

UNDERGRADUATE C.A.T END OF LECTURE SERIES ESSAYS – JANUARY 2019

QUESTION ONE – 25 MARKS

1. Fatma, a 4 month old girl (5kg) is brought to the pediatric outpatient clinic by her mother with complaints of cough, hotness of body and difficulty in breathing for 3 days. You observe that she is not alert but responds to voice, is lying in the mother's arms unable to breastfeed. On rapid assessment you note that she has no noisy breathing. She is breathing at a rate of 63/minutes, oxygen saturation in room air is 89%, has no grunting, no head nodding and no central cyanosis. Lower chest wall indrawing is present but there is no deep acidotic breathing. Crepitations are heard bilaterally on auscultation. Rhonchi (wheezes) are absent.

DPV
n, Fever
proea.
likely to feed
tachypnoea

- What would you do at this point? (4 marks)
- No other issues are identified in your rapid assessment. What would your working diagnosis be at this point? Give the appropriate classification and justify. (5 marks)
- List the interventions/key strategies for protecting, preventing and treating children under 5 years with this condition in order to improve child survival. (12 marks)
- How would you manage Fatma? (4 marks)

• Night flow
• ↓ indoor pollution
• Excl. lvs.

QUESTION TWO – 25 MARKS

2. Njoroge, a 2-and-a-half-year-old boy (now 16kg) presents with generalized body swelling.

- What are the 3 main systems that could be affected? Give one example in each system listed. (6marks)
- On taking history, Njoroge had been previously well with normal growth. The body swelling began 1 month ago and has been progressive. Systemic complaints are minimal and on examination, he is alert, has no pallor, jaundice, cyanosis or dehydration. His vital signs are within normal. Serum albumin is 15g/l. What one additional investigation would you do to clinch your diagnosis? Indicate the cut-offs. (4marks)
- Njoroge has no blood in his urine macroscopically, RBC casts and blood are absent on microscopy and 900mg of protein are reported from his 24-hour urine sample. What are the possible causes for his condition? Give one example for each cause listed. (8marks)
- What is the most likely histological diagnosis for Njoroge's condition? (2 marks)
- How would you know if Njoroge was responding well to the appropriate treatment? (5marks)

short

Severe pneumonia

DIB, cough, fever

QUESTION THREE – 25 MARKS

3. Onyango, a 3 year old boy who recently traveled from Kisumu is brought to the pediatric outpatient clinic by his father with complaints of fever and respiratory distress for 2 days. You observe that he is drowsy, and does not respond to your stimulation so you quickly transfer him to an emergency setting. On rapid assessment, his airway clear and you open it into the sniffing position. He is breathing at a rate of 52/minute, has no grunting, head nodding, central cyanosis or lower chest wall indrawing. Deep acidotic breathing is present but there are no crepitations or rhonchi (wheeze) heard on auscultation. You give oxygen via a face mask with a reservoir bag at 10L/min.

• fever
• Resp distress
• drowsy
• AVDU - U

- A. On assessing his circulation, his peripheries are warm, radial pulse is easy to feel, capillary refill time is 1 second and he has severe palmar pallor. What would you do at this point? Give reasons why (4 marks)
- B. On assessing disability, the child is noted not to respond to pain appropriately, is unable to sit up or drink. Blood glucose is 1.8mmol/l. What would you do at this point? The child weighs 15kg. (3 marks)
- C. Once you have stabilized the child, you proceed to take a history and examination and follow up investigations done. A blood slide done for malaria parasites comes back positive. Classify and give reasons why. (6 marks)
- D. Draw and describe the life cycle of Plasmodium falciparum. (12 marks)

QUESTION FOUR – 25 MARKS

4. Mutiso is a 6 year old boy who presents with painful swelling and bleeding into the ankle joint after being hit by one of his friends as they were playing football. He is unable to bear weight on this limb. This is his second episode of bleeding into this joint. There is no history of bleeding into the skin or mucosae (no epistaxis or gingival/buccal bleeding). Family history reveals that his maternal uncle experienced severe bleeding when he underwent circumcision.

- A. What is the most likely diagnosis? (2 marks)
- B. How is this condition inherited? (2 marks)
- C. List the investigations that would be useful in screening Mutiso's condition. Include the expected findings. (6 marks)
- D. What test would give a definitive diagnosis? (2 marks)
- E. Draw and describe the traditional coagulation cascade. (10 marks)

Blood glucose
5.0

0.1

bone
5mmol/kg
9.5

1. Which of the following are the correct steps for the management of a choking infant
- A. Confirm ineffective coughing, 5 back slaps, check for foreign body, then 5 chest thrusts
 - B. Confirm ineffective coughing, 5 back slaps, 5 chest thrusts, a quick finger sweep of mouth
 - C. Confirm ineffective coughing, a quick finger sweep of mouth, 5 back blows
 - D. 5 back slaps, check foreign body, quick finger sweep of mouth, 5 back blows
 - E. A finger sweep of mouth, 5 back blows, 5 chest thrusts, check for foreign body

2. Which of the following is a common indicative feature of severe malaria in children?

- A. Renal failure
- B. Acidosis with respiratory distress
- C. Diarrhea
- D. Hyperpyrexia
- E. Skin rash

- Fever
- ~~AVPV~~ AVPV >
- Unable to drink
- Hypoglycemia - < 2.2
- Convulsion
- Acidosis with resp. distress

3. A 2 year old child presents with painful swelling of the hands and feet. → Dacty Laboratory evaluation reveals Haemoglobin of 9 gm/dL with white blood cell count of 11,500/uL and platelet count of 250,000/uL. Which additional laboratory test will support your diagnosis?

- A. Skeletal survey
- B. VDRL testing
- C. Bone marrow aspiration
- D. Haemoglobin electrophoresis
- E. Serum calcium measurement

4. You suspect the diagnosis of a brain tumor in a 2 year old child with a recent history of ataxia, slurred speech, and early morning vomiting. Which statement about childhood brain tumors is true?

- A. Most are located in the midline and/or below the tentorium cerebri.

- C. Signs of increased intracranial pressure are rare on presentation.
- D. Seizures are the presenting complaint in most cases.
- E. Most cases occur in the first year of life.

5. A 3 year old child presents with an abdominal mass. Which of the following features suggest the likely cause to be a nephroblastoma

- A. Periorbital ecchymoses *Reconner / Roper's*
- B. Mass crossing the midline *nephroblastoma*
- C. Elevated urinary catecholamines *nephroblastoma, ↑ VIP production, ↑ acute myeloblastic leukaemia*
- D. Mass extending inferiorly into the pelvis
- E. Significant weight gain *renal tumor → wt loss*

6. Hemorrhagic cystitis is associated most closely with large doses of which of the following?

- A. Cyclophosphamide
- B. Methotrexate - *Angula stomatitis*
- C. Actinomycin D - *BM suppression. For Wilm's, Ewing's, NHL*
- D. L-Asparaginase *treatment ALL, AML & NHL - AE: pancreatitis & Liver & kidney dysfunction.*
- E. Prednisone

7. A 5-year-old with a history of sickle cell disease presents to the emergency department with a 2 day history of cough and a 1 day history of fever. You order blood work and a chest x-ray and she is found to have an infiltrate that is consistent with pneumonia. Which is the most appropriate drug therapy?

- A. Amoxicillin- *RTI → Penicillins*
- B. Ceftriaxone *Cephalosporins 3rd gen.*
- C. Azithromycin *Macrolide*
- D. Ceftriaxone and azithromycin *3rd gen + macrolide.*
- E. No antibiotics needed, likely viral

8. An 18 month old toddler presents with pallor. He drinks 2 litres of cow milk per day. The examination is significant only for an obese and playful child with

pallor. Stool is negative for blood. Which laboratory test would most likely reveal the diagnosis?

- A. Chest X-ray
- B. Examination of stool for ova and parasites

C

Complete blood count \rightarrow meth Hb & methyl UA

- D. Serum haptoglobin
- E. Bone marrow aspirate

9. A baby was born by caesarian section due to severe maternal hypertension. The birth weight was 1.4kg. What is the baby's total fluid requirement on this first day of life?

A. 84 ml

B. 112 ml

C. 140 ml

D. 60 ml

E. 80 ml

$1.5 \rightarrow 80 \text{ ml/kg}$
 $1.5 \rightarrow 80 \text{ ml/kg}$
 $1.0 \rightarrow 100 \text{ ml/kg}$

80×1.4

B

10. A baby aged 48 hours weighing 3.1kg had deep jaundice with serum indirect bilirubin level of 310 micromol/l. Choose the correct statement. physiologic jaundice

A. Exposure of baby to sunlight would be adequate intervention \rightarrow indirect hyperbilirubinemia

B. Dubin Johnson syndrome is the likely cause \rightarrow direct hyperbilirubinemia

C. Breastmilk jaundice is the most likely diagnosis \rightarrow usually seen after 1 week

D. Exchange Transfusion is appropriate treatment \rightarrow phototherapy

E. Hemolytic disease of the newborn is likely to be the cause \rightarrow

penicillinase-resistant

Methi, Clo, Oxa, Flucloxacillin
Nafcillin

activity spectrum

mino: Ampicillin
Amoxicillin
Bacampicillin

oxy: Carbenicillin
Ticarcillin

ido: Piperacillin

C 11. A one week old neonate presented to the hospital with 12 multiple scattered pustules on the face and head. Choose the correct statement.

A. This is likely to be scarbetic dermatitis \times

B. This is likely to be heat rash \times

C. Administration of Flucloxacillin is the best intervention

D. Gentian violet should be applied on the lesions

E. Application of tetracycline skin ointment 3% is adequate treatment

12. The following is TRUE regarding rectal bleeding

- A. Intussusception is the most likely cause of lower GI bleeding in 3-5 year olds (6 months - 3 yrs)
- B. Blood mixed in stool or dark red blood implies a proximal source with some degree of digestion of the blood
- C. Children with ^{polyps} are found to have painful bleeding per rectum, which often streaks the stool with fresh blood. → Anal fissures.
- D. A high blood urea nitrogen level, suggesting a ^{upper} lower GI source that has had time to allow the body to reabsorb blood leading to a higher BUN level compared with an upper GI source
- E. Quantity of blood vomited can be easy to assess because only large amounts of blood turn water in a toilet bowl an opaque red. X

X 13. The following is TRUE regarding breastfeeding

- A. There are specific foods that must be eaten by the breastfeeding mother
- B. malnutrition greatly reduces the amount of milk a mother produces
- X C. vitamin ^D A capsule 400,000 IU at 10 weeks postpartum to build stores, improve the vitamin A content of breastmilk, and reduce infant and maternal morbidity
- X D. The levels of Vitamin A, Vitamin D, thiamin, riboflavin, vitamin B-6, vitamin B-12, iodine, and selenium in breastmilk are not affected by how much is in the food the mother eats.
- X E. Both HIV infection and lactation increase nutritional requirement X

X 14. Choose the correct response regarding a congenital umbilical hernia found at birth.

- A. Strangulation is an early complication in neonatal period. → Strangulation is extremely rare
- B. The defect should be repaired surgically within three months of life → Surgery is not advised unless hernia persists to 4-5 yrs, becomes larger
- C. Dressing enhanced by a silver coin is a useful intervention → Ineffective (strapping).
- D. Colic pain being experienced by the baby probably originates from the defect
- E. Probability of spontaneous closure of the defect is high. → Most hernias before 6mo disappear spontaneously by 1yr of age.

15. Which of the following is a true statement on physiology of lactation?

- A. After delivery, the ^{estrogen & progesterone} prolactin concentration drops, leading to increased milk synthesis, because PRL release now initiates & maintains lactation. (PRL stimulates devt of apparatus during pregnancy)
- B. Lactation does not occur if pregnancy does not progress beyond 20 weeks. → Lactation btm .16
- C. Obesity does not interfere with lactogenesis. → lower prolactin responses for suckling (delays lactation)
- D. Oxytocin causes the milk-ejection reflex or letdown.

E. The rate of milk synthesis is not related to the degree of emptiness or fullness of the breast → emptier breast produces milk faster.

16. The following statement is true regarding Breath holding attacks

- A. Are commoner ^{before} over the age of 3 1/2 years ~~X~~ (Peak 2-3 yrs)
6-18 months Peak at 2 yrs
- B. Can be confused with a generalized convulsion → Reflex Anoxic Seizures.
- C. May be precipitated by a minor injury ~~X~~ Precipitations: Anger, Frustration, Pain
- D. Should be treated with sedatives ~~X~~ self-limiting
~~(CPAP, a denervating and/or basilectomy)~~
- E. Are never fatal ~~X~~ → self limiting

17. Which of the following is true about Necrotizing Enterocolitis?

- A. does not occur in term babies → does in birth asphyxia, Down's
- B. Oral feeds ^{not} should be continued ~~off~~.
- C. most often presents with bloody stools
- D. abdominal x-ray is usually not contributory to diagnosis → pneumatisis intestinalis
- E. only occurs in premature with perinatal stress ~~X~~

18. The following is true regarding iron physiology in the gastrointestinal tract

- A. The practice of taking beverages with or soon after eating ^{Phytates & tannins inhibit Iron} enhances iron absorption.
- B. Legumes use in composite flours is encouraged as it enhances iron absorption.
- C. Vegetables have phytates which too act as enhancers while cereals have oxalates → impair non-heme
- D. Fermentation ^{increases} inhibits availability of iron and should be discouraged. → acid
- E. Cooking eggs softly avails more iron for use

19. The following is true regarding Zinc physiology in relation to maternal and child health

- A. Zinc is the essential trace mineral occurring in the body in smaller amounts than any other trace element
- B. Zinc requirements are highest in the first trimester when the fetus acquires two-thirds of its zinc stores
- C. Diet that is high in calcium, increase zinc absorption.
- D. Routine iron and folate supplementation may also enhance zinc absorption.

E. Zinc deficiency increases the risk early rupture of the membranes,

20. Which of the following is true of Hirschsprung Disease?

A. Common in prematures Unusual in preterm

→ Most common cause of lower intestinal obst in neonates
M:F 4:1

B. in the neonatal period diarrhea is not a prominent symptom

→ Prematurity is uncommon

C. The rectum is large and full of stool
diarrhoea, abd tenderness, sepsis, ^{stasis can lead to enterocolitis with} dilatation is of proximal bowel

→ Also with other congenital anomalies

D. in the new born barium enema will always show the classic feature in 80% of patients

→ The aganglionic segment is rect

E. bile stained vomiting may occur
→ proximal ganglionic segment might not be significantly dilated in 1st week of life (10% have normal study)

→ Symptoms: Distended abdomen, to pass meconium and/or bilious or aspirates with feeding intolerant 99% of infants pass meconium in

21. A 4 month old presents with a 3 day history of low grade fever, worsening wheeze and difficulty feeding. The following is true regarding this condition.

A. This infection is uncommon in less than 1 year age → Common in early preschool years

B. This child is at risk for later development of asthma → Usually resolves during lower school years increased risk for asthma later in life.

C. Inhaled bronchodilator therapy plays a key role in treatment

D. Hypoxaemia complicates severe cases

E. Steroids have been shown to decrease duration of wheezing → Corticosteroids do not alter likelihood target the airways do not alter wheeze Target inflammation

22. A nine year old child recently returned from a malaria endemic region and now presents with progressive loss of consciousness, pallor and high fever. What is true regarding treatment?

A. Rectal artesunate may not be given → may be used in pre-referral treatment

B. A lumbar puncture should be included in his management

C. Parenteral Artemether is the firstline treatment
IV Artesunate

D. A negative malaria smear rules out malaria Low parasitemia may have negative slide

E. Artemisinin based combination treatment is only used in uncomplicated forms of this condition ~~Severe Malaria → Artesunate, Artemether~~

23. A 10 month old infant who last received vaccinations at 10 weeks should receive

A. pentavalent, pneumococcal, measles/rubella, IPV, OPV

B. pentavalent, pneumococcal, measles/rubella, IPV, OPV, rotavirus

C. pentavalent, pneumococcal, measles, rotavirus

D. pentavalent, pneumococcal, HepB, measles/rubella, IPV, OPV

E. pentavalent, pneumococcal, measles, IPV, OPV

Birth BCG, OPV 0
6 OPV 1, Penta, Pneumo
10 OPV 2, Penta, Pneumo
14 OPV 3, IPV, Penta, Pne

24. A 4 year old known asthmatic child presents with history of nocturnal cough and wheezing. Which of these is true?

- A. Use of a spacer device is not necessary since he is above 2 years ✗
- B. Oral corticosteroids are contraindicated in pre-pubertal children ✗
- C. Mycoplasma pneumonia is a common asthma trigger in this age group.
- D. He should not swim since this is a known asthma trigger
- E. 6-10 puffs of salbutamol metered dose inhaler may be administered.

25. Regarding the care of a 2 week old infant born to a HIV infected mother not on antiretroviral treatment. The following is true.

NEVP + AZT from birth
stop at 6 weeks
start Co-trimox

- A. He should start co-trimoxazole prophylaxis from 6 weeks
- B. He should be on Nevirapine prophylaxis for 12 weeks if breastfed
- C. He may ~~not breastfeed~~ ^{breastfeed} as the risk of infection outweighs the benefit
- D. HIV-DNA PCR done before 6 weeks may be falsely positive and is not recommended
- E. He should not receive the BCG vaccine

26. Regarding vaccine administration at 14 weeks, which statement is FALSE?

- A. The BCG scar should be healed by this time
- B. OPV is not administered then since it is also trivalent like IPV
- C. Pentavalent is intramuscular on the outer left thigh ✓
- D. Pneumococcal is intramuscular outer right thigh ✓
- E. Pneumococcal and IPV are administered on the same thigh ✓, 2cm from each other.

27. Which of the following is FALSE regarding an 8 year old with papulovesicular rash?

- A. vaccine is available on routine schedule ✗
- B. He is infectious until lesions form scabs ✓
- C. incubation period can be up to 21 days ✓
- D. Mothers infected 3 days before delivery will transfer antibodies to their infants protecting them from neonatal chicken pox
- E. Acyclovir may be given to exposed children at risk of severe disease ✓

28. A 10 year old child with sudden onset profuse diarrhea the color of rice water. Which statement is false?

- A. He must be treated with antibiotics
- B. A two-dose oral vaccine exists
- C. ORS and Zinc have a key role in treatment ✓
- D. Most infections are mild
- E. antidiarrhoeal medication is not recommended

29. A previously well 7-month-old infant is developing normally. She sits and holds her bottle independently, reaches for food, and finger feeds herself. What is the most appropriate food choice for this infant?

- | | <u>Age</u> |
|---|----------------|
| A. Chewable solids. ✗ | > 18 months |
| B. Finely chopped table foods. | 12-18 months |
| C. Mashed table foods. | 9-12 months |
| <input checked="" type="radio"/> D. Pureed meats. | 6-9 months |
| E. Whole fruits. ✗ | > 18-24 months |

Feeding
 Nipple feeding, or bottle (hand on)
 More upright, spoon feeding, pureed introduced. Vertical munching of easily c
 Cup drinking. Eats lumpy, mashed foods
 Rotary jaw action in chewing.
 Self-feeding. Spoon cup (drinks with 4-5 c
 bottle
 Self-feeding predominates - Chewing broo

30. A 16-year-old girl who comes to you as a new patient tells you that she has been eating a strict vegetarian diet for 5 years. You order a complete blood cell count because of concern about which of the following conditions?

- A. Lymphocytosis ✗
- B. Macrocytic anemia. - B₁₂ def (Megaloblastic)
- C. Microcytic anemia.
- D. Normocytic anemia.
- E. Thrombocytosis. ✗

31. The current recommendations for breast feeding is that:

- A. Exclusive breast-feeding should be continued till 6 months of age followed by supplementation with additional foods
- B. Exclusive breast-feeding should be continued till 4 months of age followed by supplementation with additional foods ✗
- C. Colostrum is the most suitable food for a new born baby but it is best avoided in first 2 days ✗

D. The baby should be allowed to breast feed till one year

E. Breastfeeding is contraindicated in all HIV infected mothers

32. Regarding refeeding syndrome

A. Patients with hyperkalemia, hypermagnesemia and hyperphosphatemia are at high risk

B. Refeeding syndrome can give rise to life-threatening cardiac arrhythmia ✓

C. Riboflavin is the most common vitamin deficiency

D. Patient at high risk of refeeding syndrome should be started on full calorie and protein requirements on the first day ✗

E. It is unlikely to occur after only 5 days of poor intake of feeds

33. A previously well 2-year-old child has been ill for the past 4 days and has not urinated in the past 20 hours. There is no evidence of congestive heart failure on physical examination. The diagnosis of prerenal failure is strongly supported by:

A. A history of recurrent colicky abdominal pain.

B. A serum potassium concentration of 6.7 mmol/L.

C. A urine sodium concentration of <20mmol/L.

D. Presacral and periorbital edema on examination.

E. The presence of red blood cell casts in the urine.

Prerenal

1. Urine Na < 20mmol/L
2. Fractional exc of Na <

Postrenal

1. > 30mmol/L
2. > 2% (FENa)

34. 12 year child presents with generalized oedema and urine dipstick showed proteinuria of 3 + and no blood. After further investigation high dose prednisone was started. Which of the following is an indication for performing renal biopsy?

A. Lack of response to therapy after 1 week.

B. Microscopic hematuria showing more than 5 red blood cells per high-power field in urine.

C. Reduced serum concentration of C3 complement.

D. Serum albumin less than 1.5 g/dL (15 g/L).

35. 1 month old baby is brought to hospital because of refusal to breast feed, crying a lot and yellowness of the eyes. With regard to this patients condition:

A. Blood culture alone will rule out the possible cause of the condition

B. Urine collecting bag can be used if urine is to be sent for microscopy, culture and sensitivity

C. Growth of 10^4 colony forming bacteria on a catheter urine sample is adequate to confirm urinary tract infection

D. Outpatient treatment with oral cefuroxime is adequate

E. The likely diagnosis is physiologic jaundice

36. The best method to reduce potassium level during hyperkalemia, by reducing the body burden of potassium is:

A. Sodium bicarbonate

B. Calcium gluconate

C. Albuterol aerosol

D. Glucose and insulin infusion

E. Kayexalate (Sodium resonium) enema

37. In a child with paracetamol poisoning

A. A minor but highly active metabolite N-acetyl-p-benzoquinone is important in small doses because it is toxic to both liver and kidney

B. Acute ingestion of $>150\text{mg/kg}$ is considered potentially toxic

C. Frusemide diuresis is useful therapy

D. Evidence of liver injury appears with elevated transaminases

E. Acetylcysteine is most effective when given 24-36 hours after ingestion

38. The following parasitic infestations are predominantly ecto-parasites EXCEPT?

A. Tungapenetrans

B. Scabies

C. Cutaneous larvae migrans

D. Pediculosis pubis

E. Fleas

39. A 10 year old girl presents with a painful hip and a limp for 4 weeks.

A. Positive ASOT confirms acute rheumatic fever.

B. Positive Rheumatoid factor has a better prognosis X

C. Intravenous cloxacillin has no role in care.

D. Perthes disease is likely cause in case the child is a sickler

- E. Positive Anti-Smith antibody gives indication of disease severity.
40. A 2 year old girl presents with a painful toe digits for 4 days. Which of the following is the LEAST likely cause of her problem?
- A. Vaso-occlusive crisis of sickle cell disease
 - B. Psoriatic arthropathy
 - C. Septic arthritis.
 - D. Polyarticular Juvenile rheumatoid arthritis
 - E. Juvenile spondyloarthritis
41. A 9 month old infant presents with one episode of a generalized tonic-clonic seizure associated with fever. This is the second time in 2 months.
- A. A lumbar puncture should be done immediately
 - B. This type of convulsion is the commonest in children
 - C. The child should be started on anticonvulsants
 - D. This child has a higher risk of getting epilepsy in the future
 - E. This condition is self-limiting and children recover fully by 3-4 years
42. In the general management of convulsions
- A. Combination therapy is the preferred mode of treatment
 - B. Drug levels should be monitored routinely for all patients for potential toxicity
 - C. Carbamazepine is the drug of choice for absence seizures
 - D. Phenobarbitone is a good choice for generalized seizures for children less than six months of age
 - E. Anticonvulsants should be tapered down and stopped once seizures are controlled
43. Regarding myelomeningocele
- A. Neurologic deficit is not common in cases where there is no leakage of cerebral spinal fluid
 - B. Maternal folate deficiency is responsible for over 99% of cases
 - C. Recurrences may occur in the same family
 - D. Condition commonly occurs as an isolated defect with no other abnormalities
 - E. With treatment, children do not have neurological sequelae

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44. A 3 month old child is noted to have an accelerated increase of the head size during a routine clinic. Regarding this child's condition

- A. The infant most likely suffered from meningoencephalitis that was not detected
- B. Communicating hydrocephalus is the most likely type in this infant
- C. Medical treatment with acetazolamide is as effective as surgical management
- D. Hydrocephalus is associated with more severe neurologic problems compared to hydranencephaly
- E. MRI and cranial ultrasound identifies the specific cause and severity of hydrocephalus

45. Concerning long term management of diabetes in children

- A. Ketones in urine indicate insulin deficiency with increased risk of ketoacidosis
- B. Glycated hemoglobin is not a good measure of glycemic control for type 1 diabetes
- C. Insulin dose should be reduced during intercurrent illnesses
- D. Target sugar level for infants is 4-8 mmol/l
- E. Urine ketones are more sensitive than blood ketones in diagnosing diabetes ketoacidosis

46. Regarding rickets

- A. Calcium deficiency is the commonest cause in Sub-Saharan Africa.
- B. Normal calcium levels in blood rules out presence of rickets
- C. Radiologic changes occur concurrently with biochemical changes
- D. Vitamin supplementation may be given intramuscularly
- E. Type 2 Vitamin D dependent rickets responds well to low doses of vitamin D

47. In a child with serum potassium 2.0mmol/l, the following finding would be consistent on ECG tracing

- A. Tall QRS complex
- B. Wide QRS complex X
- C. Flat T wave
- D. Prolonged PR interval
- E. Flat P wave

48. Cyanosis in the Newborn may be caused by which of the following.

A. Transposition of the Great arteries

B. Ventricular septal defect

C. Hyperbilirubinemia

D. Coarctation of the Aorta

E. Eisenmenger Syndrome

49. During feeding of children with severe malnutrition

A. F100 should be started at 130ml/kg in a marasmic child who is stable.

B. RTUF can be used in place of F75 milk when the child is able to feed

C. The resolution of oedema informs need to change to a different feed type

D. If the child is dehydrated, HSD can be used in absence of RESOMAL

E. Breastfeeding should be stopped during therapeutic feeds

50. A two year old infant is noted to have mild cyanosis, assumes a squatting position during long walking. He is noted to have increased fussiness followed by increasing cyanosis, limpness and unresponsiveness. The most likely underlying lesion is:

A. hypoplastic left heart

B. Transposition of the great arteries

• C. Anomalous pulmonary venous return

• D. Tetralogy of Fallot

E. Aspiration with obstruction to air passages