**MARKS OBTAINED\_\_\_\_\_\_\_\_\_\_\_( Right answers \_\_\_\_\_\_\_ Wrong Answers\_\_\_\_\_)**

 NNF Doctor’s Fellowship October 2019 Exit Examination



**Theory Paper 1 Multiple Choice Questions Roll No \_\_\_\_\_\_\_\_\_\_\_**

 **Duration 2 hours Maximum Marks: 100**

***General Instructions :***

***Each question carries 1 mark***

***For Wrong answers 0.25 marks shall be deleted,***

***Write the most appropriate answer in the box provided in front of each question***

 ***BOOKLET IS TO BE RETURNED BACK FOR EVALUATION***

1. Which of the following statements about temperature maintainence is true :
2. Studies have shown an association between hypothermia and increased mortality in premature neonates
3. Food grade, heat resistant plastic wrappings or plastic bags under radiant heat can be used in < 28 wk preterms.
4. Neonates born to febrile mothers are prone to respiratory depression, seizures, cerebral palsy and death
5. All of the above.
6. In infants who are born with meconium-stained fluid, the tracheal suctioning should be done if :
7. Thick meconium in liqor
8. Poor respiratory efforts
9. Poor muscle tone
10. None of the above
11. Name the gold standard examination in diagnosis of Retinopathy of prematurity (ROP):

a.Direct Ophthalmoscopy

b.Indirect Ophthalmoscopy

c.Ultra sonography of eye

d. None of the above

4. How much is the K+ content in 1ml of 15% KCl solution (mEq):

1. 1
2. 2
3. 3
4. 4

5.The walking reflex normally disappears by **what post natal age(** months):

1. 3
2. 5
3. 7
4. 9

6. 1 day old female infant who was born by a difficult forceps delivery is alert and active. She doesn't move her left arm and keeps it internally rotated by her side with the forearm extended and pronated. Which of the following is an expected clinical finding?

1. Intact Moro and grasp reflex.
2. Absent Moro and grasp reflex.
3. Intact Moro and absent grasp reflex
4. Absent Moro and intact grasp reflex.

7.The mother of a 2 week old infant reports that her baby sleeps most of the day, she has to awaken her every 4 hours to feed and the infant has persistently hard stool . On examination, HR 100/min and temperature 35.5 C, baby is still jaundiced and has a distended abdomen. What is the most appropriate diagnostic test ?

1. Screening tests for Inborn error of metabolism
2. Sepsis screen and blood culture.
3. Total and direct serum bilirubin
4. T4 and TSH

8.A 7 day old male infant presents with a seizure. Serum glucose is 17 mg/dL. Examination is normal with exception of jaundice and microphallus. The most likely diagnosis is:

1. Congenital adrenal hyperplasia
2. Congenital hypopitutarism
3. Congenital hypothyroidism
4. Galactosemia

9. A full term AGA baby at 1 month is breast fed and weights 4 kg. The mother is giving the feeds on demand. She is not giving any vitamin or iron supplementation. He passes 4-5 greenish stools/day. What should be of most concerning about this infant?

1. Stool pattern.
2. Caloric intake.
3. Iron levels.
4. None

10. Which of the following condition can be treated by antenatal intervention:

1. Duodenal Atresia
2. Accelerating oxygen extraction by using antenatal steroids.
3. Reducing the risk of kernicterous in Rhesus Disease by giving fetal blood transfusions through the umbilical vein.
4. Atropine to mother to treat fetal congenital heart block.

11.Which one of the following is not normally seen in neonates:

a. Epstein pearls

b.Milia neonatorum

c. Mongolian spots

d.Simian crease

* Top of Form

12. Identify the incorrect teratogenic effect:

1. Alcohol- IUGR, microcephaly, ocular abnormalities
2. Methimazole – Scalp defects
3. Valproate – Cranial defects
4. Lithium – Heart and great vessel defects

13.All the following conditions present with acute encephalopathy, except:

1. Hyperammonemia
2. Fatty acid oxidation disorder
3. Molybdenum co factor deficiency
4. Maple syrup urine disease

14.A 29 weeks male baby weighing 890 grams was born to a mother with severe Pre Eclampsia. The Doppler was suggestive of Reduced End Diastolic Flow in umbilical artery. On day 9 of life this baby presents with temperature instability, apnoea, abdominal cellulitis, Hypotension and intramural gas in intestinal wall in abdominal x ray. What is the stage of NEC in this baby?

1. Stage II A
2. Stage II B
3. Stage III A
4. Stage III B

15. All are true regarding gastroschisis, except**:**

1. It occurs due to defect in the abdominal wall more common on the right side.
2. The intestinal loops are always normal.
3. The herniation of liver along with the loops of intestine is not common.
4. Can be detected antenatally as early as 12 weeks of gestation.

16. Of the following macronutrients, which one is relatively poorly digested by neonate:

a.Fats

b.Carbohydrates

c.Proteins

d. All of the above

17.A 12day old male neonate presented with features of lethargy, poor feeding. On examination child had features of dehydration , prolonged Capillary refilling time, decreased urine output. In neonatal screening, 17 OHP was raised. What metabolic abnormalities are expected?

1. Metabolic acidosis, Hypernatremia and Hypokalaemia
2. Metabolic alkalosis, Hyponatremia and Hyperkalaemia
3. Metabolic alkalosis, Hypernatremia and Hypokalaemia
4. Metabolic acidosis, Hyponatremia and Hyperkalaemia

18.Head growth of Preterm baby after 14 days of postnatal age:

1. 0.0-0.5 cm/ week
2. 0.5-1.0 cm/week
3. 1.0-1.5cm/week
4. 1.5-2.02.0 cm/week

19.Intergrowth Preterm Postnatal follow up study standards are used till what Postmenstrual age:

1. 52weeks
2. 56weeks
3. 60 weeks
4. 64 weeks

 20. The third trimester intrauterine calcium and phosphorus accretion rate is approximately:

 a) 120 mg/kg/d of calcium & 60 mg/kg/d of Phosphorus

 b) 160 mg/kg/d of calcium & 80 mg/kg/d of Phosphorus

 c) 180mg/kg/d of calcium &90 mg/kg/d of Phosphorus

 d) 200 mg/kg/d of calcium & 100 mg/kg/d of Phosphorus

 21.. Which one of the following is the most common cause of Metabolic liver disease in a neonate?

 a) Galactosemia

 b) Tyrosinemia

 c) α1 Anti-trypsin deficiency

 d) Niemann-Pick disease

22. All of the following drugs can lead to osteopenia of prematurity except:

 a) Frusemide

 b) Caffeine

 c) Steroids

 d) Phenytoin

23.In a very preterm baby with poor head growth at term equivalent age,the head ultrasound shows widespread cystic lesions extending into the parieto-occipital region,however,sparing deep white matter. State the grade of peri ventricular leukomalacia :

1. Grade 4
2. Grade 3
3. Grade 2
4. Grade 1

24. Neuronal migration during brain development occurs between gestational age of:

1. 0-12 weeks
2. 12-24 weeks
3. 24-36 weeks
4. After 36 weeks

25. Which growth chart should be used to classify a baby as appropriate, large or small for gestational age?

a. IAP chart

b. Fenton’s chart

c. WHO MGRS chart

d. Ehrenkranz chart

26. The major causes of poor growth in the postnatal period include all of the following, except:

a. Inadequate protein intake

b. Chronic hypothermia

c. Regurgitation of feeds

d. Anaemia

27. Which of this is a correct statement?

a. Preterm baby should be exposed to bright red light to promote vision

b. Preterm baby should listen to music at all times

c. REM sleep is important for brain growth

d. Preterm baby feels pain but do not remember it

28.The commonest injury pattern seen in MRI brain in partial prolonged asphyxia in term infants is:

a. Basal ganglia thalamus injury

b.Parasagital water shed injury

c. Cortical injury

d. Global brain injury

29. The criteria for initiating therapeutic hypothermia are the following ,except

1. Gestational age more than 35 weeks
2. Weight greater than 1800 grams
3. Apgar score <3 at 1 minute
4. Moderate or severe encephalopathy

30. The commonest pattern of injury in premature infants due to ischemia is

1. Parasagittal
2. Periventricular leucomalacia
3. Cerebellar
4. Deep nuclear

31. Female baby presented on day 2 of life with infantile spasm and her MRI revealed cerebral cortical poly microgyria and neuronal heterotopia and agenesis of Corpus callosum. Her likely diagnosis is:

1. Septo-optic dysplasia
2. Aicardi syndrome
3. Dandy Walker malformation
4. Walker warburg syndrome

32. Complications of therapeutic hypothermia include:

1. Cardiac arrythmias
2. Thrombocytopenia
3. Coagulopathy
4. All of the above

33. Following are considered as neuronal migration disorder, except:

1. Schizencephaly
2. Lissencephaly
3. Callosal agenesis
4. Cortical dysplasia

34. Extremely low birth weight neonate developing hyperkalemia during the first 72 hours of life is due to:

1. High exogenous potassium intake
2. High proximal tubular reabsorption of potassium
3. Low distal tubular excretion of potassium
4. Shift of potassium from ICF to ECF

35. Regarding Insensible water loss in neonate, following is true:

1. Larger component of total water requirement
2. Antenatal steroid decreases insensible water loss
3. Skin losses are more than respiratory losses
4. All of the above

36. Cascade of events for sexual differentiation at 6 to 7 weeks of gestation is initiated by:

1. 5 Alpha reductase
2. Mullerian inhibiting substance
3. Sex determination region of Y gene
4. Testosterone

37. Cyanotic spell may be feature of following, except:

1. Sepsis
2. Adrenal hemorrhage
3. Hypoglycemia
4. meningitis

38.. Physiological weight loss during the postnatal period is attributed to :

1. Caloric intake
2. Intracellular fluid
3. Insesible water loss
4. Plasma volume

39.Causes of microcephaly in neonates are all the following, except:

1. Porencephaly
2. Hydranencephaly
3. Osteopetrosis
4. Trisomy 18

40. Regarding neonatal neurological examination following are true, except:

1. Tone progress in caudal to rostral fashion
2. Flexor posture should be present at term
3. Asymmetric tonic neck reflex can be elicited from 35 weeks of gestation
4. Tendon reflexes appear earlier in arms than legs

41. Following are true regarding therapeutic hypothermia, except:

1. Initiated with 6 hours of life
2. Initiation should be slow
3. Rewarming should be slow
4. Temperature is maintained between 33 and 34 degree centigrade

42.Term otherwise healthy neonate fed with cow’s milk, presented with seizures on day 5 of life. What is the most likely cause?

* 1. a. Hypoglycemia
	2. b. Hyponatremia
	3. c. Hypernatremia

 d. Hypocalcemia

43. All the following have better long-term neurodevelopmental outcome, except:

* 1. a. Hypocalcemia
	2. b. Hypoglycemia
	3. c. Idiopathic neonatal epilepsy

 d.Subarachnoid hemorrhage

44. You are asked to counsel a woman who is planning to have another baby after her first baby was born with spina bifida. Which one of the following preconception management options is most likely to reduce the risk in any subsequent pregnancy?

* 1. a. Thiamine
	2. b. Folic acid
	3. c. Ultrasound screening
	4. d. Vitamin B12

45. Which one of the following is the most useful tool in the prediction of neurodevelopmental outcome for a baby with moderate encephalopathy secondary to hypoxic–ischemic encephalopathy (HIE):

* 1. a. Neurologic examination at the time of discharge
	2. b. Amplitude integrated EEG
	3. c. Magnetic resonance imaging of Brain
	4. **d.**Serial doppler assessment of anterior cerebral artery

46. Premature closure of which of the following sutures can cause scaphocephaly?

* 1. a. Fronto-zygomatic suture
	2. b. Coronal suture
	3. c. Sagittal suture

 d. Metopic suture

47. Cerebral blood flow decreases with all, EXCEPT:

 a. Decreased pCO2

* 1. b. Increased pO2
	2. c. Increased serum glucose

d.Decreased pO2

48. Premature infants are prone to apnea, the main reason is:

* 1. a. Preterm infants have more quiet sleep than REM sleep
	2. b. Hering-Breuer deflation reflex is more prominent during REM sleep
	3. c. Preterm infants have blunted response to CO2

 d. GER is the most common cause of apnea in preterm infants

49. Look at CSF report: Colorless, RBC 540, WBC 12 (7 lymphocytes), glucose 9, protein 427mg/dl. This CSF specimen is most likely obtained from a :

* 1. a. preterm infant with post-hemorrhagic hydrocephalus
	2. b. preterm infant with grade I hemorrhage
	3. c. Term infant with bacterial meningitis
	4. d. Term infant with perinatal asphyxia

50. Phenytoin is administered intravenously after dilution with:

* 1. a. Normal saline
	2. b. 5% Dextrose solution
	3. c. 10% dextrose solution

 d. Distilled water

51. In case of seizure due to hypoglycemia in a newborn, treat preferably with the loading dose of :

* 1. a. 5 ml/kg of 10% dextrose
	2. b. 2 ml/kg of 25% dextrose
	3. c. 2 ml/kg of 10% dextrose

d.5 ml/kg of 5% dextrose

52. In majority of newborn infants ,the congenital facial nerve palsy will usually recover in:

* 1. a. one weeks
	2. b. 3-6 months
	3. c. 6-9 months

d.9-12 months

53. By what gestational age are premature infants expected to have a pupillary light response?

* 1. a. 24 weeks
	2. b. 28 weeks
	3. c. 32 weeks

d.36 weeks

54. The reflex appearing at 28 weeks’ gestational age, is established by 32 weeks’ gestation, and disappears by age of 2-4 months. If this reflex persists beyond 6 months, is characteristic of athetoid cerebral palsy. What is the name of reflex?

* 1. a. Crossed extensor reflex
	2. b. Moro reflex
	3. c. Palmar grasp reflex

d.Tonic-neck reflex

55. Baby born at 40 weeks’ gestation following vacuum extraction has a swelling over her scalp. The swelling is boggy and soft predominantly over the left parietal region, but extending across to the right parietal region, and also down behind the left ear. The pinna of the left ear is slightly pushed forward by the swelling. Of the following, the most likely diagnosis in this infant is:

* 1. a. Caput succedaneum
	2. b. Cephalohematoma
	3. c. Subdural hematoma
	4. d.Subgaleal hemorrhage

56. Which of the following conditions is **NOT** associated with microcephaly?

* 1. a. Achondroplasia
	2. b. Congenital infection with toxoplasmosis
	3. c. Prader-Willi syndrome
	4. d. Schizencephaly

57. The rate of bilirubin production can be assessed by measuring rate of production of:

1. Carbon monoxide
2. Carbon dioxide
3. Carbon
4. Oxygen

58. Neonatal cholestasis can be caused by all of the following except

1. Sepsis
2. Choledochal Cyst
3. Neonatal hepatitis
4. Criggler Najjar syndrome

5 9:A 2-day-old neonate has biphasic stridor that worsens with agitation. He has intermittent desaturations with bradycardia and a weak cry. Blood pressure is 80/60 mm Hg, and pulse rate is 112 beats/min. Of the following, the MOST likely etiology is:

 A. Congenital subglottic stenosis

 B. Cystic fibrosis

 C. Congenital laryngomalacia

 D. Innominate artery compression

60.Specific gravity of colostrums is:

 a.1.01

 b.1.02

 c.1.03

 d.1.04

61.The rate of gucose production in neonates in relation to adult is:

 a.Same

 b.Half

 c.Double

 d.Four times

62.Which of the following milk has high vitamin K content:

a.Human

b.Cow’s

c.Ass’s

d.Human milk and cows milk have equal amounts

63.Which of the following disaccaridases appear last in intra-uterine life:

a.Sucrase

b.Maltase

c.Lactase

d.All appear simultaneously.

64. Per cent absorption of human breast milk iron is:

a.10

b.30

c.50

d.70

65. Most common Trisomy irrespective of viability is:

a.13

b.16

c.18

d.21

66.Which of the following is sign of copper deficiency in a neonate:

a. Microcytic hypocromic anemia

b. Neutropenia

c.Bone demineralization

d. All of the above

67.What is the per cent incidence of major congenital malformations in infants of diabetic mothers.

a.0-1

b.1-3

c.6-9

d.10-12

68.Blue diaper syndrome is due to deficiency of:

a.Valine

b.Leucine

c.Tyrosine

d.Tryptophane

69.In early onset hypocalcemia the nadir for serum calcium levels is at what post natal age(hours):

a.<12

b.12-24

c,25-36

d.37-48

70.Newborn can present with hydrops in following conditions,except:

a.Congenital Nephrosis

b.Osteopetrosis

c.Congenital Syphilis

d.Achondroplasia

71.At what post natal age(months) the intra cellular and extra cellular fluid volumes become equal:

a.1

b.3

c.6

d.12

72.What is the renal concentrating ability in mosmol/L in normal term babies

a.200-400

b.400-600

c.600-800

d.800-1000

73.What per cent of normal newborns pass urine in first 24 hours of life:

a.75

b.85

c.95

d.100

74.Insensible water loss in full term neonates (ml/kg/day) is:

 a.10-20

 b.40-50

 c.60-70

 d.70-80

 75. Volpe classification is used for

1. IVH grading by CT scan
2. IVH grading by USG
3. Grading of neonatal encephalopathy
4. Grading of neonatal convulsions

76. Characteristic neuropathology of PVL was first described by :

1. Sarnat & Sarnat
2. Levine
3. Banker & Larroche
4. Prader

77. Most common cell affected in PVL in prematurity is:

1. Glia
2. Astrocyte
3. Oligodendrocyte
4. Neuron

78. Chiari malformation II is seen as flattened cerebellum in Cranial USG.This sign is called as:

1. Lemon sign
2. Banana sign
3. Sliding sign
4. Bat wing sign

79.The second trimester screening/Quad screen includes all, except:

 A. AFP (Alpha Feto Protein)

 B. Unconjugated estriol (uE3)

 C. Inhibin A

 D. Pregnancy-associated plasma protein A

80.The movements of fetus are first felt by mother( Quickening) at what gestation(wks):

a.8-15

b.16-25

c.26-30

d.30-26

81.Unfusing of eye lids starts by what gestation(wks)

a.12

b.22

c.32

d.none of the above

82.The transmission of spirochetes from mother to fetus occurs during which trimester:

a.First

b.Second

c.Third

d.Anytime

83.Which intra uterine infection causes cicatricial lesions and hypoplastic extremities in off spring:

a.Varicella Zoster

b.Parvo virus

c.Cytomegalo virus

d.Herpes Simplex

84.Chlamydial conjunctivitis usually occurs after how many days of birth:

a.2

b.3

c.4

d.5

85.Biliary atresia has been assosciated with which Virus:

a.Parvo

b.Entero

c.Reo

d.Retro

86.Following are normal findings in newborn ,except:

a.Phimosis

b.Mastitis neonatorum

c.Enlarged clitoris

d.Palpable kidneys

87.The functional unit of placenta is:

a.Villus

b.Cotyledon

c.Chorionic plate

d.Deciduas

88.The bloody diarrhea could be presentation of following infections in newborn,except:

a.Listeria

b.Shigella

c.Salmonella

d.Campylobacter

89.Which maternal infection in mother is associated with aqueductal stenosis in newborn:

a.Mumps

b.Rubella

c.Toxoplasmosis

d.Cyto megalo virus

90.Normal preterms may have methemoglobin levels upto :

a.<1%

b.1-4.5%

c.4.6-9%

d.>9%

91.Above which cut off level of venous hematocrit(%) a neonate is labeled as polycythemic:

a.45

b.55

c.65

d.75

92. The fetal hemoglobin levels in cord blood are upto(%):

a.70

b.50

c.30

d.10

9 3.Normal cardiac output (ml/kg/min) in fullterm fetus is:

a.150

b.250

c.350

d.450

94.Contraindication for indomethacin therapy in PDA are:

a.Low platelet count

b.Raised serum creatinine

c.Hypoglycemia

d.Necrotizing Enterocolitis

95.How much is the tidal volume(ml/kg) of a preterm baby:

a.<4

b.4-6

c.7-9

d.>9

96. Which hormone functions as growth hormone in fetal life:

a. Human placental lactogen(Human Chorionic Somatotropin)

b.Adrenaline

c.Estradiole

d.None of the above

97.In Congenital Adrenal Hyperplasia, virilization of female fetus occurs by which geastation (wks):

a.<9

b.9-16

c.20-28

d.>28

98.Following are the components of Prune Belly Syndrme,Except:

a.Abdominal wall muscular deficiency

b.Undescended testes

c.Megalo urethra,ureter and hydronephrosis

d.Absence of colonic ganglion cells

99.Following are responsible for chronic intra-uterine infections,Except:

a.Toxoplasma gondii

b.Treponema pallidum

c.Cyto megalo virus

d. Herpes simplex

100.Which of the following maternal conditionsis associated with fetal bradycardia:

a.Second degree heart block

b.Systemic lupus erythematosus

c. Rheumatoid arthritis

d.None of the above