios, pulmonary hypoplasia and bilateral echogenic kidney is suggestive of?

(1) Autosomal recessive polycystic kidney disease
(2) Autosomal dominant polycystic kidney disease
(3) Medullary cystic kidney
(4) Multicystic dysplastic kidney

18. A baby on total parenteral nutrition is receiving 70 Kcal/kg, 4 gm/kg of protein, 6 mg/kg/min of glucose infusion rate and 3 gm/kg of fat. What kind of biochemical abnormality is expected?

(1) Metabolic acidosis and uraemia
(2) Hypoglycaemia
(3) Respiratory alkalosis
(4) Hyperlipidemia

19. All of the following are benefits of delivery room CPAP except?

(1) Decreasing need for ventilation
(2) Decreased surfactant use
(3) Decreased incidence of BPD
(4) Decreased number of Airleak

20. Which of the following is not a prognostic factor for congenital diaphragmatic hernia outcome?

(1) Lung head ratio
(2) Liver position
(3) Total lung volume
(4) Sex of baby
21. What is not true regarding KCN gene mutation hyperinsulinemic hypoglycaemia?
   (1) Usually Diazoxide resistant
   (2) Lead to diffuse islet cell hyperplasia
   (3) Treatment include subtotal pancreatectomy
   (4) Majority of them are transient and resolve over 3 months of age

22. Which is not a side effect of Diazoxide?
   (1) Hyperuricemia
   (2) Hypertrichosis
   (3) Fluid retention
   (4) Hypocalcemia

23. Which antibiotic can be used for metallo beta lactamase producing gram negative bacilli sepsis?
   (1) Pipercillin
   (2) Meropenem
   (3) Imipenem
   (4) Colistin

24. All are essential component of kangaroo mother care, EXCEPT
   (1) Developmental supportive care
   (2) Skin to skin contact
   (3) Early discharge
   (4) Exclusive breast milk feeding

25. Which of the following condition can be diagnosed early by Stool colour card?
   (1) Persistent neonatal jaundice
   (2) Cow milk protein allergy
   (3) Extra hepatic biliary atresia
   (4) Cystic fibrosis

26. Which of the following statement is not true regarding use of Heated High Flow Nasal Cannula (HHFNC)?
   (1) It is equally effective to CPAP in post extubation scenario
   (2) HFNC is superior to CPAP as a primary modality in Respiratory distress syndrome
   (3) HHFNC causes less trauma to newborn
   (4) There is better nursing acceptance with HHFNC
27. Prerequisite for surgery in congenital diaphragmatic hernia are all except?
   (1) Serum Lactate <2.5 mmol/l
   (2) FiO2 <40%
   (3) Urine output 2 ml/kg/hour
   (4) Pre ductal saturation >95%

28. For routine in between patient contact, which is best hand hygiene strategy?
   (1) Hand wash by liquid soap
   (2) Alcohol based hand rub
   (3) Hand rub followed by gloves
   (4) Hand wash by chlorhexidine based scrub

29. What is not to be used in severe PPHN?
   (1) Dopamine
   (2) Sildenafil
   (3) Inhaled nitric oxide
   (4) PGE1

30. What is true regarding CSF protein in ventricular fluid versus lumbar puncture?
   (1) Ventricular CSF protein is higher than Lumbar CSF
   (2) Ventricular CSF protein is lower than lumbar CSF
   (3) CSF protein is equal in both Ventricular and lumbar fluid
   (4) There is no relation in both fluids

31. Which is not a benefit of delayed cord clamping in preterm babies?
   (1) Decreased need for blood transfusion.
   (2) Decreased incidence of necrotising enterocolitis
   (3) Decreased incidence of intraventricular haemorrhage
   (4) Decreased mortality

32. Neonatal cholestasis, significantly elevated alpha fetoprotein and coagulopathy suggest:
   (1) Neonatal Hemochromatosis
   (2) Neonatal Tyrosinemia
   (3) Cystic fibrosis
   (4) Galactosemia
33. Best way for umbilical cord care to promote easy falling is?
   (1) Keeping umbilical cord dry
   (2) Applying antibiotic powder
   (3) Cleaning umbilical cord with spirit
   (4) Applying betadine on umbilical cord

34. Which is not a direct benefit of antenatal corticosteroid?
   (1) Decreased incidence of Respiratory distress syndrome
   (2) Decreased incidence of Bronchopulmonary dysplasia
   (3) Decreased Mortality
   (4) Decreased Intraventricular haemorrhage

35. Column movement in intercostal drainage tube (ICDT) indicates?
   (1) ICDT is in pleural space
   (2) Air leak is still present and not sealed
   (3) ICDT is in lung parenchyma
   (4) ICDT is in mediastinum

36. What is the formula for dissociation coefficient for Co2 in high frequency ventilation?
   (1) DCO2 = VThf2 * Fhf
   (2) DCO2 = VThf3 * Fhf
   (3) DCO2 = MAP * Fhf
   (4) DCO2 = VThf * Fhf2

37. What is the traumatic parameter to induce Ventilator Induced Lung Injury (VILI)?
   (1) Volumtrauma
   (2) Barotrauma
   (3) Differences in regional mechanics of lung
   (4) All of the above

38. What is the treatment of seizure, occurring during hypernatremia correction?
   (1) Phenobarbitone
   (2) Hypertonic saline
   (3) Hypotonic saline
   (4) Dextrose infusion
39. Which test is recommended to pick deletion and duplications of chromosomal material?
   (1) Karyotyping
   (2) Clinical Exam sequencing
   (3) Microarray
   (4) Methylation analysis

40. What kind of data is Gender?
   (1) Nominal
   (2) Ordinal
   (3) Interval
   (4) Discrete

41. Which of the following suggest highest correlation between variables?
   (1) $r = +0.25$
   (2) $r = +0.5$
   (3) $r = -0.75$
   (4) $r = +2$

42. Best measure for central tendency in a highly skewed distribution is?
   (1) Mean
   (2) Median
   (3) Mode
   (4) Range

43. What is false about Increased nuchal translucency with normal karyotype?
   (1) Associated with cardiac anomalies
   (2) Associated with renal anomalies
   (3) Have higher chance of miscarriages
   (4) Always an abnormal finding

44. A newborn born limp was started on bag and mask ventilation after initial steps. After 5 breaths, you notice that the baby has no chest rise. Which of the following steps is not important in managing the baby’s condition?
   (1) Ensure adequate seal
   (2) Clear the airway if secretions are present
   (3) Increase the oxygen concentration by adding a reservoir
   (4) Position the baby’s neck so that it is not overflexed or hyperextended

45. If a new-born does not begin breathing in response to stimulation, you should assume he is in ________ apnea.
   (1) Primary
   (2) Secondary
   (3) Terminal
   (4) None of above
46. Which device should be readily available as a back up wherever resuscitation may be needed, in case compressed gas source fails?
   (1) Self inflating bag
   (2) T piece resuscitator
   (3) Flow inflating bag
   (4) All of the above

47. Which is not a reliable mean to assess neonatal heart rate at the time of resuscitation?
   (1) Palpating base of umbilical cord
   (2) Cardiac monitor
   (3) Pulse oximetry
   (4) Auscultation

48. Below what gestational age, New NRP guideline recommends non initiation of resuscitation?
   (1) 22 weeks
   (2) 23 weeks
   (3) 24 weeks
   (4) 20 weeks

49. Which antenatal screening modality has highest pickup rate for downs syndrome?
   (1) First trimester screen with NT measurement
   (2) Second trimester Triple screen
   (3) Second trimester Quad screen
   (4) First trimester nasal bone hypoplasia

50. Where are the stem cell that renew the epithelium of gut found?
   (1) Near the bottom of the crypt
   (2) In the connective tissue, underlying the gut epithelium
   (3) In the villi, underlying the dead outer layer of keratinocytes
   (4) N the inner cell mass

51. False statement about fetal CTG monitoring, comparing intermittent auscultation is?
   (1) No significant difference in perinatal death
   (2) Significant difference in cerebral palsy
   (3) Reduced neonatal seizures
   (4) Increased surgical intervention
52. All are causes of intrauterine growth retardation, except?
   (1) Anemia
   (2) Pregnancy induced hypertension
   (3) Maternal heart disease
   (4) Gestational diabetes

53. Which one is not an ECHO finding in hypovolemic shock?
   (1) IVC Collapsibility index >55%
   (2) Kissing small left ventricle cavity small right atrium and ventricle
   (3) Variation >15% in Left ventricle outflow tract velocity time integral with respiration
   (4) Left ventricle ejection fraction

54. Match the following:
   a. Fetal alcohol syndrome
   b. Maternal diabetes
   c. Downs syndrome
   d. Congenital rubella
   1. Ventricular septal defect
   2. Atrial septal defect
   3. Patent ductus arteriosus
   4. Transposition of great arteries

55. Which ionotrope doesn't have any effect on beta receptors?
   (1) Dopamine
   (2) Dobutamine
   (3) Epinephrine
   (4) Norepinephrine

56. Pick the odd one.
   (1) COIN
   (2) SPPORT
   (3) BOOST
   (4) HIPSTER

57. Which equipment is based on Bear Lambert law?
   (1) Ventilator
   (2) Pulse oximeter
   (3) Infusion pump
   (4) Therapeutic hypothermia machine

58. What is the recommended position to fix skin temperature probe?
   (1) Right hypochondrium
   (2) Left hypochondrium
   (3) Right flank
   (4) Chest
59. Which one is not a component in Downe's score?
   (1) Respiratory rate
   (2) Nasal flare
   (3) Grunting
   (4) Retraction

60. Which biochemical marker is utilised for adjusted fortification?
   (1) Blood urea
   (2) Serum Creatinine
   (3) Serum Ammonia
   (4) Serum Albumin

61. Which drug doesn't cause cardiac teratogenicity?
   (1) Phenytoin
   (2) Carbamezapine
   (3) Lithium
   (4) Phenobarbitone

62. Mid facial hypoplasia, cleft lip and palate, microcephaly, ventricular septal defect and aplasia cutis congenita is indicative of which chromosomal abnormality?
   (1) Trisomy 13
   (2) Trisomy 18
   (3) Trisomy 21
   (4) Monosomy 45 X

63. Infant of diabetic mother with polycythemia and umbilical catheter in situ is having hematuria, renal flank mass and hypertension. What is most probable reason?
   (1) Renal vein thrombosis
   (2) Renal artery thrombosis
   (3) Aortic thrombus
   (4) Inferior vena cava thrombosis

64. At what gestational age urine production starts?
   (1) 13 weeks
   (2) 12 weeks
   (3) 14 weeks
   (4) 10 weeks

65. What is unlikely in Hyperammonia and abnormal urine organic acid?
   (1) Urea cycle defect
   (2) Congenital lactic acidosis
   (3) Organic academia
   (4) Fatty oxidation defect
66. Autosomal dominant Craniosynostosis, midfacial hypoplasia, syndactyly and CNS malformation is suggestive of which syndrome?
   (1) Apert syndrome
   (2) Pfeiffer syndrome
   (3) Crouzon syndrome
   (4) Carpenter syndrome

67. What is not true regarding supernumerary nipples?
   (1) Also known as Polythelia
   (2) Never grow
   (3) Present along embryonic mammary line
   (4) Excision may be needed if glandular tissues is present

68. Which is not a transient skin lesion in neonate?
   (1) Benign cephalic histiocytosis
   (2) Neonatal cephalic pustulosis
   (3) Dermal melanocytosis
   (4) Congenital melanocytic nevi

69. A new-born present with jaundice, mild anemia and splenomegaly. A complete blood count with differential reveal spherocytosis. Reticulocytes are also increased. Parents informed that several of the relative are also suffering from same illness. The infant’s condition is most likely by defective:
   (1) Clathrin
   (2) Spectrin
   (3) Dynein
   (4) Connexon

70. PIVKA level are useful to diagnose?
   (1) Vitamin A deficiency
   (2) Vitamin K deficiency
   (3) Vitamin D deficiency
   (4) Vitamin E deficiency

71. Adequate renal function and normal amniotic fluid production is NOT required for which one of the following actions in newborn?
   (1) Lung development
   (2) Excretion of waste products
   (3) Prevention of infection
   (4) Temperature maintenance
72. Which statement is true regarding prophylactic surfactant (within 15 min after birth) to intubated preterm neonate (<30 weeks)?

(1) Decreased duration of ventilation
(2) Decreased incidence of BPD
(3) Decreased incidence of PDA
(4) Decreased incidence of pneumothorax

73. Which of the following is true of small for gestational age (SGA) babies?

(1) SGA is usually defined as birth weight <3rd centile
(2) Asymmetrical IUGR usually reflects a fetal disease process
(3) Small mothers tend to have small babies
(4) IUGR babies have more respiratory distress at birth.

74. Which of the following condition is not associated with neonatal hypercalcemia?

(1) Distal renal tubular acidosis
(2) Subcutaneous fat necrosis
(3) Congenital lactase deficiency
(4) Williams beauren syndrome

75. The blood component constituent most implicated in transfusion associated graft versus host disease is?

(1) Erythrocyte Rh D antigen
(2) Donor T cell lymphocytes
(3) Inflammatory interleukins
(4) Anti-neutrophilic antibodies

76. In high frequency ventilation, which variable affects the oxygenation most?

(1) MAP
(2) Amplitude
(3) FiO2
(4) Rate

77. Which of the following is least likely present in infant of diabetic mother?

(1) Hypocalcemia
(2) Hypomagnesemia
(3) Hyponatremia
(4) Hypoglycemia

78. Which of following single parameter should be changed in a ventilated baby with ABG showing Hyperoxia and hypercarbia,

(1) Peak inspiratory pressure
(2) Positive end expiratory pressure
(3) Respiratory rate
(4) I:E ratio
79. The plasma constituent most commonly associated with transfusion associated acute lung injury is?
   (1) Anti neutrophil and anti HLA antibody
   (2) ABO alloantibodies
   (3) Anti IgA antibodies
   (4) Anti T agglutinins

80. Which chromosome’s imprinting defect is involved in transient neonatal diabetes mellitus?
   (1) Chromosome 7
   (2) Chromosome 6
   (3) Chromosome 11
   (4) Chromosome 17

81. All are the benefits of breast feeding, EXCEPT?
   (1) Decreased incidence of late haemorrhagic diseases of newborn
   (2) Decreased incidence of childhood allergies
   (3) Decreased incidence of necrotising enterocolitis
   (4) Decreased risk of viral gastroenteritis in infancy

82. Which of the following is a disadvantage of unmodified cow milk feeding?
   (1) Hyponatremia
   (2) Hypoglycemia
   (3) Hypercalcemia
   (4) Hyperphosphatemia

83. Which is not an essential criterion for therapeutic hypothermia?
   (1) Gestational age >36 weeks & Age <6 hours
   (2) Evidence of asphyxia (Apgar <5 at 10 min or Cord blood base deficit >16 mmo/L)
   (3) Moderate to severe encephalopathy
   (4) EEG Changes

84. Which is not a poor prognostic sign in neonatal bacterial meningitis?
   (1) Leucocytosis at admission
   (2) Seizures persisting beyond 72 hours after admission
   (3) Focal neurological deficit
   (4) Low birth weight
85. Which of the following cardiac condition will not respond to PGE1 infusion?
   (1) Transposition of great arteries
   (2) Pulmonary atresia
   (3) Hypoplastic left heart syndrome
   (4) TAPVC

86. Neonate with non-bilious vomit, hypochloremic metabolic alkalosis and dehydration without any abdominal lump. Most probable diagnosis is?
   (1) Duodenal atresia
   (2) Gastric antral web
   (3) Malrotation
   (4) Congenital Hypertrophic pyloric stenosis

87. Which is not a cause of prolonged unconjugated hyperbilirubinemia?
   (1) Hypothyroidism
   (2) ABO incompatibility
   (3) Cephalhematoma
   (4) G6PD deficiency

88. Which intracranial pathology is better picked up by CT scan than MRI brain?
   (1) Gliosis
   (2) Intracranial hemorrhage
   (3) Intracranial calcification
   (4) Periventricular leukomalacia

89. Which vaccine is not to be given after IVIG administration?
   (1) Measles vaccine
   (2) DPT vaccine
   (3) Injectable polio vaccine
   (4) Influenza vaccine

90. What is Neonatal Mortality rate of India in 2020?
   (1) 28.5
   (2) 26.5
   (3) 23.5
   (4) 24.5

91. Which of the following has moderate evidence in prevention of NEC?
   (1) Standardised feeding protocol
   (2) Avoidance of severe anaemia
   (3) Antenatal corticosteroid
   (4) Avoidance of prolonged antibiotics use
92. What is true regarding nasal IPPV in comparison to nasal CPAP?
(1) Decreases extubation failure
(2) Decreases BPD
(3) More Pneumothorax
(4) Decreases mortality

93. What is not a long term adverse outcome of fetal growth restriction?
(1) Chronic kidney disease
(2) Type 2 Diabetes mellitus
(3) Coronary artery diseases
(4) Asthma

94. Match the CHD with age of presentation,
   a. TGA 1. 1-2 days
   b. VSD 2. 14 days
   c. Coarction of aorta 3. 3-7 days
   d. HLHS 4. 4-6 weeks
   (1) a: 2, b: 3, c: 1, d: 4
   (2) a: 1, b: 4, c: 3, d: 2
   (3) a: 4, b: 3, c: 2, d: 1
   (4) a: 1, b: 4, c: 2, d: 3

95. Which segment of the fetal circulation contain the highest O2?
(1) Right atrium
(2) Right ventricle
(3) Left ventricle
(4) Umbilical artery

96. Biphasic stridor occur in all except?
(1) Laryngomalacia
(2) Tracheomalacia
(3) Vocal cord paralysis
(4) Laryngeal web

97. Preterm infants are prone to apnea. The main reason is?
(1) Preterm infant have more quiet sleep than REM sleep.
(2) Preterm infant have blunted response to Co2.
(3) GER is the most common cause of apnea of prematurity.
(4) Supplemental oxygen may be helpful in apnea of prematurity.

98. A baby is having cyanosis and desaturation. ABG is showing normal PaO2. What is the most probable reason?
(1) Carbon mono oxide poisoning
(2) Methemoglobinemia
(3) Intrapulmonary shunt
(4) Cyanotic heart disease
99. What is not true regarding Congenital Diaphragmatic Hernia?
   (1) Surgical correction is not an emergency and should be done once baby is stabilised.
   (2) Liver herniation is a poor prognostic indicator.
   (3) iNO is a good modality in CDH to decrease pulmonary vascular pressures.
   (4) Induced Hypocarbia and alkalosis are not recommended.

100. You are teaching residents about the pulmonary mechanics. You note the following ventilator parameters: Compliance 0.005 L/cmH2O, Resistance 30 cmH2O/L/sec. The 95% of the lung would be emptied by?
   (1) 0.15 sec
   (2) 0.20 sec
   (3) 0.25 sec
   (4) 0.45 sec

101. The best measure of bilirubin production is?
   (1) HbCO measurement
   (2) ETCO measurement
   (3) Serum bilirubin
   (4) Reticulocyte count

102. A term baby is born by vaginal delivery. Mother is O-ve and baby is A+ve. True statement regarding the incompatibility is?
   (1) Direct Coombs on baby blood would be strongly positive
   (2) More severe Rh disease is expected if baby was O+ve
   (3) In maternal blood, IgG is formed primarily followed by IgM
   (4) In neonatal blood, bilirubin of 10 at 24hr necessitates exchange transfusion

103. A 21-day-old male infant presents with history of recurrent oral thrush and eczematous skin rash. The WBC counts are persistently low with normal morphology. Nitroblue tetrazolium test is negative. The most likely diagnosis is?
   (1) Severe combine immunodeficiency
   (2) Chronic Granulomatous Disease
   (3) Leukocyte Adhesion Defect
   (4) Bruton's disease
104. Placental pathology would be most important in diagnosis and management in which of the following?

(1) GBS infection
(2) Listeria infection
(3) Syphilis
(4) Preeclampsia

105. The best fit for three compartment pharmacokinetic model is?

(1) Vancomycin given IV
(2) Surfactant given via ETT
(3) Drug transport across placenta
(4) Drug transport across breast tissue

106. Cerebral blood flow decreases with all EXCEPT?

(1) Decrease pCO2
(2) Increase pO2
(3) Increase serum glucose
(4) Increase fetal Hb

107. A 14-day-old infant present with omphalitis. He is being breast fed and having seedy stools with each feeding. Physical exam is normal. The CBC showed WBC of 2500/cumm with neutrophils of 2%. After consulting with haematologist, you start G-CSF. Within 2 days the WBC rose to 6000 and neutrophils to 36%. The most likely cause is?

(1) Severe congenital neutropenia
(2) Idiopathic neutropenia of infancy
(3) Leukocyte adhesion deficiency
(4) Chronic granulomatous disease

108. A 33 wks female infant with BW of 1420 gm is noted to have prolonged bleeding after heel stick. Platelet count is 1,80,000/cumm and Prothrombin time is 40 sec. Vitamin K 1 mg IM was given with no response. The next important investigation is to check?

(1) Factor V
(2) Factor VIII
(3) vWF D.
(4) Bone marrow

109. Syndrome of Inappropriate AntiDiuretic Hormone (SIADH) is characterised by all except?

(1) Low urine output
(2) Low Na excretion
(3) High Urine Osmolality
(4) Weight gain
110. What is not true regarding Low Molecular weight heparin in comparison to unfractionated heparin?
(1) LMWH is short acting
(2) LMWH can be given subcutaneously
(3) Monitoring require anti Xa assay
(4) there is less risk of haemorrhage with LMWH

111. True statements about RhoGam are all EXCEPT?
(1) It’s a monoclonal antibody
(2) Given at 28 wks before delivery
(3) Given within 72 hrs after delivery
(4) Kliehauer-Betke test could be used to calculate the dose

112. Positive Wright stain for neutrophils with negative Gram stain is suggestive of?
(1) Benign pustular melanosis
(2) Erythema toxicum
(3) Milia
(4) Staphylococcal scalded skin syndrome

113. What is not true regarding Hirschprung disease?
(1) Baby have delayed passage of meconium.
(2) Contrast study will show dilation of aganglionic segment
(3) Histology show increase acetylcholinesterase activity
(4) Present with large bowel obstruction

114. What is odd in William syndrome?
(1) Supravalvular aortic stenosis
(2) Short stature
(3) Normal facies
(4) Mild to moderate learning difficulties

115. What is false regarding lactation management centre?
(1) It has breast milk storage & dispensing facility.
(2) Provide lactation support to all lactating mother
(3) Store donor human milk
(4) It has breast milk collection facility
116. Match the following regarding diaper dermatitis.
   a. Candida  1. Involves scalp diaper dermatitis
   b. Seborrhoic 2. Spares inguinal fold
   c. Psoriasis 3. Involves inguinal fold
   d. Irritant 4. Satellite lesions dermatitis

   (1) a : 2, b : 1, c : 4, d : 3
   (2) a : 3, b : 4, c : 2, d : 1
   (3) a : 4, b : 1, c : 3, d : 2
   (4) a : 1, b : 4, c : 2, d : 3

117. What is true regarding intraventricular haemorrhage?

   (1) Babies born between 12 am - 7 am have higher incidence of IVH
   (2) IUGR babies have higher incidence of IVH than preterm
   (3) Indomethacin increases the incidence of IVH
   (4) Genetic factors don’t predispose for IVH

118. The correlation coefficient computed for two parameters measured in 429 patients is \( r = 0.829 \). This means that:

   (1) The two parameters are directly correlated, and the link is weak
   (2) The two parameters are inversely correlated, and the link is strong
   (3) The two parameters are directly correlated, and the link is strong
   (4) There are too few cases and we do not trust this coefficient’s value

119. All is true regarding a regression line EXCEPT?

   (1) It is a straight line located as close as possible to all the points of a scatter chart
   (2) It is defined by an equation having 2 parameters: the slope and the intercept
   (3) It provides an approximate relationship between the values of two parameters
   (4) It is parallel to one of the coordinate axes

120. Which is a test to detect publication bias in meta-analysis?

   (1) Egger regression intercept
   (2) Chi squared test
   (3) Grade system
   (4) Funnel plot
121. Which of the following is not a medical journal index system?
(1) EMBASE
(2) SCOPUS
(3) Medline
(4) Medscape

122. Which of the following is not a grade domain for rating down?
(1) Publication bias
(2) Inconsistency
(3) Dose response gradient
(4) Indirectness

123. What is current Infant mortality rate of India?
(1) 35
(2) 30
(3) 27
(4) 36

124. Who fund the Pradhan Mantri Jan Arogya Yojna?
(1) 100% by Central Government
(2) 100% by State Government
(3) 50:50 by Central & State government
(4) 60:40 by Central & State government

125. Which of following is not an objective of LaQshya program?
(1) To reduce maternal & neonatal mortality & morbidity
(2) To improve quality of care during delivery & immediate postpartum period
(3) To improve childhood immunization coverage
(4) To provide respectful maternity care

126. Which of the following condition is not covered under Rashtriya Bal Swasthya Karyakram (RBSK)?
(1) Birth defects
(2) Developmental delay and disabilities
(3) Childhood deficiency disorders
(4) Childhood trauma and accidents

127. What is a false statement regarding Janani Shishu Suraksha Karyakaram (JSSK)?
(1) JSSK cover pregnant women including delivery & cesarian section
(2) It provide free transportation, from home to hospital and back
(3) JSSK covers rural & urban woman & newborn population
(4) JSSK covers newborn upto 30 days of life
128. What is not true regarding Home based newborn care?
(1) Services are delivered by ASHA worker
(2) Six home visit in first 42 day of life
(3) Focus is to strengthen health & nutrition of mother and baby
(4) Childhood Immunisation is not covered in Home based newborn care program

129. What is not true regarding YASHODA initiative?
(1) YASHODA is a regular employe of health system
(2) The program is supported by Norway government
(3) The work are is in public health facility
(4) Birth immunisation is a quality indicator for the initiative

130. Extended Wigglesworth classification is used for investigation of?
(1) Neonatal Deaths
(2) Perinatal deaths
(3) Maternal Mortality
(4) Under five mortality

131. How much is the share of neonatal deaths among all under five deaths?
(1) 27%
(2) 37%
(3) 47%
(4) 57%

132. What is the mean duration of gestation for triplets?
(1) 32 weeks
(2) 34 weeks
(3) 35 weeks
(4) 36 weeks

133. As per Indian guideline, what is not true regarding cut off gestation age/weight for ROP screening eligibility?
(1) Any preterm infant at the discretion of treating paediatrician or neonatologist
(2) If gestation is not known, Birth weight 2000 grams or less
(3) Gestation age more than 34 weeks with risk factors
(4) Gestation age 32 weeks or less, even without risk factor
134. Aggressive Posterior Retinopathy Of Prematurity (APROP) is characterised by all except?

(1) Involvement of Zone 1 or Zone 2 posterior
(2) Rapid progression to retinal detachment
(3) Early elevated neo vascularisation
(4) Intraretinal shunting

135. What is true regarding brain death in newborns?

(1) The diagnosis of Brain death can’t be made in preterm infants less than 37 weeks.
(2) An interval observation period of 12 hours should be given between two separate examinations.
(3) Apnea test requires rise in arterial PaCO2 by 10 mmHg.
(4) EEG is mandatory to establish brain death in newborn.

136. Which is not a cause for Methemoglobinemia?

(1) Inhaled Nitric oxide
(2) Dapsone
(3) EMLA
(4) Ciprofloxacin

137. What is not true regarding preterm immunization?

(1) The antibody response is equal to term infant.
(2) Vaccine are safe and well tolerated by them.
(3) The schedule is same as for term infants.
(4) An additional dose of hepatitis B vaccine should be given.

138. Match the following medicines and the teratogenic effect.

a. Valproate 1. Skeletal dysplasia
b. Carbamazepine 2. Tooth enamel Hypoplasia
c. Coumarin derivatives 3. Neural tube defect
d. Tetracyclins 4. Cranio facial defect

(1) a : 2, b : 1, c : 4, d : 3
(2) a : 3, b : 4, c : 1, d : 2
(3) a : 4, b : 1, c : 3, d : 2
(4) a : 1, b : 4, c : 2, d : 3
139. Match the following structure and their embryonic counterparts.

a. Urachus  
   1. Connection between midgut to yolk sac

b. Vitello intestinal duct  
   2. Umbilical vein

c. Falceparum Ligament  
   3. Cloaca & Alantois

d. Round ligament of mesentery liver  
   4. Ventricle (1) a : 2, b : 1, c : 4, d : 3
   (2) a : 3, b : 1, c : 4, d : 2
   (3) a : 4, b : 1, c : 3, d : 2
   (4) a : 1, b : 4, c : 2, d : 3

140. Which is a false statement?

(1) Stillbirth is a baby born with no sign of life at or after 28 weeks of gestation.
(2) The current perinatal mortality rate in India is 45 per 1000.
(3) 60% of perinatal death are stillbirths.
(4) The WHO target under Every Newborn Action Plan is to decrease stillbirth rate to 12/1000 birth by 2030.

141. Which intestinal atresia is most common?

(1) Duodenal atresia
(2) Ileal atresia
(3) Jejunal atresia
(4) Colonic atresia

142. What is not true regarding Transient Myeloproliferative Disorder?

(1) Exclusively affect newborn with Down’s syndrome
(2) Also known as Transient abnormal myelopoiesis
(3) Most definitive test is GATA1 mutation
(4) Spontaneous resolution is a rule over 3-6 months

143. What conditions may make us suspect an interruption in normal transition to extraterine breathing?

(1) Tachycardia and high systolic blood pressure
(2) Tachypnea and bradycardia
(3) Tachypnea with acrocyanosis
(4) Tachycardia and Apgar of 9
144. When resuscitating a newborn with chest compression, how much oxygen concentration should be used?

(1) 21%
(2) 30%
(3) 40%
(4) 100%

145. Which is not a valid reason to withhold resuscitation in newborn?

(1) Weight <500 grams
(2) Gestation <23 weeks
(3) Trisomy 13 or 18
(4) Anencephaly

146. Resuscitation can be discontinued if there is no heart rate and breathing for?

(1) 10 min
(2) 15 min
(3) 20 min
(4) 30 min

147. What is false statement regarding Maternal lupus and neonatal heart blocks?

(1) Peak age of onset of bradycardia is 18-22 weeks.
(2) Maternal Dexamethasone is a standard therapy.
(3) Babies can develop cardiomyopathy in long term.
(4) All pregnant ladies are symptomatic at the time of diagnosis.

148. Which variety of choledochal cyst is commonest?

(1) Type 1 (Extraheptic dilatation)
(2) Type 2 (Diverticulum)
(3) Type 3 (Intraheptic Dilataion)
(4) Type 4 (Both Intra & Extra hepatic dilatation)

149. A preterm otherwise well baby had sudden abdominal distension and bluish discolouration of abdomen wall on day 7 of life. X-ray show pneumoperitoneum. Laprotomy reveal ileal perforation and rest of gut as healthy. What is most probable diagnosis?

(1) Necrotising enterocolitis stage 3
(2) Spontaneous intestinal perforation
(3) Intestinal sepsis and septic perforation
(4) Ischemic perforation of gut
150. What is not true regarding Total Parenteral Nutrition (TPN)?

(1) SMOF oil is a better choice than only soya based fat preparations.

(2) 20% lipid formulation are better tolerated than 10% lipid formulation.

(3) Amino acids are the primary cause of TPN related hepatotoxicity.

(4) Aluminium toxicity via TPN can worsen neurodevelopment outcome.

151. What is the formula for Cerebroplacental ratio?

(1) Middle cerebral artery pulsatility index divided by uterine artery pulsatility index

(2) Uterine artery pulsatility index divided by Middle cerebral artery pulsatility index

(3) Middle cerebral artery resistance index divided by uterine artery resistance index

(4) Uterine artery resistance index divided by Middle cerebral artery resistance index

152. Lactation has strongest preventive effect on which type of maternal cancer?

(1) Breast cancer

(2) Ovarian cancer

(3) Endometrial cancer

(4) Cervical cancer

153. All are proven benefits of oral colostrum application, except?

(1) Reaching full enteral feed volume early

(2) Earlier initiation of enteral feeding

(3) Reduced length of stay

(4) Reduced incidence of NEC

154. Which one of following is not a NEC score?

(1) NeoNEEDS

(2) GutCheck

(3) eNEC

(4) NIRS

155. Which is not an EGG finding of hyperkalemia?

(1) Tall P wave

(2) Tall T wave

(3) Wide QRS complex

(4) Increased PR interval
156. What is not true regarding adverse effects of Bicarbonate therapy in Metabolic acidosis?
(1) Increase in IVH
(2) Deteriorate cardiac function
(3) Increase myocardial injury
(4) Improve intracellular acidosis

157. What is the false statement regarding FENa?
(1) The correct formula for FENa is (urinary sodium multiplied by serum creatinine) divided by (urinary creatinine multiplied by serum sodium)
(2) FENa cutoff decreases with decreasing gestational age
(3) FENa is a direct measure of renal tubule handling of filtered sodium
(4) FENa should not be used in <28 weeks to define AKI

159. The yield of blood culture can be increased by all, EXCEPT?
(1) Taking culture sample before starting antibiotic
(2) Increasing volume of blood for culture
(3) Using automated culture system
(4) Taking samples from central lines.

160. A newborn with Neonatal sepsis, has developed paucity of right lower limb movement during the course of treatment. His CRP has increased. What is the most probable possibility?
(1) Right Knee septic arthritis
(2) Right Hip arthritis
(3) Left cerebral abscess
(4) Complicated meningitis

161. Antenatal scan show left kidney pelvicalyeal system AP diameter of 12 mm, normal ureter, normal amniotic fluid volume and normal bladder. Right kidney is normal. Which of the following statement is false?
(1) Postnatal ultrasound should be done after 48 hours of age.
(2) Most likely cause is Pelvi-ureteric junction obstruction.
(3) Most likely cause is Vesico ureteric reflex.
(4) No antenatal intervention is required.
162. Earliest changes of perinatal asphyxia will be picked up by?
   (1) T1 weighted images of MRI
   (2) T2 weighted images of MRI
   (3) Diffusion weighted images of MRI
   (4) T1 Inversion images of MRI

163. Upper Gastro intestinal losses should be replaced by?
   (1) N/2 Saline with KCl
   (2) Normal saline with KCl
   (3) Ringer lactate with KCl
   (4) Isolate P 5%

164. Which of the following is not a seizure mimic?
   (1) Myoclonic spasm
   (2) Hyperkplexia
   (3) Motor automatism
   (4) Tonic posturing

165. The duration of antibiotic for neonatal meningitis is?
   (1) 7 days
   (2) 14 days
   (3) 21 Days
   (4) 28 Days

166. What is the predictor of poor prognosis in MRS, in perinatal asphyxia?
   (1) Elevated lactate
   (2) Elevated ratio of Lactate to pyruvate
   (3) Elevated ratio of Lactate to n-acetyl aspartate
   (4) Elevated n-acetyl aspartate

167. Abnormal sign in posterior limb of internal capsule is a poor prognostic marker for?
   (1) Perinatal asphyxia
   (2) Kernicterus
   (3) Hypoglycemia
   (4) Maple syrup Urine Diseases

168. A 28 week baby recovering from RDS, develop increased ventilatory requirement on day 3 of life. Sepsis screen is negative, ABG is showing metabolic acidosis, and murmur is present on auscultation. What is further course of action?
   (1) Second dose of surfactant
   (2) Upgrading antibiotic
   (3) Getting ECHO and starting Paracetamol
   (4) Giving a fluid bolus
169. Which of the following is not a high risk antenatal factor for Developmental Dysplasia of Hip (DDH)?
   (1) Female sex
   (2) Breech presentation
   (3) Primigravida
   (4) Polyhydramnios

170. Which of the following is the most sensitive marker for Osteopenia Of Prematurity?
   (1) Hypocalcemia and raised Alkaline phosphate
   (2) Hypophosphatemia and raised Alkaline phosphate
   (3) Raised Alkaline phosphate
   (4) Hyperphosphatemia

171. Which of the following statement is false regarding Pulse oximeter screening?
   (1) Waiting for screening until 24 hours of life will decrease false positive result
   (2) Passed screening is Right hand or foot saturation 95% or greater and difference is < 3%
   (3) Pulse oximeter Screening can detect majority of correction of aorta.
   (4) Screen should not be repeated if right hand saturation is less than 90%.

172. Which one is a postnatal growth chart?
   (1) Lubchenco
   (2) Colorado
   (3) Fenton
   (4) Ehrancranz

173. Which one is not treatment for fetal Supraventricular tachycardia?
   (1) Digoxin
   (2) Flecainide
   (3) Sotalol
   (4) Amiodarone

174. Which is not a Quality Improvement study tool?
   (1) PDSA Cycle
   (2) Root cause analysis
   (3) Blinding
   (4) Six Sigma

175. Match the following.
   a. Randomised 1. PRISMA
      Controlled Trial
   b. Meta-analysis 2. CHOP
      screening checklist
   c. Observational 3. STROBE
      study
   d. Quality 4. CONSORT
      Improvement Projects
   (1) a : 1, b : 2, c : 3, d : 4
   (2) a : 4, b : 1, c : 3, d : 2
   (3) a : 3, b : 4, c : 1, d : 2
   (4) a : 2, b : 1, c : 4, d : 3
176. Match the following:

a. Chi Square Test 1. Compare multiple sample with single test
b. ANOVA 2. Compare categorical variable
c. T test 3. Test of normal distribution
d. Z test 4. Compare mean of two given sample

(1) a : 1, b : 2, c : 3, d : 4
(2) a : 4, b : 1, c : 3, d : 2
(3) a : 3, b : 4, c : 1, d : 2
(4) a : 2, b : 1, c : 4, d : 3

178. In intrauterine transfusion, blood is transfused in?

(1) Fetal peritoneal cavity
(2) Umbilical artery
(3) Umbilical Vein
(4) Placenta

179. Which agent is used for fetal reduction?

(1) KCl
(2) CaCl2
(3) Hypertonic saline
(4) Bleomycin

180. Which one of following is not an evidence based strategy to decrease ventilatory associated pneumonia in newborn?

(1) Head of bed elevation by 30-45 degree
(2) Hand hygiene
(3) Using closed suction system for endotracheal tube suction
(4) Changing ventilator circuit if visible soiled