

D.M. Neonatology

Test Booklet Serial No.....

Series No. :

Number of Questions : 120

Time Allowed : 2 hours

Booklet Contains Pages : 36

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1. A neonate presents with multiple blisters and periostitis, appropriate test is :
 - (A) HbsAg
 - (B) VDRL
 - (C) Elisa for HIV
 - (D) PCR for TB

2. Large for gestational age (LGA) infant are seen in all except :
 - (A) Congenital rubella syndrome
 - (B) Transposition of great arteries
 - (C) Erythroblastosis fetalis
 - (D) Beckwith Wiedemann syndrome

3. Blue berry muffin spot are seen in infection with all except :
 - (A) CMV
 - (B) Rubella
 - (C) Parvovirus
 - (D) Toxoplasmosis

4. Primary apnea is characterized by all except :
 - (A) Fall in BP
 - (B) Fall in HR
 - (C) Ceasing of respiratory effort
 - (D) Neuromuscular tone decreases

5. A patient with apgar score 1 and 2 at 1 and 5 min, respectively appear hyper-alert and has hyperactive deep tendon reflexes and mydriasis. The most common likely diagnosis is :
- (A) Stage 1 HIE
 - (B) Stage 2 HIE
 - (C) Stage 3 HIE
 - (D) Kernicterus
6. A newborn female has a ventricular septal defect, cleft lip and palate and imperforate anus. All of the following laboratory tests would be appropriate except :
- (A) A karyotype analysis
 - (B) Torch titre
 - (C) Renal ultrasonography
 - (D) USG Brain
7. Phototherapy converts unconjugated bilirubin to more soluble bilirubin by :
- (A) E isomerisation
 - (B) Z isomerisation
 - (C) H isomerisation
 - (D) P isomerisation
8. Direct reacting hyperbilirubinemia on 10 day of life suggests all of following except :
- (A) Cystic fibrosis
 - (B) Galactosemia
 - (C) Neonatal hepatitis
 - (D) Gilbert disease

9. The essential AA present in breast milk are :
- (A) Methionine and Tryptophan
 - (B) Cysteine and Taurine
 - (C) Tyrosine and Methionine
 - (D) Leucine and Valine
10. A 3600 g breast fed female 42 weeks gestational age is noted to have persistent hyperbilirubinemia at 2 weeks of age. On physical examination the infant has not gained weight since birth and has decrease tone an umbilical hernia and an anterior fontanel measuring 4×6 cm. The most likely diagnosis is :
- (A) CriglerNajjar syndrome
 - (B) Gilbert disease
 - (C) Hypothyroidism
 - (D) Galactosemia
11. Commonest abdominal mass in a neonate is :
- (A) Wilm's tumour
 - (B) Polycystic kidney
 - (C) Multiple dysplastic kidney
 - (D) Rhabdomyosarcoma
12. All of the following are seen in the cold injury of preterm neonate except :
- (A) Bradycardia
 - (B) Shivering
 - (C) Sclerema
 - (D) Metabolic acidosis

13. Artificial feeding causes all the following except :
- (A) NEC
 - (B) Eczema
 - (C) Late onset tetany
 - (D) Haemorrhagic disease
14. Which of the following statement about 21 alpha hydroxylase deficiency is false ?
- (A) Most common cause of congenital hyperplasia in children
 - (B) Affected females present with ambiguous genitalia
 - (C) Affected males present with precocious puberty
 - (D) Hypokalemic alkalosis is seen
15. Which condition is most commonly associated with coarctation of aorta ?
- (A) Patent ductus arteriosus
 - (B) Bicuspid aortic valve
 - (C) Ventricular septal defect
 - (D) Aortic stenosis
16. Which of the following agent is likely to cause cerebral calcification & hydrocephalus in a newborn whose mother has history of taking spiramycin but was not compliant with therapy ?
- (A) Rubella
 - (B) Toxoplasmosis
 - (C) Cytomegalovirus
 - (D) Herpes

17. All of the following are true about childhood polycystic kidney disease, except :
- (A) Autosomal dominant
 - (B) Pulmonary hypoplasia may be seen
 - (C) Renal cysts are present at birth
 - (D) Congenital hepatic fibrosis may be seen
18. Primary metabolic bone disorder in scurvy is :
- (A) Decreased mineralization
 - (B) Decreased osteoid matrix formation
 - (C) Increased bone resorption
 - (D) Decreased bone mass with normal mineralization and osteoid formation
19. Which of the following regarding Kawasaki disease is true ?
- (A) Associated with coronary artery aneurysm in up to 25% of untreated cases
 - (B) It is the most common cause of vasculitis in children
 - (C) IV immunoglobulins are recommended only if coronary artery is involved
 - (D) Lymph node biopsy is useful for diagnosis
20. All of the following statements about Patent Ductus Arteriosus are true, except :
- (A) It is more common in males than females
 - (B) It is common heart lesion in rubella
 - (C) Treatment is closure of defect by ligation and division of ductus
 - (D) Hypoxia and immaturity are important in maintaining the patency

21. Which drug can produce HCM in premature infant ?
- (A) Bronchodilator
 - (B) Steroids
 - (C) Antibiotics
 - (D) None of above
22. Most common tumour of heart in children :
- (A) Rhabdomyoma
 - (B) Lipoma
 - (C) Fibroblastoma
 - (D) Neurofibroma
23. Which drug is contraindicated in digitalis toxicity ?
- (A) Phenytoin
 - (B) Lidocaine
 - (C) Quinidine
 - (D) Amiodarone
24. Mannitol prevents Na reabsorption in :
- (A) PCT
 - (B) DCT
 - (C) Loop of henle
 - (D) None of above

25. What is normal average stool content of sodium in a newborn who is fed on breast feed ?
- (A) 19 meg/It
 - (B) 26 meg/It
 - (C) 22 meg/It
 - (D) 27 meg/It
26. At what point of infancy extracellular and intracellular fluid volume are equal :
- (A) 1 month
 - (B) 3 month
 - (C) 5 month
 - (D) 9 month
27. Newborns have transplacentally acquired immunity against all of above following disorder, except :
- (A) Measles
 - (B) Pertusis
 - (C) Diptheria
 - (D) Poliomyelitis
28. Fetal acidosis is $\text{pH} <$
- (A) 7.0
 - (B) 7.2
 - (C) 7.3
 - (D) 7.4

29. Splenomegaly in absence of hepatomegaly is most likely to be seen in :
- (A) Fabry's disease
 - (B) Niemann pick disease
 - (C) Infantile Gaucher disease
 - (D) Congenital erythropoietic porphyrin
30. Surfactant precursors appear as inclusion bodies in alveolar lining cell by _____ wks.
- (A) 20
 - (B) 24
 - (C) 28
 - (D) 32
31. Ammoniacal urine may result in :
- (A) Urethritis
 - (B) Pyelonephritis
 - (C) Hydronephrosis
 - (D) Meatal ulcer
32. Spinal Dysgraphism includes all except :
- (A) Interspinal lipoma
 - (B) Diastematomyelia
 - (C) Meningocele
 - (D) Lateral thoracic meningocele

33. Virilisation of female is present in all of following except :
- (A) 21 beta hydroxylase deficiency
 - (B) 12 beta hydroxylase deficiency
 - (C) 11 beta hydroxylase deficiency
 - (D) 17 alpha hydroxylase deficiency
34. Bone age is normal in :
- (A) Genetic short stature
 - (B) Hypopituitarism
 - (C) Hypothyroidism
 - (D) Emotional deprivation
35. What is not true of classical neimann pick disease ?
- (A) Infantile convulsion
 - (B) Muscular degeneration
 - (C) Hepatosplenomegaly
 - (D) Partial blindness
36. Which statement about umbilical artery Doppler assessment is true ?
- (A) Assesses downstream (placental) resistance
 - (B) Should be used as screening test in all pregnancies
 - (C) When used in conjunction with other test of fetal well being, it can reduce perinatal mortality by 95%
 - (D) Does not improve perinatal outcome in pregnancies with growth restricted fetuses

37. Which of the following statement is false ?
- (A) Early continuous Positive pressure ventilation (CPAP) decreases need for mechanical ventilation
 - (B) Early CPAP decreases the need for surfactant administration
 - (C) Early CPAP can increase intraventricular hemorrhage in extreme preterms
 - (D) CPAP improves lung growth
38. All are true regarding Twin gestation, except :
- (A) Splitting of the egg between 4 to 7 days results in monochorionic monoamniotic placenta
 - (B) The risk of having a chromosomal abnormality is twice as compared to singleton pregnancy
 - (C) The average gestational age at birth for twins is 34 weeks
 - (D) In the pathophysiology of TTTS (twin to twin transfusion syndrome), an Arterio-arterial (AA) connection is thought to be protective
39. Which is false about neonatal skin ?
- (A) Stratum corneum is generally formed after 23-24 wks gestation
 - (B) An intact Stratum corneum forms the primary skin barrier to water loss and infection
 - (C) A 'faster tracking of the physiological maturation of skin occurs once a baby is born premature
 - (D) The normal skin pH of newborn babies is slightly alkaline

40. Which statement is true regarding neonatal sepsis ?
- (A) Sepsis screen is used to 'rule in' sepsis
 - (B) Most common organism causing neonatal sepsis in India is Group B streptococcus
 - (C) Routine use of conventional intravenous immunoglobulin (IVIG) has no role in the treatment of neonatal sepsis
 - (D) The incidence of meningitis is higher with late onset sepsis
41. After birth, which of following changes does not occur in neonatal circulation ?
- (A) Increase in pulmonary vascular resistance
 - (B) Increase in systemic vascular resistance
 - (C) Increase in partial pressure of oxygen in arterial blood
 - (D) Increase in blood pressure
42. A one day old female neonate 1.7 kg is brought to hospital with rectal temp of 36.1 C. Vitals are otherwise stable and blood glucose is 82 mg/dL. What is the preferred method of rewarming the baby ?
- (A) Warm intravenous fluids
 - (B) Incubator
 - (C) Radiant warmer
 - (D) Skin to skin contact
43. Congenital nephrotic syndrome can be due to all except :
- (A) HIV
 - (B) Congenital syphilis
 - (C) NPHS 1 and NPHS 2 mutation
 - (D) Herpes simplex

44. Prenatal sex determination is indicated in :
- (A) Previous unexplained abortions
 - (B) Previous offspring with congenital adrenal hyperplasia
 - (C) Mitochondrial inheritance in the family
 - (D) Mother on chemotherapy
45. All are feature of neonatal thyrotoxicosis except :
- (A) Poor weight gain
 - (B) Endocardial Cushion defect
 - (C) Prematurity
 - (D) Fulminant hepatic failure
46. The laboratory parameter with highest positive predictive value for diagnosis of neonatal sepsis :
- (A) Immature to total neutrophil ratio
 - (B) C-reactive protein
 - (C) Gastric aspirate stains
 - (D) Micro ESR
47. Which is true about exchange transfusion in newborns ?
- (A) A double volume, exchanges 95% of blood volume
 - (B) At 60 minutes post-exchange, the serum bilirubin is 40% of the pre exchange value
 - (C) Hypoglycemia can occur at 6 hours following exchange
 - (D) Graft versus host disease is a potential complication

48. Which is true regarding congenital toxoplasmosis ?
- (A) The most specific method for detecting toxoplasma specific IgM in newborn is double sandwich ELISA
 - (B) Symptomatic newborn should receive treatment whereas asymptomatic newborns can be followed up with serial IgM and IgG antibody titres
 - (C) There is no difference in the neurological outcome between infants receiving short course treatment of one month and treatment for more than one year
 - (D) The classic triad of congenital toxoplasmosis includes chorioretinitis, hydrocephalus and cataracts
49. The correct sequence of resuscitating a term newborn born through meconium stained liquor with poor tone and absent spontaneous respiratory efforts will be :
- I. Place the newborn under radiant warmer
 - II. Re-intubate, give positive pressure ventilations
 - III. Dry the newborn in three quick steps
 - IV. Position, intubate and do endotracheal suctioning
- (A) I, III, II, IV
 - (B) I, III, IV, II
 - (C) I, IV, II, III
 - (D) I, IV, III, II
50. A 38 year old lady has a daughter who has Down's syndrome. The father has 21/21 balanced translocation. The risk of Down's syndrome in the next child is :
- (A) 3 to 5%
 - (B) 25%
 - (C) 50%
 - (D) 100%

51. The most common cause of persistent hypoglycemia in newborn is :
- (A) Glycogen storage disease type 1
 - (B) Fatty acid oxidation defects
 - (C) Hyperinsulinemia
 - (D) Beckwith Wiedemann syndrome
52. The benefits of KMC include :
- (A) Lesser incidence of infections
 - (B) Better neurological outcomes at 5 years of age
 - (C) Lower rates of bronchopulmonary dysplasia
 - (D) Lesser incidence of IVH
53. All of the following are causes of neonatal polycythemia except :
- (A) Maternal diabetes
 - (B) Neonatal hyperthyroidism
 - (C) SGA
 - (D) Neonatal hemosiderosis
54. A term newborn with birth weight 3kg presented to ER on day 5 with jaundice, lethargy and shrill cry. On examination baby had arching of neck, retrocollis. There is no hepatosplenomegaly. Baby on day 5 is weighing 2.7 kg. Investigations shows serum bilirubin of 26 mg/dl and serum sodium of 148 mEq/L. What is your plan of action ?
- (A) Start intensive phototherapy and correct dehydration with IV fluids and wait for decline in serum bilirubin and serum sodium
 - (B) Start intensive phototherapy and plan for urgent double volume exchange transfusion
 - (C) Start phototherapy with high irradiance of 60 μ W/cm/nm only
 - (D) Start intensive phototherapy and give Phenobarbitone

55. A term well baby with birth weight of 2.5 is born to mother having history of pulmonary tuberculosis 5 years back. Mother was treated adequately and during current pregnancy did not have any symptoms. What will be your plan of management regarding the baby ?
- (A) Get a Mantoux test and start on isoniazid and rifampicin prophylaxis
 - (B) Isolate the baby from mother, start prophylaxis with isoniazid and rifampicin
 - (C) Send Gastric juice for Acid fast bacilli, Chest x-ray and lumber puncture and treat if baby is infected
 - (D) Do not isolate the baby from mother, and no active intervention needed
56. A well neonate presented with skin bleeds. Investigations showed normal platelet, prothrombin time and activated partial thromboplastin time. Following are differential diagnosis except :
- (A) Qualitative platelet defect
 - (B) Factor XIII deficiency
 - (C) Trauma
 - (D) Vitamin K deficiency
57. A six weeks male baby presented with failure to thrive, His vital were stable with normal blood pressure. Laboratory workup showed random blood glucose: 60 mg/dL; Serum sodium: 122 mEq/L; Serum Potassium: 6.9 mEq/L; Serum urea: 25 mg/dL and serum creatinine: 0.6 mg/dL. The most likely diagnosis is :
- (A) Gitelman syndrome
 - (B) Bartter syndrome
 - (C) 21-hydroxylase deficiency
 - (D) 11 β hydroxylase deficiency

58. A 6 week baby presented with deep jaundice. There is history of acholic stools with high colored urine. Which of the following test will be least useful ?
- (A) Daily stool examination with cutting of stools
 - (B) Ultrasound examination
 - (C) G6PD levels in the blood
 - (D) Liver function test
59. A home delivered term baby on day 1 came to ER with respiratory distress. On examination, abdomen was scaphoid with breath sounds decreased on left side. Cardiac impulse was shifted towards the right side. The likely diagnosis is :
- (A) Transient tachypnea of newborn
 - (B) Congenital diaphragmatic hernia
 - (C) Hyaline membrane disease
 - (D) Aspiration pneumonia
60. A 37 weeker baby weighing 3.2 kg had Apgar scores of 2, 4 and 7 at 1, 5 and 10 minutes of life respectively. Further examination of the baby at 6 hours of life, showed the following findings: Baby is lethargic, has mild hypotonia, poor suck, miosis with increased oral secretions. His heart rate is 100/min with normal blood pressure and perfusion. His respiratory efforts are normal. According to Sarnat and Sarnat classification what stage of encephalopathy does this baby have ?
- (A) Stage 1
 - (B) Stage 2
 - (C) Stage 3
 - (D) Mild encephalopathy

61. A 38 weeker baby was born by vaginal delivery. At 1 minute of life the baby has a heart rate of 110/mt, gasping respiratory effort, no response to stimulation and bluish discoloration of tongue. His extremities are kept at a posture of mild flexion. His peripheral pulses are poorly palpable and have a prolonged capillary filling time. What is the Apgar score of the baby ?
- (A) 2
 - (B) 3
 - (C) 4
 - (D) 5
62. NBS (New Ballard Scoring) is an important bed side tool for assessing gestational age. Out of the physical maturity criteria in NBS, which one has got a maximum score of 5 ?
- (A) Skin
 - (B) Lanugo
 - (C) Plantar surface
 - (D) Breast
63. In a city of total population 1,00,000 during year 2012, 2000 babies were delivered. Of these 200 neonates were born dead. Among 1800 live births, 400 weighed less than 2.5 kg at birth. Of these 36 died within first 28 days and 18 died after 28 days but before reaching their first birthday. What is neonatal mortality rate for this city ?
- (A) 18
 - (B) 27
 - (C) 20
 - (D) 30

64. A 34 week male child is born by preterm labor following pPROM of 36 hours duration. The child has tachypnea with respiratory rate of 69/min of life. There are no retractions or grunt. What will be the immediate management required in the child ?
- (A) Early nasal CPAP therapy
 - (B) Early rescue surfactant therapy
 - (C) IV antibiotics and oxygen
 - (D) Oxygen through blender and head box alone
65. Which of the following statistical tests should be used to compare the means of 2 groups of newborns-a group of 28-30 weekers with mean \pm SD bilirubin levels of 12.3 \pm 7.2 mg/dL and a group of 37-40 weekers with mean \pm SD bilirubin levels of 16.3 \pm 9.1 mg/dL ?
- (A) Fisher's exact test
 - (B) Unpaired t test
 - (C) Paired t test
 - (D) Mann-Whitney U test
66. In patients with metabolic alkalosis, low urine chloride levels are seen in all except :
- (A) Acute correction of chronically compensated respiratory acidosis
 - (B) Continuous naso-gastric suction
 - (C) Idiopathic infantile hypertrophic pyloric stenosis
 - (D) Bartter syndrome
67. Hand washing with soap and water is superior to Alcohol based hand rub in all of the following scenarios except :
- (A) When hands are visibly soiled
 - (B) After removing gloves
 - (C) Using toilet
 - (D) Routine patient contact

68. In general, which statement is true about vaccination of preterm infants ?
- (A) They should be vaccinated as per corrected age
 - (B) They should be vaccinated as per chronological age
 - (C) The vaccination should begin once they are more than 2 kg
 - (D) Oral vaccines should not be given to them till they reach 40 weeks corrected age
69. Major diagnostic criteria for staphylococcal toxic shock syndrome include all, except :
- (A) Thrombocytopenia ($<100000/\text{mm}^3$)
 - (B) Hypotension
 - (C) Erythroderma
 - (D) Acute fever
70. Which is the most appropriate therapeutic choice for maintaining patency of ductus arteriosus in a neonate ?
- (A) Nitric oxide
 - (B) Oxygen
 - (C) Prostaglandin E1
 - (D) Indomethacin
71. Figure of 8 configuration on chest radiograph is seen in which one of the following congenital heart disease :
- (A) Tetralogy of Fallor
 - (B) Total Anomalous Pulmonary Venous Drainage
 - (C) Atrial Septal defect
 - (D) Ventricular Septal defect

72. All of the following are causes of congestive cardiac failure soon after birth except :
- (A) Arteriovenous malformation (B) Tricuspid regurgitation
(C) Perinatal asphyxia (D) Coarctation of aorta
73. Oral rehydration therapy in neonates which of the following is correct :
- (A) Standard ORS is not safe for rehydration in low birth weight babies
(B) Periorbital swelling and mild pedal edema is uncommon with standard WHO-ORS
(C) Standard WHO-ORS with 90 mmol/L sodium can be safely given, if the baby is able to breast feed
(D) Excessive sodium retention and incidence of hypernatremia is low with WHO-ORS
74. All of the following are true regarding neonatal hypoglycemia except :
- (A) Congenital hyperinsulinism is associated with low ketones and free fatty acid levels in blood
(B) Fatty acid oxidation defect is associated with high free fatty acid levels, with no acidosis
(C) Surgery is the treatment of choice for congenital hyperinsulinism
(D) Brain can utilize ketones during hypoglycemia
75. In a 2 days old neonate with stridor which of the following is the most common etiology :
- (A) Laryngomalacia
(B) Vascular ring
(C) Congenital subglottic stenosis
(D) Vocal cord paralysis

76. Midpoint of the body of newborn is :
- (A) Public symphysis
 - (B) Just below public symphysis
 - (C) Umbilicus
 - (D) Just above umbilicus
77. Which one is abnormal ?
- (A) Inverted T wave in V4R in a 1 month old baby
 - (B) Upright T wave in V3R in a day 10 old neonate
 - (C) QRS frontal plane axis of 150° in a newborn
 - (D) R:S ratio > 1 in V5 in newborn
78. Severity of PDA is determined by :
- (A) Length of the murmur
 - (B) Intensity of the murmur
 - (C) S3 and mid diastolic murmur
 - (D) Hyperactive precordium
79. The most common clinical complication noted after umbilical artery catheterization is :
- (A) Hematuria
 - (B) Hypertension
 - (C) Necrotizing enterocolitis
 - (D) Leg blanching

80. A newborn infant with meningocele who has progressive enlargement of the head after birth. The birth defect with which it is most likely associated with is :
- (A) Platybasia
 - (B) Arnold-Chiari malformation
 - (C) Syringomyelia
 - (D) Lissencephaly
81. What is the most important ultrasonographic finding that predicts spastic diplegia in preterm neonates ?
- (A) Grade 3IVH
 - (B) Cystic periventricular leucomalacia
 - (C) Occipital flare
 - (D) Choroid cyst
82. Following are the physiological effects of CPAP, except :
- (A) Prevent the collapse of the alveoli
 - (B) Decreases pulmonary compliance
 - (C) Increases the functional residual capacity
 - (D) Decreases the airway resistance
83. In a brainstem auditory evoked response recording wave V corresponds to activity of :
- (A) Medial lemniscus
 - (B) Inferior colliculus
 - (C) Superior colliculus
 - (D) Superior olivary nucleus

84. The best measure of bilirubin production is :
- (A) HbCO measurement
 - (B) End tidal carbon monoxide measurement
 - (C) Serum bilirubin
 - (D) Reticulocyte count
85. At what age extracellular fluid is equal to the intracellular fluid :
- (A) 14 days
 - (B) 4 weeks
 - (C) 2 months
 - (D) 3 months
86. Which segment of the fetal circulation contains the highest O₂ ?
- (A) Right atrium
 - (B) Right ventricle
 - (C) Left ventricle
 - (D) Umbilical artery
87. Most of the gas exchange during mechanical ventilation with a normal I:E ratio occurs during :
- (A) Inspiration
 - (B) The inspiratory plateau
 - (C) Exhalation
 - (D) Gas exchange is uniform throughout the respiratory cycle

88. In which colored bin, should contaminated gauze in an ICU be discarded ?
- (A) Yellow
 - (B) Blue
 - (C) Black
 - (D) White
89. When should the umbilical cord usually be tied and cut ?
- (A) After the placenta is delivered
 - (B) Around 1-3 minutes after birth
 - (C) Immediately after the baby is born
 - (D) Before a baby has cried
90. Optimum gestational age for chorionic villus sampling is :
- (A) 8 to 10 weeks
 - (B) 10 to 12 weeks
 - (C) 12 to 14 weeks
 - (D) 14 to 16 weeks
91. Ferric chloride test is positive in urine screen of :
- (A) Organic aciduria
 - (B) Amino-aciduria
 - (C) Congenital lactic acidemia
 - (D) Peroxisomal disorder

92. Kappa statistics provides which of the following information :
- (A) Incidence
 - (B) Likelihood ratio
 - (C) Survival
 - (D) Agreement
93. A newborn presents with unilateral conjunctivitis on the 7 day of life. What is the most likely etiology in her ?
- (A) Gonococcal ophthalmia
 - (B) Chlamydial ophthalmia
 - (C) Sticky eyes
 - (D) Staphylococcal conjunctivitis
94. Which of the following is the most reliable intervention for translocating K^+ into the cells in patients with severe hyperkalemia ?
- (A) Insulin
 - (B) Sodium bicarbonate
 - (C) Salbutamol
 - (D) Calcium
95. Which of the following is an effective screening test for T-cell function ?
- (A) Absolute lymphocyte count
 - (B) Flow cytometry for CD4 (helper) and CD8 (cytotoxic) T cells
 - (C) Respiratory burst assay
 - (D) Candida skin test

96. The Millennium Development Goal 5 relates to :
- (A) Reducing maternal mortality
 - (B) Reducing burden of HIV
 - (C) Reducing child mortality
 - (D) Reducing burden of malaria
97. Under the Integrated Management of Childhood Illness (IMNCI) strategy, the Anagawari Worker :
- (A) Conducts immunizations sessions in the community
 - (B) Performs antenatal checks of pregnant women
 - (C) Organizes health and nutrition days in the community
 - (D) Makes home visits to examine neonates
98. Sample size in a clinical trial is greater in the following situations except :
- (A) If the effect size of interest is large
 - (B) If the standard deviation of the variable of interest is large
 - (C) If beta error of the study is small
 - (D) If alpha error is small
99. Congenital nephrotic syndrome of the Finnish type is associated with mutation in gene encoding :
- (A) Podocin
 - (B) Nephrin
 - (C) CD2-associated protein
 - (D) Alpha fetoprotein (AFP)

100. A 7-day-old infant with an intraventricular bleed has a serum sodium level of 127 mEq/L, below the normal accepted value of 135 mEq/L. On evaluation of bed side chart there was weight gain of 120 gms from the previous day, but there were no signs of edema, the NIBP were around the 90th percentile. Fluid intake over the past 24 hours have been 140 ml/kg. Urine output over the last 24 hours was 1 ml/kg/hour. Urine specific gravity was 1.040. What would you suspect ?
- (A) Central diabetes insipidus
 - (B) Syndrome of inappropriate ADH Secretion
 - (C) Dilutional hyponatremia
 - (D) Adrenal insufficiency
101. A preterm 30 wk, 1.4 kg neonates was ventilated for RDS & was on SIMV mode with settings of PIP 16 cm/PEEP 5 cm/rate 40 per min/Ti 0.35 sec/FiO₂ 30%[^] at 48 hrs of life. ABG showed Ph 7.36/PCO₂ 37/pO₂ 72/BE 2/HCO₃ 20. At 72 hrs of life, there was a sudden deterioration with poor peripheral perfusion, increased respiratory distress, HR 180 per min & bounding peripheral pulses. The most likely cause could be :
- (A) Intra ventricular hemorrhage
 - (B) Pulmonary hemorrhage
 - (C) Opening of Ductus Arteriosus
 - (D) ET tube blockage
102. A full-term newborn infant is having episodes of cyanosis and apnea, which are worse when he is attempting to feed, but he seems better when he is crying. The most important next step to quickly establish the diagnosis is :
- (A) Echocardiogram
 - (B) Ventilation perfusion scan
 - (C) Passage of catheter into nose
 - (D) Bronchoscopic evaluation of palate and larynx

103. You are advised by the obstetrician that the mother of a baby he has delivered is a carrier of hepatitis B surface antigen (HBsAg-positive). The most appropriate action in managing this infant would be to :
- (A) Screen the infant for BHsAg
 - (B) Isolate the infant for enteric transmission
 - (C) Screen the mother for hepatitis B “e” antigen (BHeAg)
 - (D) Administer hepatitis B immune globulin and hepatitis B vaccine to the infant
104. 1-day-old infant who was born by a difficult forceps delivery is alert and active. She does not move her left arm, however, which she keeps internally rotated by her side with the forearm extended and pronated; she also does not move it during a Moro reflex. The rest of her physical examination is normal. This clinical picture most likely indicates :
- (A) Fracture of the left clavicle
 - (B) Spinal injury with left hemiparesis
 - (C) Left-sided Erb-Duchenne paralysis
 - (D) Left-sided Klumpke paralysis
105. A preterm baby is being ventilated for hyaline membrane disease. At 4 hours of life, the baby suddenly develops decreased chest rise and ABG shows hypercarbia with a CO₂ of 60.0 mmHg. What among the underlying factors is least likely to be responsible for the problem ?
- (A) Blocked ET tube
 - (B) Collapse
 - (C) Pulmonary hypertension
 - (D) Pneumothorax

106. A neonate born at 35 weeks of gestation weighing 140 grams and clinical features suggestive of intrauterine growth retardation is on hypoglycemia screening during the first 72 hours of life. He has a blood sugar of 35 mg% at 24 hours. PCV is 66%. What will you do ?
- (A) Give oral feeds and repeat sugar
 - (B) Start a glucose infusion at 6 mg/kg/mt
 - (C) Perform partial exchange with saline after 30-60 min
 - (D) Give dextrose bolus, followed by a glucose infusion at 6 mg/kg/min
107. A term baby is born through Meconium stained liquor and is non vigorous. Endotracheal suction is done which shows copious meconium. He develops hypoxia requiring ventilation and is intubated. The optimal strategy to ventilate this baby would be one among the following :
- (A) High PEEP, Increased T_i , short T_e , Increased RR
 - (B) High PEEP, High F_iO_2 , Inverse I:E ratio
 - (C) Low PEEP, Short T_i , low RR, High F_iO_2
 - (D) Low PEEP, Increased T_i , Low RR, Low F_iO_2
108. A late preterm baby is born by normal delivery and cries after birth immediately. Baby develops respiratory distress and cyanosis and thus, a chest x ray is done. It shows cardiomegaly. Which of the following is unlikely to explain the same ?
- (A) Transposition of great vessels
 - (B) Delayed adaptation
 - (C) Obstructive TAPVC
 - (D) Ebstein's anomaly

109. In a given hospital, there were 2900 live births and 100 still births in the year 2012. In the same year 60 new born babies died, among which 50 died in the first week of life. Calculate the perinatal mortality rate (per 1000 births).
- (A) 40 (B) 50
(C) 60 (D) 70
110. A Rh isoimmunised infant weighing 2.4 kgs is born with a cord bilirubin of 5 mg%. What is the requirement of blood for double volume exchange transfusion, assuming a blood volume of 90 ml/kg ?
- (A) 430 ml O neg whole blood
(B) 300 ml O neg packed cells and 130 ml AB plasma
(C) 215 ml O neg packed cells and 215 ml AB plasma
(D) 240 ml O neg packed cells and 240 ml AB plasma
111. A 1.0 kg preterm infant is edematous on examination. The serum Na is 136 & creatinine is 1.4 mg/dl. Urine output for 24 hr is 144 ml. The urine Na is 40 mEq/L and creatinine is 14 mg/dl. The creatinine clearance would be :
- (A) 0.2 ml/min (B) 0.5 ml/min
(C) 1 ml/min (D) 1.5 ml/min
112. An ultrasound obtained on a 26 wk, 21-day-old preterm infant, suggests ventriculomegaly without any evidence of intraventricular haemorrhage. This infant is at increased risk of ?
- (A) PVL
(B) Optic Nerve atrophy
(C) Growth delay
(D) Cerebral palsy

113. A term neonate develops multifocal clonic seizures on day 5 of life. Neurological examination is normal. Investigations including blood sugar, calcium, electrolytes, arterial blood gas, CSF and USG head are normal. Which trace element level if done in CSF could clinch the diagnosis ?
- (A) Copper
 - (B) Magnesium
 - (C) Zinc
 - (D) Aluminium
114. A couple has a child with a trait believed to be determined by multifactorial inheritance. There is no known family history of the disorder. Which of the following statements is true regarding their recurrence risk ?
- (A) They are not at increased risk, given the absence of prior family history
 - (B) They are only at increased risk if they are related to one another
 - (C) They are only at increased risk if the next child is the same sex as the previously affected child
 - (D) They are at increased risk, which can be estimated from empirical data
115. A 5 year old child is being mechanically ventilated for Adult Respiratory Distress Syndrome (ARDS). She is on volume controlled ventilation. Following are the ventilator settings: Rate 30/min, Tidal volume 110mL, T_i 0.7 sec, FiO_2 75%, MAP 15 cm H_2O . Her ABG shows at pH of 7.31; PO_2 60 mmHg; PCO_2 40mm Hg. What is the Oxygenation index :
- (A) 18.75
 - (B) 28.75
 - (C) 38.75
 - (D) 48.75

116. An arterial blood gas report shows; pH 7.38, bicarb (mEq/L) 30 and PaCO₂ 55 mmHg. What is the compensatory mechanism for this disorder ?
- (A) Respiratory acidosis
 - (B) Respiratory alkalosis
 - (C) Metabolic acidosis
 - (D) Metabolic alkalosis
117. A preterm baby, 28 weeks of gestation was discharged from NICU. The ultrasound head at discharge shows bilateral PVL grade II, was advised to attend high risk clinic on follow-up. Now baby is one year of corrected age. The developmental assessment at this age is: Sits alone steady; pivots when sitting; crawls well but does not pull to stand. What is the motor and mental developmental age of the child ? What do the gross motor milestones point to :
- (A) Motor age 12 months
 - (B) Motor age 6 months
 - (C) Motor age 6 months
 - (D) Motor age 4 months
118. The following critical cardiac conditions may improve after administration of prostaglandin except :
- (A) Hypoplastic left heart syndrome with patent foramen ovale
 - (B) Hypoplastic left heart syndrome with restrictive foramen ovale
 - (C) Total anomalous pulmonary venous return
 - (D) Transposition of great arteries with ventricular septal defect

119. Which of the following statements is true about premature ventricular contractions in a neonate ?

- (A) Isolated premature ventricular contractions are not uncommon
- (B) Premature ventricular contractions generally require intervention
- (C) Premature ventricular contractions are narrow QRS complex beats
- (D) Premature ventricular contractions are generally grouped such as bigeminy etc.

120. A neonate born by forceps vaginal delivery, 38 wk gestation develops focal seizures at 18 hours of age, bulging fontanel and unequal pupils. Cranial USG is not revealing any obvious lesion. What are you likely to find in CT brain ?

- (A) Sub arachnoid hemorrhage
- (B) Intra ventricular bleed
- (C) Sub dural bleed
- (D) Sub galeal bleed

Space for Rough Work

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