

PROVISIONAL ANSWER KEY

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Question1:-A newborn male is confirmed to have an X-linked recessive disorder. Which of the following statements regarding his family members is CORRECT?

A:-His father is likely to be clinically affected with the same disorder

B:-His maternal grandfather may himself have been affected with the same disorder

C:-His sisters cannot be carriers of the gene

D:-His sons have a 50% probability of being affected

Correct Answer:- Option-B

Question2:-Which of the following BEST explains why preterm neonates born at less than 32 weeks of gestation are disproportionately vulnerable to invasive bacterial infection compared with term neonates?

A:-Complete absence of maternal IgM transfer across the placenta during gestation

B:-Significantly reduced transplacental IgG levels due to premature birth before the peak period of transfer

C:-Inability of the preterm gut mucosa to synthesize secretory IgA

D:-Absent complement activity secondary to a deficiency of IgE

Correct Answer:- Option-B

Question3:-Regarding the embryological development of the diaphragm, which of the following structures contributes PRIMARILY to its muscular component, and also explains the innervation pattern of the diaphragm?

A:-The septum transversum, which gives rise to the central tendon and receives branches of the vagus nerve

B:-The pleuroperitoneal membranes, which close the pleuroperitoneal canals and are supplied by the intercostal nerves

C:-Myoblasts migrating from cervical somites (C3, C4, C5), which carry the phrenic nerve along with them

D:-The dorsal mesentery of the oesophagus, innervated by thoracic splanchnic nerves

Correct Answer:- Option-C

Question4:-Which of the following statements regarding fetal haemoglobin (HbF) and oxygen transport is CORRECT?

A:-HbF has a lower affinity for oxygen than adult haemoglobin (HbA), facilitating oxygen release at the placenta

B:-The P50 of HbF (~ 27 mm/Hg) is identical to that of HbA, resulting in similar oxygen dissociation curves

C:-HbF binds 2,3-diphosphoglycerate (2,3-DPG) less avidly than HbA, producing a left-shifted oxygen dissociation curve and higher oxygen affinity

D:-The high oxygen affinity of HbF facilitates efficient oxygen release to peripheral fetal tissues compared with HbA

Correct Answer:- Option-C

Question5:-A term neonate is born in a delivery room at an ambient temperature of 20°C and is wet with amniotic fluid. Which mechanism of heat loss is PRIMARILY responsible for the immediate drop in core body temperature in the first minutes after birth?

A:-Conduction - direct transfer of heat to the cold weighing scale surface

B:-Convection - movement of cooled air currents across the skin surface

C:-Evaporation - vaporisation of amniotic fluid from the wet skin surface

D:-Radiation - infrared heat emission to the cooler walls and surfaces of the room

Correct Answer:- Option-C

Question6:-A preterm neonate is delivered at 28 weeks of gestation and requires immediate respiratory support. Based on the stage of lung development at this gestational age, Which of the following best describes the predominant structural characteristic of the lung at this stage?

A:-The lung is in the pseudoglandular stage, with airways ending in blind tubules lined by columnar epithelium and no gas exchange possible

B:-The lung is transitioning through the canalicular stage, with the formation of primitive acini and the beginning of surfactant synthesis by Type II pneumocytes

C:-The lung is in the saccular (terminal sac) stage, with widening of peripheral airways into saccules that can support limited gas exchange

D:-The lung is in the alveolar stage, with mature alveolar septa and a thin blood-gas barrier similar to that of a term neonate

Correct Answer:- Option-C

Question7:-A term neonate with *d*-transposition of the great arteries (d-TGA) and an intact ventricular septum presents with profound central cyanosis immediately after birth. Survival in this lesion fundamentally depends on:

A:-Maintenance of ductal patency to allow mixing of oxygenated and deoxygenated blood at the great artery level

B:-Adequate intercirculatory mixing at the atrial level through a patent foramen ovale or atrial septal defect

C:-Elevated pulmonary vascular resistance, which reduces the volume of deoxygenated blood reaching the lungs

D:-A low systemic vascular resistance, which redistributes oxygenated pulmonary venous blood to the systemic circulation

Correct Answer:- Option-B

Question8:-Consider the following statements regarding cerebral blood flow autoregulation in preterm neonates:

I. Cerebral autoregulation in healthy preterm neonates functions over a wide range of mean arterial blood pressures, similar to adults

II. In sick preterm neonates, cerebrovascular autoregulation is often impaired, resulting in pressure-passive cerebral blood flow.

III. Hypercapnia produces vasoconstriction in the cerebral vasculature of preterm neonates, reducing cerebral blood flow.

IV. Pressure-passive cerebral blood flow increases the risk of intraventricular haemorrhage during episodes of systemic hypotension or hypertension

Which combination of statements is CORRECT?

A:-I and III only

B:-II and IV only

C:-I, II and IV only

D:-II, III and IV

Correct Answer:- Option-B

Question9:-Which of the following correctly distinguishes Crigler-Najjar Syndrome Type I from Type II?

A:-Type I has partial deficiency of UDP-glucuronosyltransferase (UGT1A1) and responds well to phenobarbitone, while Type II has complete enzyme absence

B:-Type I has complete absence of UGT1A1 activity, requires 10-12 hours of daily phototherapy to prevent kernicterus and does NOT respond to phenobarbitone

C:-Both types are autosomal dominant, but Type I presents with more severe hyperbilirubinaemia than Type II

D:-Type I responds to ursodeoxycholic acid, while Type II requires liver transplantation for definitive cure

Correct Answer:- Option-B

Question10:-A 3-day-old term neonate presents with poor feeding, progressive lethargy and a distinctive odour described as resembling 'sweaty feet' Investigations reveal normal blood glucose, metabolic acidosis with elevated anion gap, and elevated serum ammonia. The most likely diagnosis is:

A:-Maple Syrup Urine Diseases (MSUD) - due to accumulation of branched-chain amino acids

B:-Isovaleric acidaemia - due to accumulation of isovaleric acid from leucine metabolism

C:-Phenylketonuria (PKU) - due to phenylalanine hydroxylase deficiency

D:-Galactosaemia (classic) - due to galactose-1-phosphate uridylyltransferase deficiency

Correct Answer:- Option-B

Question11:-In a randomised controlled trial of prophylactic surfactant therapy in preterm neonates, the mortality rate in the control group was 20% and in the treatment group was 10%. Based on these figures, which of the following correctly states the Number Needed to Treat (NNT) to prevent one death?

A:-NNT = 2

B:-NNT = 5

C:-NNT = 10

D:-NNT = 20

Correct Answer:- Option-C

Question12:-A neonatologist wishes to determine whether early caffeine therapy (initiated within the first 3 days of life) reduces the incidence of Bronchopulmonary Dysplasia (BPD) in neonates born below 30 weeks of gestation. Which of the following study designs would provide the STRONGEST evidence for a causal relationship between early caffeine therapy and a reduction in BPD?

A:-Retrospective cohort study using existing hospital records from multiple NICUs

B:-Prospective case-control study matching BPD cases with non-BPD controls for gestational age

C:-Randomised controlled trial with concealed allocation and blinded outcome assessment

D:-Cross-sectional survey of caffeine prescribing practices and BPD rates across tertiary neonatal centres

Correct Answer:- Option-C

Question13:-Regarding the four principles of biomedical ethics in the context of neonatal end-of-life care, which of the following clinical actions BEST exemplifies the principle of non-maleficence?

A:-Administering opioid analgesia to a dying neonate to relieve pain and distress

B:-Seeking informed parental consent before withdrawing life-sustaining treatment

C:-Discontinuing a treatment that is prolonging suffering without offering any meaningful benefit to the neonate

D:-Allocating NICU resources equitably regardless of the neonate's social background

Correct Answer:- Option-C

Question14:-According to current international neonatal resuscitation guidelines (NRP), which of the following statements regarding chest compressions during newborn resuscitation is CORRECT?

A:-Chest compressions should be initiated when heart rate remains less than 60 bpm despite at least 30 seconds of effective positive-pressure ventilation

B:-The recommended compression-to-ventilation ratio during neonatal resuscitation is 15:2 as used in paediatric basic life support

C:-The two-finger technique is preferred over the two-thumb encircling technique as it delivers more consistent chest compressions

D:-Chest compressions should be delivered at a rate of 80 compressions per minute

Correct Answer:- Option-A

Question15:-A ventilated preterm neonate on pressure-controlled ventilation (PCV) with fixed peak inspiratory pressure (PIP) and respiratory rate shows a sudden increase in expired tidal volume without any change in ventilator settings. Which of the following is the MOST likely explanation?

A:-Development of a tension pneumothorax causing air trapping

B:-Improvement in respiratory system compliance allowing greater volume delivery for the same pressure

C:-Partial endotracheal tube obstruction by secretions increasing airway resistance

D:-Development of significant auto-PEEP (intrinsic PEEP)

Correct Answer:- Option-B

Question16:-The following arterial blood gas (ABG) result is obtained from a term neonate with respiratory distress at 2 hours of age. Analyse the result and identify the CORRECT interpretation

Parameter	Patient Value
pH	7.20
PaCO ₂	65 mmHg
PaO ₂	55 mmHg
HCO ₃ ⁻	24 mEq/L
Base Excess	-2 mEq/L

A:-Metabolic acidosis with partial respiratory compensation

B:-Acute (uncompensated) respiratory acidosis

C:-Mixed respiratory and metabolic acidosis

D:-Chronic respiratory acidosis with metabolic compensation

Correct Answer:- Option-B

Question17:-In the delivery room management of a neonate born at 27 weeks of gestation, which of the following interventions has the STRONGEST evidence-based recommendation for reducing hypothermia in the first minutes after birth?

A:-Immediate placement under a preheated radiant warmer as the sole thermal protective measure

B:-Placing the neonate (without drying) into a polyethylene bag or occlusive wrap up to the neck, then placing under a radiant warmer

C:-Warming the delivery room to 26°C as the primary intervention before any other measures

D:-Application of a chemical warming mattress as the sole measure of thermal protection without a polyethylene wrap

Correct Answer:- Option-B

Question18:-During the stabilisation and transport of a neonate with suspected congenital diaphragmatic hernia (CDH), which of the following is the MOST critical management priority to prevent acute deterioration?

A:-Immediate bag-mask ventilation with 100% oxygen to correct hypoxia before securing the airway

B:-Avoidance of bag-mask ventilation, with early endotracheal intubation and placement of an orogastric tube on free drainage

C:-Administration of prophylactic surfactant prior to transport to improve respiratory compliance

D:-Positioning the neonate in the left lateral decubitus position throughout transport

Correct Answer:- Option-B

Question19:-Which of the following statements regarding the optimal tip position of an umbilical venous catheter (UVC) in a neonate is CORRECT?

A:-The UVC tip should be positioned within the right atrium to ensure the most reliable blood sampling and drug infusion

B:-The optimal UVC tip position is at the junction of the inferior vena cava (IVC) and right atrium, confirmed radiographically

C:-A UVC tip positioned in the portal vein is acceptable for exchange transfusion as it is in the hepatic circulation

D:-Correct UVC positioning can be confirmed by free aspiration of blood alone, without radiographic verification

Correct Answer:- Option-B

Question20:-A study is designed to evaluate the diagnostic accuracy of a novel serum biomarker for early-onset neonatal sepsis. The investigators recruit neonates with clinical signs of sepsis as the 'case' group, and healthy term neonates from the postnatal ward as the 'control' group. Which type of bias is MOST likely to artificially inflate the sensitivity and specificity of the test in this

study?

A:-Spectrum bias

B:-Verification bias

C:-Incorporation bias

D:-Attrition bias

Correct Answer:- Option-A

Question21:-Doppler velocimetry, especially of the umbilical artery, is a well-studied measurement in the setting of intrauterine growth restriction (IUGR) and can specifically be a powerful tool in prognosticating severity of fetal growth restriction, potentially dictating prenatal management of IUGR fetuses. When included in prenatal testing in cases of suspected fetal growth restriction, the rate of perinatal death is decreased by almost:

A:-10%

B:-20%

C:-30%

D:-40%

Correct Answer:- Option-C

Question22:-Cerebro-placental ratio (CPR) is a Doppler index used to evaluate at risk fetal growth restricted (FGR) pregnancies. How do you correctly define COR?

A:-Defined as ratio of resistive index (RI) of middle cerebral artery (MCA) to RI of umbilical artery (UA)

B:-Defined as ratio of pulsatility index (PI) of MCA to PI of UA

C:-Defined as ratio of RI of MCA to PI of UA

D:-Defined as ratio of PI of MCA to RI of UA

Correct Answer:- Option-B

Question23:-Which of the following interventions have role in the prevention of preeclampsia?

A:-Heparin

B:-Excercise

C:-Ibuprofen

D:-Calcium

Correct Answer:- Option-D

Question24:-ACOG recommends antenatal magnesium sulphate for the following indications:

- i. Seizure prophylaxis in preeclampsia or treatment of eclampsia
- ii. Fetal neuroprotection before anticipated early preterm (less than 32 weeks of gestation) delivery
- iii. Tocolysis for up to 7-8 days

A:-i

B:-ii

C:-i, ii

D:-i, ii, iii

Correct Answer:- Option-C

Question25:-Intrapartum Group B Streptococcus (GBS) prophylaxis is indicated in all of the following scenario EXCEPT:

A:-Prior infant with invasive GBS disease

B:-GBS bacteriuria any time during pregnancy

C:-GBS carriers through prenatal screening cultures collected at 35-37 weeks gestation

D:-Unknown GBS culture at the onset of labor in women

Correct Answer:- Option-D

Question26:-Various red cell antigens can cause antibody formation in pregnancy and lead to significant hemolytic disease of the newborn (HDN) in future pregnancies. Which of the following systems carries the lead risk for HDN in human pregnancy?

A:-Rh antigens

B:-ABO antigens

C:-Kell antigens

D:-Lewis antigens

Correct Answer:- Option-D

Question27:-Hydrops Fetalis (HF) is defined as the presence of excessive fetal fluid in two or more of the spaces: abdominal ascites, pleural effusion, pericardial effusion, skin edema, polyhydramnios or placentomegaly. Which of the following criteria has been described incorrectly for the definition of HF?

A:-Pericardial effusion - Non-physiologic fluid ≥ 5 mm

B:-Skin edema - Subcutaneous edema ≥ 5 mm

C:-Polyhydramnios-Single deepest fluid pocket ≥ 8 cm

D:-Placentomegaly-Placenta ≥ 6 cm thickness

Correct Answer:- Option-A

Question28:-Amniotic fluid surrounds the developing embryo throughout gestation, protecting the fetus and umbilical cord from trauma. Which of the following is the main mechanism of fluid dynamics in early pregnancy before 24 weeks?

A:-Fetal renal system

B:-Surface exchange across fetal skin

C:-Trans-membranous movement across amnion and chorion

D:-Intra-membranous movement between fetal blood and placenta

Correct Answer:- Option-B

Question29:-The choice of empirical antibiotics in women with preterm premature rupture of membranes (PPROM) has an important implication on neonatal outcomes. The administration of co-amoxiclav (ampicillin/clavularic acid) in women with PPRM or preterm labor with intact membranes was associated with an increased risk for:

A:-Periventricular leukomalacia

B:-Intraventricular hemorrhage

C:-Necrotizing enterocolitis

D:-Bronchopulmonary dysplasia

Correct Answer:- Option-C

Question30:-A mother suffering from immune thrombocytopenic purpura (ITP) had marked thrombocytopenia during her pregnancy and required intravenous immunoglobulin (IVIg) therapy to maintain platelets in the safe range. However, she had to be delivered by cesarean section at 30 weeks as her platelets hovered around $10,000 \text{ mm}^3$. The baby boy born with birth weight of 960 g had

generalized petechiae and bruises and day 1 work up revealed platelet counts of $19,000/\text{mm}^3$; neurosonogram screening showed intraventricular haemorrhage (IVH) Grade II bilaterally. Which one of the following is the recommended initial management options for him?

A:-Platelets transfusion plus Ivlg

B:-Platelets transfusion plus glucocorticoids

C:-Glucocorticoids only

D:-Ivlg only

Correct Answer:- Option-C

Question31:-The rarity of high-order multiple gestations can be appreciated by the quasi-mathematical Hellin-Zellany rule for twins, triplets and quadruplets. According to this rule, if the frequency of twins in a population is 1 in 100, what would be the frequency of triplets?

A:-1 in 1,000

B:-1 in 10,000

C:-1 in 1,00,000

D:-1 in 10,00,000

Correct Answer:- Option-B

Question32:-Generally, the condition twin-to-twin transfusion syndrome (TTTS) gives the impression of serious morbidity, but the specific outcome is related to the gestational age when TTTS occurred and to the severity of the syndrome. At or beyond which of the following stage, treatment is indicated?

A:-Quintero's stage

B:-Twin oligohydramnios polyhydramnios sequence (TOPS)

C:-Stage I

D:-Stage II

Correct Answer:- Option-D

Question33:-A 34-years old female visits to an obstetrician with 8 weeks of amenorrhoea. Should this woman be offered testing for chromosomal abnormalities as per American College of Obstetricians and Gynecologists?

A:-No screening is required as her age is below 35 - years

B:-Should be offered if her family history is positive

C:-Should be discussed and offered to all patients early in pregnancy regardless of maternal age or baseline risk

D:-Screening depends on personal choice of the mother

Correct Answer:- Option-C

Question34:-What is the source of DNA in Cell-Free DNA Screening?

A:-Placental trophoblasts

B:-Fetal skin cells

C:-Fetal blood

D:-Polar bodies

Correct Answer:- Option-A

Question35:-Chorionic Villus Sampling (CVS) involves procuring a small sample of the placenta for genetic diagnosis. Which of the following is true regarding this procedure?

A:-Usually performed between 10 and 13 weeks gestation

B:-There is risk of hypoplastic left heart syndrome if CVS is performed before 9 weeks

C:-Pregnancy loss rate attributable to CVS is 5-10%

D:-Cases of genetically abnormal fetuses should be conformed with amniocentesis

Correct Answer:- Option-A

Question36:-As-low-as reasonably-achievable (ALARA) principle holds true for:

- i. Ultrasound
- ii. X-rays
- iii. Radiation safety
- iv. MRI

A:-(ii)

B:-(ii), (iii)

C:-(i), (ii), (iii)

D:-(i), (ii), (iii) and (iv)

Correct Answer:- Option-D

Question37:-The sinusoidal pattern is a smooth, sine wave-like undulating pattern in fetal heart rate baseline with a frequency of 3 to 5 cycles/min that persists for at least 20 minutes is labeled as sinusoidal pattern. Which fetal condition is classically associated with this pattern?

A:-Fetal hypoxia

B:-Fetal hypercarbia

C:-Severe fetal anemia

D:-Fetal hypotension

Correct Answer:- Option-C

Question38:-An unblocked pregnant woman with irregular antenatal follow up arrives in your labour room at a gestational age of 41 weeks in labour pains. Her records show moderate gestational diabetes mellitus. The obstetric evaluation rules out fetal distress. What problem you may anticipate in the neonate during delivery?

A:-Shoulder dystocia

B:-Umbilical Cord around neck

C:-Meconium Aspiration

D:-Umbilical cord prolapse

Correct Answer:- Option-A

Question39:-Category I fetal heart rate tracings are predictive of normal fetal acid-base balance at the time of observation. Which of the following is not the criteria for category I tracing?

A:-Baseline heart rate: 110-160 bpm

B:-Moderate baseline fetal heart rate variability

C:-No late or variable decelerations

D:-Accelerations must be present

Correct Answer:- Option-D

Question40:-A pregnant female in her second trimester presents with inextinguishable pruritus associated with erythematous urticarial patches and plaques, which are typically located around the navel. The skin lesions progressed to tense vesicles and blisters, which spread peripherally. The face, palms, soles and mucous

membranes are usually unaffected. The dermatologist suggested a diagnosis of herpes gestationis. Which of the following statements is FALSE regarding the latter?

A:-It is a rare autoimmune disorder associated with herpes infection

B:-All the symptoms usually wane toward the end of pregnancy, but may recur in subsequent pregnancies.

C:-Peripartum exacerbations do exist and it may recur with menses and oral contraception

D:-IgG autoantibodies are produced against an important element in epidermal-dermal adhesion - the bullous pemphigoid antigen 2 (BPAg2, also known as BP180)

Correct Answer:- Option-A

Question41:-An ELBW neonate with necrotizing enterocolitis is on mechanical ventilation, nil orally and parenteral nutrition. During morning round, you find that the baby's lips and tongue are dry, covered with dry flakes with occasional bleeding spots. How will you provide oral care to this infant?

A:-Lips should not be cleaned as raw area will further expose to microbial colonization

B:-With sterile water

C:-With colostrum

D:-With normal saline

Correct Answer:- Option-C

Question42:-During parenteral nutrition of neonates, why 20% lipid emulsions are preferred over 10%?

A:-20% lipids are more energy dense

B:-10% emulsions contain proportionately higher amounts of phospholipids which combine with cholesterol to form lipoprotein X, that interferes with the clearance of infused tri-glycerides

C:-10% emulsions will increase the incidence of sepsis

D:-Hypertriglyceridemia is more common with 10% lipids

Correct Answer:- Option-B

Question43:-A late preterm neonate born to a primigravida mother was discharged on request on day 2 of life. The mother was not confident regarding breast feeding, however she decided for discharge due to social reasons. She

tried for exclusive breastfeeding at home. Baby came for follow up on day 10 of life 20% weight loss. This baby is at increased risk of :

A:-Hyperkalemia

B:-Hyponatremia

C:-Hypermatremia

D:-Hypocalcemia

Correct Answer:- Option-C

Question44:-A 34-week neonate with a respiratory rate of 70/minute, mild retractions and grunting has been initiated on high flow nasal cannula (HFNC). Which of the following is CORRECT regarding this respiratory support?

A:-The temperature of the delivered gases should be maintained up to 34°C

B:-The flow rate of the gas should exceed 1 L/minute

C:-The gases are humidified to a relative humidity of 50%

D:-The nasal interface used can be either a mask or snugly fitted prong

Correct Answer:- Option-B

Question45:-A neonates in undergoing pressure support ventilation (PSV). Which of the following is TRUE regarding cycling of this mode?

A:-Depends on the duration of inspiratory time

B:-Cycling occurs when inspiratory gas flow falls to a predetermined proportion of peak flow

C:-Depends on the ratio of inspiratory and expiratory time

D:-Cycling occurs after 0.35 seconds

Correct Answer:- Option-B

Question46:-A neonate delivered through meconium stained liquor developed respiratory distress so initiated on mechanical ventilation. Baby desaturates with light or noise. Right upper limb SpO₂ is 94% while lower limb SpO₂ is 82%. An echocardiography done in this case is expected to reveal all of the following, EXCEPT:

A:-Tricuspid valve regurgitation

B:-Flattened ventricular septum

C:-Poor cardiac contractility

D:-Narrowing of arch

Correct Answer:- Option-D

Question47:-Which cardiac anomaly must be EXCLUDED before initiating ECMO?

A:-Hypoplastic left heart

B:-Interrupted aortic arch

C:-Total anomalous pulmonary venous return

D:-Tricuspid atresia

Correct Answer:- Option-C

Question48:-A full-term, 3.2 kg neonate, delivered by caesarean section, cried immediately after birth and shifted with mother in a district hospital. Baby was breastfeeding well and passing urine and stools normally. Critical congenital heart disease screening done at 30 hr of life was passed. He was discharged at 60 hr of life. He returned to Pediatric emergency on day 5 of life with lethargy, poor feeding, decreased urine output and quiet tachypnea. Sepsis screen done was negative. What will you do in this scenario?

A:-Refer the neonate to a tertiary care center equipped for cardiac surgery

B:-Send the neonate for urgent echocardiography

C:-Immediate cardiac catheterization should be done

D:-PGE1 infusion should be started immediately

Correct Answer:- Option-D

Question49:-A neonate presented with small, low-set ears, short width of eye openings (palpebral fissures), hooded eyes, a relatively long face, an enlarged nose tip (bulbous), or a short or flattened groove in the upper lip and hypocalcemic seizures. The neonate is also tachypneic and cyanosed. Which genetic evaluation should be performed in this neonate?

A:-FISH for deletion 22q11

B:-Karyotyping for Trisomy 21

C:-Karyotyping for Trisomy 18

D:-Microarray for deletion 7q11

Correct Answer:- Option-A

Question50:-A full-term neonate born by spontaneous vaginal delivery developed gradually worsening respiratory distress since birth. Chest radiograph done at 16-hour-of life revealed ground-glass appearance. Despite high inflating and positive end-expiratory pressures and a FiO_2 of 1, the arterial blood gas revealed a pH of 7.02, arterial carbon dioxide tension ($PaCO_2$) of 84, and an arterial oxygen tension (PaO_2) of 23 mm Hg. What should be the MOST appropriate management of this neonate?

A:-Surfactant administration

B:-Emergent surgical management

C:-High frequency ventilation

D:-Antibiotics

Correct Answer:- Option-B

Question51:-A mother reaches neonatal emergency with complaints of bluish discoloration of tongue and lips of her 6 day old baby. An echo cardiogram done by junior resident was unremarkable and blood gas revealed pH=7.38. $PaCO_2 = 45$; $PaO_2 = 78$ mm Hg. What is your MOST probable diagnosis?

A:-Methemoglobinemia

B:-Tricuspid atresia

C:-Ebstein anomaly

D:-Truncus arteriosus

Correct Answer:- Option-A

Question52:-Which of the following is the goal of enteral nutrition in extremely preterm neonates?

A:-Weight gain = 10 g/kg/day; head growth 0.75 cm/wk; length gain = 0.75 cm/wk

B:-Weight gain = 15 g/kg/day; head growth 0.9 cm/wk; length gain = 1 cm/wk

C:-Weight gain = 18 g/kg/day; head growth 0.9 cm/wk; length gain = 0.75 cm/wk

D:-Weight gain = 18 g/kg/day; head growth 0.9 cm/wk; length gain = 1 cm/wk

Correct Answer:- Option-D

Question53:-Which feeding strategy has been found to decrease the frequency of necrotizing enterocolitis?

- A:-Continuous feeding in ELBW
- B:-Standardized feeding regimen
- C:-Probiotics in extremely low weight babies
- D:-Minimal enteral nutrition

Correct Answer:- Option-B

Question54:-High intensity gallium nitride LEDs with emission within 460-490 nm regions are one of the most commonly used phototherapy devices and have all of the following benefits, EXCEPT :

- A:-Longer lifetime (>20,000 hours)
- B:-Lower heat output
- C:-Low infrared emission
- D:-Less UV emission

Correct Answer:- Option-D

Question55:-Which of the following is false about PRBC transfusion related necrotizing enterocolitis (NEC)?

- A:-Transfusion associated NEC is postulated to be mediated by an immunologic reaction in the gut
- B:-It may also result from affect mesenteric blood flow or tissue oxygenation
- C:-Enteral feedings during RBC transfusion have been implicated in intestinal perfusion changes that lead to tissue ischemia
- D:-It is standard of care to withhold feeds during PRBC transfusion

Correct Answer:- Option-D

Question56:-An extremely low birth weight (ELBW) neonate, with respiratory distress syndrome was intubated, ventilated and given surfactant. Minimal enteral nutrition along with IV fluid was started. how should you revise the fluid order after 24 hours?

- A:-Increase fluids by 20 mL/kg/day
- B:-Increase fluids by 20 mL/kg/day and add sodium

C:-Depends on the urine output and weight of the baby

D:-Do not increase fluids as ELBWs are at high risk of bronchopulmonary dysplasia

Correct Answer:- Option-C

Question57:-Blood gas analysis of a preterm 1.2 kg neonate showed serum sodium of 128 mEq/L. On further assessment, urine output was 5 mL/kg/hr and present weight was 1020 g. On urinary electrolyte assessment, urine sodium was 50 mEq/L. All of the following can be the cause of hyponatremia in this scenario, EXCEPT:

A:-Renal tubular acidosis

B:-Fanconi syndrome

C:-Barter syndrome

D:-Diarrhea

Correct Answer:- Option-D

Question58:-The ratio of intracellular to extracellular fluid volume reaches adult levels by:

A:-1 year

B:-2 years

C:-3 years

D:-5 years

Correct Answer:- Option-A

Question59:-Which of the following statements is FALSE regarding congenital hypothyroidism?

A:-Classic clinical features of congenital hypothyroidism are usually present at birth

B:-Early manifestations include lethargy, inactivity, hypotonia, periorbital edema, large anterior and posterior fontanelles

C:-Respiratory distress can occur due to myxoedema of the airway

D:-In central hypothyroidism, there is a mixture of indirect and direct hyperbilirubinemia

Correct Answer:- Option-A

Question60:-In newborns with disorders of sex differentiation, considerable information can be obtained by performing a careful physical examination. Which of the following disorders will result in palpable gonads in male-appearing genitalia?

A:-Anorchia

B:-Persistent Mullerian duct syndrome

C:-46, XX DSD with 21-hydroxylase deficiency

D:-Complete androgen insensitivity syndrome

Correct Answer:- Option-D

Question61:-Dietary sources contribute maximum to magnesium stores in the body. The rate of absorption is more in term and preterm neonates as compared to adults. Which of the following parts is the main site of absorption of magnesium?

A:-Jejunum

B:-Terminal ileum

C:-Ileo-cecal junction

D:-Colon

Correct Answer:- Option-B

Question62:-In which of the following scenarios, you will consider a bolus of 2 ml/kg 10% dextrose in a neonate?

A:-A neonate with jitteriness with blood sugar of 60 mg/dL

B:-An asymptomatic neonate with blood sugar of 45 mg/dL

C:-A neonate with lethargy with blood sugar of 35 mg/dL

D:-An asymptomatic neonate with blood sugar of 30 mg/dL

Correct Answer:- Option-C

Question63:-Fetal and neonatal alloimmune thrombocytopenia (FNAIT) is the most common cause of severe neonatal thrombocytopenia and of intracranial hemorrhage (ICH) in term neonates. What is the most common human platelet antigens (HPA) involved in the pathogenesis of FNAIT?

A:-HPA 1

B:-HPA 3

C:-HPA 4

D:-HPA 5

Correct Answer:- Option-A

Question64:-Fetal liver is believed to be the major site of hematopoiesis between weeks 6 and 16, thereafter the bone marrow assumes this role by week 24. Which of the following hemoglobin is most expressed during this period?

A:-Hb Gower

B:-Hb Portland

C:-Hb F

D:-Hb A

Correct Answer:- Option-C

Question65:-Thrombolytic agents are mainstay of therapy in adults for several indications including myocardial infarction, strokes etc. However, there are few selected indications for systemic thrombolysis in neonates. Which of the following is NOT one of these indications?

A:-Umbilical arterial catheter related thrombosis resulting in renal dysfunction

B:-Acute ischemic stroke

C:-Aortic thrombus compromising viability of lower limbs

D:-Right atrial/ventricular thrombus

Correct Answer:- Option-B

Question66:-A 26-week pregnant woman with Rh isoimmunization has been planned for intra-uterine transfusion (IUT) of her fetus. What is the most preferred site for IUT in the fetus?

A:-Any well-delineated and accessible part of umbilical cord

B:-Umbilical cord at fetal insertion site

C:-Intrahepatic portion of the umbilical vein

D:-Umbilical cord at placental insertion site

Correct Answer:- Option-D

Question67:-Automated auditory brainstem response (AABR) for screening and ABR for diagnostic testing are obtained from surface electrodes that record neural activity in the cochlea, outer and inner hair cells, auditory nerve and brainstem in response to a click stimulus. In AABR, a predetermined algorithm provides an automated pass-or-fail response to the presence or absence of which wave on the ABR?

A:-2

B:-4

C:-5

D:-7

Correct Answer:- Option-C

Question68:-Diffuse excessive high-signal intensities (DEHSI) on term equivalent MRI is a common finding, reported on term equivalent MRI in 50%-90% of preterm infants. What is the implication of these lesions on the long-term neurodevelopment outcomes in follow-up studies?

A:-No association

B:-Subtle learning disabilities

C:-Behavioural problems

D:-Higher incidence of cerebral palsy

Correct Answer:- Option-A

Question69:-Spinal dysraphisms are a subset of neural tube defects and are classified as open or closed. Which of the following is an example of open spinal dysraphism?

A:-Caudal agenesis

B:-Neuroenteric cysts

C:-Terminal myelocystocele

D:-Meningocele

Correct Answer:- Option-D

Question70:-A newborn is comfortable, awake and breathing regularly. He does not vocalize during the observation period but moves his limbs slightly and gently. According to Prechtl's behavioral states, which state is the newborn in?

A:-State 1

B:-State 2

C:-State 3

D:-State 4

Correct Answer:- Option-C

Question71:-A term neonate, born through meconium-stained liquor, develops respiratory distress and requires mechanical ventilation and sedation. The neonate has sudden dip in saturation with almost no visible chest rise and absent breath sounds. The neonate is revived with hand-ventilation after administering vecuronium. Which of the following is the most likely diagnosis?

A:-ET displacement

B:-Chest wall rigidity

C:-Severe persistent pulmonary hypertension of newborn

D:-Worsening parenchymal disease

Correct Answer:- Option-B

Question72:-Propofol is increasingly being shown to be effective and safe in treating procedural sedation and anesthesia in neonates. What is the most important concern that has been raised by the recent studies in neonates?

A:-Hypotension

B:-Laryngospasm

C:-Increased incidence of severe intraventricular hemorrhage

D:-Long term safety data not available

Correct Answer:- Option-A

Question73:-While antenatal interventions are available for only a limited number of neonatal surgical conditions. Which of the following is a primary indication for Fetoscopic Endoluminal Tracheal Occlusion (FETO)?

A:-Tracheo-esophageal fistula

B:-Congenital diaphragmatic hernia

C:-Congenital pulmonary Airway malformation

D:-Tracheal agenesis

Correct Answer:- Option-B

Question74:-A neonate is born to mother with known hepatitis C infection via spontaneous vaginal delivery. When is the optimal time for ruling out vertical hepatitis C infection in the infant?

A:-6 weeks by HCV-RNA assay

B:-6 weeks by anti-HCV antibodies

C:-18 months by HCV-RNA assay

D:-18 months by anti-HCV antibodies

Correct Answer:- Option-D

Question75:-An 11-day-old term neonate is noted to have "only fast breathing" by a community health worker (CHW) on a routine follow up home visit and the father is not willing to accept referral to hospital. Which is the most appropriate strategy for the CHW to manage such neonate according to WHO recommendations on managing possible serious bacterial infection in young infants 0-59 days old?

A:-Give oral amoxicillin first dose and convince for referral to the nearest hospital

B:-Give IM gentamicin first dose and convince for referral to the nearest hospital

C:-Referral is not needed, give oral amoxicillin on outpatient basis

D:-Referral is not needed, give IM gentamicin on outpatient basis

Correct Answer:- Option-C

Question76:-A preterm neonate develops late-onset sepsis requiring increased respiratory support, feed intolerance and abdominal distention. Her blood culture is positive for *Candida albicans*. Which of the following drugs is the treatment of choice in this neonate?

A:-Intravenous amphotericin B

B:-Intravenous fluconazole

C:-Intravenous caspofungin

D:-Intravenous voriconazole

Correct Answer:- Option-A

Question77:-A pregnant woman tests positive for Human Immunodeficiency Virus (HIV) post-delivery. She has not received any antiretroviral treatment (ART) during pregnancy. What is the recommended prophylactic treatment for her neonate as

per latest National AIDS Control Organisation (NACO) guidelines?

A:-Nevirapine alone

B:-Zidovudine alone

C:-Nevirapine and Zidovudine

D:-No prophylaxis required

Correct Answer:- Option-C

Question78:-A preterm neonate is intubated for respiratory distress syndrome. The endotracheal tube (ET) is fixed at 7 cm and a call is sent for a chest x-ray to confirm the ET position. Which is the ideal location of the ET tip on chest x-ray?

A:-C7-T1 vertebral bodies

B:-T1-2 vertebral bodies

C:-T2-3 vertebral bodies

D:-T1-4 vertebral bodies

Correct Answer:- Option-B

Question79:-A 3.2 kg male neonate is delivered via caesarean section through clear amniotic fluid at 37 weeks of gestation. The neonate is noted to have respiratory distress soon after birth, which resolves within 24 hours. What will be the most likely initial finding on lung ultrasound in this neonate?

A:-Quad sign

B:-Double lung point

C:-Spine sign

D:-Jelly fish sign

Correct Answer:- Option-B

Question80:-A pregnant woman undergoes a fetal ultrasound examination at 32 weeks of gestation. The radiologist notes bilateral hydroureteronephrosis in the fetus with a characteristic keyhole sign of the bladder. Which of the following is the most likely diagnosis in this case?

A:-Pelvi-ureteric junction obstruction

B:-Ureterocele

C:-Posterior urethral valve

D:-Vesico-ureteric reflux

Correct Answer:- Option-C

Question81:-A small for date newborn with congenital cataract was found to have a murmur, which on ECHO revealed PDA. The neonate was having a characteristic retinal appearance described as "salt and pepper". The vision is moderately affected

A:-Chorioretinitis with hemorrhage

B:-Pigmentary retinopathy

C:-Retinal detachment

D:-Macular coloboma

Correct Answer:- Option-B

Question82:-Aggressive posterior ROP is recognized by all except

A:-Difficulty in documenting the stage of ROP at the junction between vascularized and non-vascularized retina

B:-Marked dilatation of the posterior retinal vessel

C:-Involves zone 1 or posterior zone 2

D:-A ridge between the junction vascularized and non-vascular retina

Correct Answer:- Option-D

Question83:-Plus disease in ROP is characterized by

A:-Neovascularization

B:-Vascular dilation and tortuosity

C:-Macular edema

D:-Retinal haemorrhage

Correct Answer:- Option-B

Question84:-Which zone has the worst prognosis if involved

A:-Zone III

B:-Zone I

C:-Zone II posterior

D:-Peripheral avascular retina

Correct Answer:- Option-B

Question85:-A newborn developed central cyanosis, which improved with crying. Which one is the best bedside method for diagnosis?

A:-Flexible nasal endoscopy

B:-CT scan of nose and paranasal sinus

C:-Passing a feeding tube through the nostrils

D:-MRI of the brain and paranasal sinus

Correct Answer:- Option-C

Question86:-A neonate developed progressive biphasic stridor, which worsened over the following weeks. The baby had an uneventful postnatal period and no feeding difficulties. Which is the most apparent treatment modality?

A:-Systemic steroid

B:-Immediate tracheostomy

C:-Oral propranolol

D:-Lase excision

Correct Answer:- Option-C

Question87:-A 4-week-old neonate had progressive stridor since birth, Which worsens on feeding supine and is associated with recurrent desaturation and poor weight gain. The Pediatrician referred to an ENT specialist for an opinion. Flexible laryngoscopy showed omega-shaped epiglottis. What is the most likely next step for management?

A:-Supraglottoplasty

B:-Tracheostomy

C:-Start anti-reflux therapy and keep the baby prone

D:-Reassurance and follow-up

Correct Answer:- Option-A

Question88:-A term neonate developed a vasicobullos lesion over the trunk and extremities. There is no mucosal involvement and the skin slips off with slight pressure, leaving an erosion. What is the most likely diagnosis?

A:-Epidermolysis bullosa

B:-Bullous impetigo

C:-Staphylococcal Scalded Skin Syndrome

D:-Neonatal herpes simplex

Correct Answer:- Option-C

Question89:-A 3-day-old neonate developed erythematous macules with central pustules all over the body except palms and soles. The baby is feeding well at the breast; otherwise active and alert. What is the most probable diagnosis?

A:-Neonatal varicella

B:-Transient pustular melanosis

C:-Impetigo

D:-Erythema toxicum neonatarum

Correct Answer:- Option-D

Question90:-A neonate developed generalized erythematous rash and scaling, ecropion of the eyelid and was encased in a shiny parchment-like membrane. What is the most probable diagnosis?

A:-Lamellar ichthyosis

B:-Seborrheic dermatitis

C:-Atopic dermatitis

D:-neonatal psoriasis

Correct Answer:- Option-A

Question91:-Which one intervention in the community has the maximum impact on reducing the LBW-related mortality rate in the community?

A:-Reducing emergency LSCS

B:-Immediate KMC

C:-Iron supplementation of the mother

D:-Delayed cord clamping

Correct Answer:- Option-B

Question92:-What is the leading cause of neonatal mortality in India?

A:-Neonatal sepsis

B:-perinatal asphyxia

C:-Prematurity

D:-Pneumonia

Correct Answer:- Option-B

Question93:-Beneficiaries under PM-JAY are identified based on:

A:-Income Tax Records

B:-Socio-Economic Caste Census 2011 databases

C:-Aadhaar database

D:-State government survey

Correct Answer:- Option-B

Question94:-A neonate with extreme prematurity (28 weeks) requires a prolonged NICU stay in a private hospital. Which statement is MOST accurate?

A:-Full cost is always covered regardless of duration

B:-Coverage limited to predefined package rates

C:-Only government hospitals are eligible

D:-PM-JAY does not cover neonates

Correct Answer:- Option-B

Question95:-The MOST important component of KMC is:

A:-Breastfeeding only

B:-Skin-to-Skin contact

C:-Incubator care

D:-Antibiotic use

Correct Answer:- Option-B

Question96:-The district shows high neonatal mortality despite high institutional delivery rates (>90%). The most likely explanation is:

A:-Poor antenatal coverage

B:-Inadequate facility-based newborn care quality

C:-Lack of JSY implementation

D:-Low vaccination coverage

Correct Answer:- Option-B

Question97:-An ASHA visited a 3-day-old newborn with fast breathing (RR 70/min.) but feeding well. What is the MOST appropriate action?

A:-Reassure and review on next visit

B:-Start oral antibiotics at home

C:-Current referral to health facility

D:-Advise breastfeeding only

Correct Answer:- Option-C

Question98:-Which indicator BEST reflects the quality of perinatal care?

A:-Neonatal mortality rate

B:-Infant mortality rate

C:-Still birth rate

D:-Under-5 mortality rate

Correct Answer:- Option-C

Question99:-Which indicator is MOST sensitive to improvements in delivery room care?

A:-Late neonatal mortality

B:-Early neonatal mortality

C:-Infant mortality

D:-Under-5 mortality

Correct Answer:- Option-B

Question100:-What is the Neonatal mortality rate in India?

A:-25 per 1000 live birth

B:-32 per 1000 live birth

C:-28 per 1000 live birth

D:-22 per 1000 live birth

Correct Answer:- Option-A