

Pediatric final exam || 5th year || 2020 batch

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1. A baby born with heart rate 110, irregular respiration and grimace, flexed arms and extended legs, pink face and blue hands, what is his apgar score?

- A. 5
- B. 6
- C. 7
- D. 8
- E. 9

Answer: B

SCORE	0 points	1 point	2 points
A ppearance (Skin color)	Cyanotic / Pale all over	Peripheral cyanosis only	Pink
P ulse (Heart rate)	0	<100	100-140
G rimace (Reflex irritability)	No response to stimulation	Grimace or weak cry when stimulated	Cry when stimulated
A ctivity (Tone)	Floppy	Some flexion	Well flexed and resisting extension
R espiration	Apneic	Slow, irregular breathing	Strong cry

2. 15 kg baby with gastroenteritis, has symptoms of dehydration but no signs, what is the total fluid that you should give in 24 hours?

- A. 1250
- B. 2000
- C. 2500

Answer: A

Total fluid = Maintenance; $10 \times (100) + 5 \times (50) = 1250$ mL

Patients with **no signs of dehydration** do not require replacement therapy (deficit) and can begin maintenance therapy.

3. Which of the following is a normal weight of a newborn?

- A. 1500g
- B. 2000 g
- C. 2200g
- D. 2800g

Answer: D

Normal birth weight: 2500–4000 g

4. Which of the following does not favor chronic kidney disease over acute kidney injury:

- A. Small kidneys
- B. Normal bones
- C. Prolonged elevated creatinine

Answer: B

5. A child presented to the ER after 15 minutes of a tonic clonic seizure, initial action was done by securing airway and obtaining an IV access, which of the following is the treatment:

- A. IV Levetiracetam
- B. IV Lorazepam
- C. IM Midazolam
- D. IV phenobarbital

Answer: B

Benzodiazepines are the first-line treatment for convulsive status epilepticus because they control seizures rapidly ([IV diazepam](#)/ [lorazepam](#)), if IV access is not achieved within 3 minutes give IM midazolam is the second choice.

6. Which of the following is not part of treatment of acute gastroenteritis?

- A. Antimotility drugs
- B. Antisecretory drugs
- C. Oral rehydration solution
- D. Zinc Sulphate
- E. Probiotics

Answer: A

7. A 9 month old baby presented with fever, cough and diffuse wheezing for 2 days after an Upper respiratory tract infection, which of the following is the diagnosis:

- A. Asthma exacerbation
- B. Bronchiolitis

Answer: B

8. A child presented to the emergency department leaning forward and refused to lean down for examination, drooling, muffled voice, which of the following is the most important initial step:

- A. Lateral neck X ray
- B. Secure the airway and give IV fluids
- C. Laryngoscope

Answer: B

9. A child came with fever barking cough and inspiratory stridor, which of the following is the next step:

- A. Nebulized epinephrine
- B. IV fluids
- C. Steroids
- D. antibiotics.

Answer: A

In croup there is inflammation and edema of the subglottic airway.

Epinephrine, given by nebulization, quickly decreases edema and improves airflow.

10. A child presented with cough that did not improve after 4 days of antibiotics, chest x ray showed multiple round opacities in both lungs, which of the following is the most common microorganism:

- A. Staph aureus
- B. Streptococcus Pneumonia.
- C. M. Pneumonia

Answer: A

11. 10 year old boy presented with cough and empyema, which of the following is the antibiotic combination to give:

- A. Vancomycin and Ceftriaxone
- B. Vancomycin, Ceftriaxone and Azithromycin
- C. Amoxicillin

Answer: B

The most frequent pathogens in pediatric empyema are : **S. pneumonia**, **S. aureus**, **S. pyogenes**. Because MRSA must be covered, therapy should include [vancomycin](#). Because pneumococcus and other typical bacteria must also be covered, a 3rd gen cephalosporin such as [ceftriaxone](#) is added.

Dr. montaha said In older children, > 5 years, you should consider atypical pathogens such as Mycoplasma pneumoniae, so adding azithromycin is appropriate. Although textbooks may describe different approaches, this is commonly practiced in our hospital.

12. A child rides a tricycle, draws a circle and knows his age and gender, which of the following is the developmental age:

- A. 2 years
- B. 3 years
- C. 4 years
- D. 5 years
- E. 6 years

Answer: B

13. A child presented with fever, fatigue and abdominal pain for 3 days, chest x ray showed cardiomegaly, abdominal examination showed hepatomegaly, chest x ray showed left atrial dilation, which of the following is the diagnosis:

- A. Viral pneumonia
- B. Hypertrophic cardiomyopathy
- C. Rheumatic heart disease
- D. Acute viral myocarditis

Answer: D

14. A child presented with symptomless hematuria for 3 weeks, he has sore throat 3 weeks ago, which of the following is the important initial test:

- A. Kidney biopsy
- B. C3
- C. ASO titer

Answer: B

ASO titer → evidence of prior strep infection

Low C3 → evidence of the immune mechanism causing the kidney disease

15. Which of the following is red flag in a patient presented with fever for 1 day ago:

- A. Macular non blanchable rash on trunk
- B. Vesicular rash on the trunk
- C. Maculopapular rash

Answer: A

N. meningitidis causes **meningococemia** (severe bloodstream infection) → macular non-blanchable rash

16. Which of the following is not true about hypernatremic dehydration:

- A. Initiate fluids at 1.25-1.5 maintenance
- B. Give slowly for 48-72 hours
- C. Fluid given depends on rate of drop of sodium
- D. Give GS 0.18%

Answer: D

Hypotonic fluids, such as GS 0.18 %, can lower Na too rapidly, increasing the risk of brain swelling.

17. A one month old infant presented with T4 0.9 ng/dl and TSH 1.2 mIU/L, which of the following is the cause:

- A. Central hypothyroidism
- B. Thyroid dysgenesis
- C. Thyroid dyshormonogenesis

Answer : A

		25 th – 75 th percentile by age group					
		1 day to 1 month	1 – 12 months	1 – 5 years	6 – 10 years	11 – 14 years	15 – 18 years
TSH	mIU/L	1.75 - 5.0	1.9 - 4.5	1.75 - 3.5	1.7 - 3.0	1.6 - 2.8	1.3 - 2.35
Free T4	ng/dL	1.05 - 1.9	1.09 - 1.35	1.1 - 1.4	1.12 - 1.35	1.03 - 1.3	1.05 - 1.3
Free T3 (female)	pg/mL	3.5 - 4.75	3.65 - 4.5	3.6 - 4.3	3.6 - 4.3	3.5 - 4.1	3.1 - 3.78
Free T3 (male)	pg/mL	3.7 - 4.5	3.7 - 4.4	3.7 - 4.4	3.7 - 4.25	3.7 - 4.2	3.5 - 4.0

↓ T4 + normal/ ↓ TSH ⇒ Central hypothyroidism (pituitary/hypothalamus problem)

18. A one month old baby presents with anemia and jaundice since birth, Hb 8, platelets 200000, reticulocytes 5%, which of the following is not likely the cause:

- A. ABO incompatibility
- B. Rh incompatibility
- C. Hereditary spherocytosis
- D. Sickle cell anemia
- E. G6PD deficiency

Answer: D

In Sickle cell disease, symptoms are usually absent at birth and appear later in infancy because newborns predominantly carry **fetal hemoglobin**.

19. Which of the following is not true about UTI:

- A. Incidence is highest after first year of life
- B. Uncircumcised males are more likely to have UTI than circumcised males
- C. Females are generally more commonly affected
- D. One third of patients have VUR.

Answer: A

UTI is most common during infancy. During the first few months, boys (particularly uncircumcised) have a higher risk. After infancy, girls become much more commonly affected because of their shorter urethra.

20. Which of the following is true about breast milk over cow's milk:

- A. Has lower lactose than cow's milk
- B. Has more IgA
- C. Has more Vitamin D

Answer: B

21. A baby is low weight normal height and head circumference and is exclusively breastfed every 2-3 hours, no signs of chronic disease, which of the following is true:

- A. FTT type I - Inadequate caloric intake
- B. FTT type II - Increased metabolic demands
- C. FTT type III - chromosomal abnormalities
- D. FTT type II - chronic malnutrition.

Answer: A

22. Rotavirus vaccine final dose should be given after no more than:

- A. 6 months
- B. 8 months
- C. 10 months
- D. 12 months

Answer: B

23. Preterm babies are at increased risk to all except:

- A. Hypoglycemia
- B. Meconium aspiration
- C. Respiratory distress syndrome
- D. Intraventricular hemorrhage

Answer: B

Meconium aspiration usually occurs in **post-term or term infants**

24. A child presented with fever 39 that goes on and off for 6 days, desquamation of skin of hands, strawberry tongue, cervical lymphadenopathy, which of the following tests is not indicated:

- A. CBC and CRP
- B. Blood culture
- C. Brain CT
- D. Echocardiography

Answer: C

Kawasaki disease, vasculitis of medium sized arteries, especially coronary arteries. **Exclusion of other causes of fever is mandatory** in the evaluation of KD. Labs and echo are useful; imaging unrelated to symptoms (like brain CT) is unnecessary

25. 15 year old girl presented with weakness and fatigue for 3 months, and these are on her knuckles which of the following is the diagnosis.



- A. Gottron papules
- B. Lichen Planus
- C. Pityriasis rosea

Answer: A

Juvenile Dermatomyositis.

26. A child presented with fever cough and pulling his ear, which of the following is the treatment:

- A. High dose amoxicillin
- B. Supportive care
- C. decongestants for 2 days.
- E. Anti-histamine

Answer: A

27. A 2 year old child with his parents was brought to the clinic because he did not walk, he was born prematurely at 28 weeks gestation but they say that his language and social skills are up to age, there was bilateral lower leg hyperreflexia, which of the following is the diagnosis:

- A. Duchenne muscular dystrophy
- B. Cerebral palsy

Answer: B

Premature baby, delayed walking, normal cognition, lower limb spasticity ⇒ **spastic diplegic CP**

28. Which of the following is the most common complication of blood transfusion:

- A. Febrile non hemolytic transfusion reaction
- B. Hepatitis
- C. TRALI

Answer: A

29. A patient presented to the emergency department with glucose 660 bicarbonate 4.4 K 5.3, which of the following is true about treatment:

- A. Initial infusion with normal glucose saline in the first hour

- B. Continuous infusion of IV fluids and potassium after the first hour
- C. Initial infusion of insulin within the first hour
- D. Initial infusion of bicarbonate
- E. Initial infusion with hypertonic saline

Answer: B

The first step in the treatment of DKA is **infusion of isotonic fluid** (saline or buffered crystalloid) to expand extracellular volume and stabilize cardiovascular status.

- Fluids first → Check potassium (replace as needed) → Start insulin slowly

30. Which of the following is not found in vitamin D resistant rickets:

- A. Normal calcium
- B. High alkaline phosphate
- C. Low phosphate
- D. High PTH

Answer: D

Secondary hyperparathyroidism is a feature of vitamin D dependent rickets.

31. A newborn baby with lethargy and fever, Which of the following is not part of workup:

- A. Urine culture
- B. Blood culture
- C. CSF culture
- D. Kidney function tests
- E. Liver function tests

Answer: E

Neonatal sepsis workup = blood, urine, CSF, basic metabolic panel.

32. Which of the following is a T cell independent vaccine:

- A. Pneumococcal polysaccharide vaccine
- B. Diphtheria vaccine

Answer: A

T cell-dependent antigens usually protein-based

33. Breastfeeding makes all of the following diseases worse except:

- A. Classic galactosemia
- B. Congenital lactase deficiency
- C. Cystic fibrosis
- D. Fructose intolerance

Answer: C

34. A 10 hour old baby has yellow face and chest and is otherwise well, which of the following is the cause:

- A. Hemolysis
- B. Biliary atresia
- C. Breastfeeding jaundice

Answer: A

35. A child presented to the emergency department with Na 122 K 6 and hyperpigmented scrotum, which of the following is the diagnosis:

- A. Adrenal crisis

36. Which of the following is the most likely mechanism of hyponatremia in nephrotic syndrome:

- A. Factitious
- B. Water retention
- C. Urinary loss of sodium
- D. SIADH

Answer: B

37. 8 year old child came to the clinic because of headaches he describes it like a band on his head with no vomiting and does not affect him, which of the following is true:

- A. Bilateral headache without associated symptoms
- B. Headache exacerbated by exercise and relieved by vomiting

Answer: A

38. Which of the following is not a cause of bloody diarrhea:

- A. Giardia
- B. Salmonella
- C. Shigella
- D. Yeresenia
- E. Campylobacter jejuni

Answer: A

Giardia = non-invasive → watery diarrhea, no blood.

39. All of the following are associated with increased risk of celiac disease except:

- A. Type 1 diabetes
- B. Autism spectrum disorder
- C. Juvenile idiopathic arthritis
- D. Down syndrome

Answer: B

40. Which of the following is not present in a 10 month old child:

- A. Pulls to standing position
- B. Crawls
- C. Transfers object from hand to hand
- D. Kissing with a pucker

Answer: D

41. Hypoglycemia is not present in one of the following:

- A. Fatty acid oxidation disorder
- B. Urea cycle defects
- C. Glycogen storage disease

Answer: B

42. Which of the following about infantile phase of growth is not true:

- A. Rapid period of growth
- B. Depends on growth hormone
- C. A decelerating trend from intrauterine life
- D. It is normal to cross some percentiles at this phase

Answer: B

Depends on factors such as nutrition, insulin and the insulin-like growth factors.
Largely independent of growth hormone