

UNIVERSITY OF ESWATINI

FACULTY OF HEALTH SCIENCES ~ GENERAL NURSING SCIENCE

MNSc FAMILY NURSE PRACTITIONER PROGRAMME

Title of Course: Family Nurse Practice of the Child and Adolescent

Course Code: GNS 607

TIME ALLOWED: THREE (3) HOURS

PAGES: 14 INCLUDING COVER PAGE

MARKS: 100

INSTRUCTIONS:

THERE ARE THREE (3) PARTS TO THIS EXAM. ANSWER ALL THREE (3) IN ANY ORDER.

START EACH QUESTION ON A NEW PAGE.

WRITE LEGIBLY

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**Part 1 MULTIPLE CHOICE**

**TOTAL 30 MARKS**

**Choose the one best answer for each question. Write the answer clearly in the test booklet, e.g.12. A. ONE MARK EACH.**

1. According to the 2018 Swaziland Integrated HIV Management Guidelines a child should be fully informed of his or her HIV status by the age of 10. Who is the best person to disclose the status?
  - A. The doctor
  - B. Any qualified health professional.
  - C. The person who performed the test.
  - D. The parent, guardian, or caregiver.
  
2. The rate of bronchiolitis is highest in which age group?
  - A. Toddlers
  - B. School-aged children
  - C. Preschool children
  - D. Infants younger than two years old.
  
3. Sifiso is a three-year old with 48-hour history of upper respiratory symptoms and fever of 39° C with pain in his left ear starting 8 hours ago. He weighs 20 Kg. Which is the best initial treatment?
  - A. Amoxicillin 160 mg twice a day for 5 days; symptomatic treatment for his fever and pain.
  - B. Paracetamol 125 mg orally every 4 hours alternating with aspirin 125 mg orally every four hours.
  - C. Ciprofloxacin 250 mg orally three times a day for 10 days.
  - D. Nitrofurantoin 125 mg orally twice a day for 10 days.

4. Wendile is a 5-year-old boy who is HIV+. He weighs 20 Kg. You treated him for pneumonia with Amoxicillin 250 mg tablet twice daily. After two days she returns to the clinic with a temperature of 38° C and respiratory rate of 44. According to the 2018 Swaziland Integrated HIV Guidelines, what is your next best action?

- A. Double the dose of amoxicillin.
- B. Add erythromycin, since this is likely an atypical pneumonia.
- C. Reassure her mother that more time on the antibiotic is needed to see an improvement.
- D. Screen for TB, PJP, interstitial lymphoid pneumonitis, or asthma.

5. According to the 2018 Swaziland Integrated HIV Guidelines, prophylactic TB treatment should be started for which group(s) of children?

- A. All children on aged 12 and over on ART and all children under 12 on ART with a TB exposure.
- B. All children on ART.
- C. All children with a history of exposure to TB.
- D. All children who screen positive according to the National TB Symptom Screening tool.

6. The duration of INH prophylaxis for children for latent TB infection is

- A. One year
- B. At least 6 months.
- C. Variable according to the age of the child.
- D. Dependent upon the experience of the prescriber.

7. All children and adolescents diagnosed with HIV should receive Co-trimoxazole Preventive Therapy (CPT) at a dose appropriate to their weight and age. Which of the following is an indication that the treatment can be discontinued?

- A. The treatment has been continuous for at least 6 months.
- B. The parent gives permission to stop treatment.
- C. The pill burden becomes so high that the child might lapse treatment.
- D. CD4 count is greater than 350 cells/mm<sup>3</sup>, undetectable viral load, and no opportunistic infections.

8. Which of the following best describes the pathophysiology and resulting clinical presentation of asthma?

- A. Intermittent airway inflammation with occasional bronchospasm.
- B. A disease of bronchospasm leading to airway inflammation.
- C. Chronic airway inflammation with intermittent bronchospasm.
- D. Relatively fixed airway constriction.

9. According to the Global Initiative for Asthma (GINA) Guidelines, the critical treatment in asthma management includes which of the following?

- A. Daily low-dose inhaled or oral cortico-steroid.
- B. Daily theophylline tablets.
- C. Intermittent use of high-dose steroids.
- D. Bronchodilator therapy by nebulization.

10. The rotavirus vaccine is not given before 6 weeks of age or after 23 months to limit the risk of which complication?

- A. Local erythema and tenderness.
- B. Intussusception.
- C. Anaphylaxis.
- D. Fever greater than 40° C.

11. Which of the following is considered when prescribing rehydration therapy for a child with moderate dehydration?

- A. Intravenous (IV) fluid therapy is the preferred route according to the Standard Treatment Guidelines.
- B. The child should be admitted to the hospital.
- C. Oral rehydration therapy is as effective and less costly when compared to IV therapy.
- D. Fluid replacement should consist of 10-20 ml/kg over 3-4 hours.

12. The parents of an 11/12 infant call the clinic stating that their baby has had loose, watery stools for the past few days. Which statement by the parents indicate that the infant requires immediate medical attention?

- A. "Our baby will usually take a full bottle of baby formula or juice."
- B. "Our baby is usually happy when we sit together but is now cranky."
- C. "Our baby is having three (3) watery stools per day."
- D. "Our baby's soft spot has a little dent in it that wasn't there before."

13. Type 2 diabetes in children is characterized by:

- A. Lack of insulin due to destruction of the beta cells of the pancreas.
- B. The body's inability to use the insulin it has created.
- C. Inconsistent use of insulin.
- D. High metabolism of insulin in the body.

14. Kwashiorkor can **best** be described as

- A. Maladaptation to chronic low nutrition.
- B. Chronic adaptation to poor nutrition
- C. Inadequate intake of both protein and calories.
- D. Inadequate intake of nutrient other than protein and calories.

15. The incubation period for measles, or rubeola, is:

- A. 7-10 days
- B. 10-14 days
- C. 1-2 weeks
- D. 2-3 weeks.

16. A 4-year-old child presents with fever, exudative pharyngitis, anterior cervical lymphadenopathy and a fine, raised pink rash, and a deeply furrowed bright red tongue ("strawberry tongue".) The most likely diagnosis is:

- A. Scarlet fever
- B. Roseola
- C. Rubella
- D. Rubeola.

17. Which is the typical pattern of the rash of measles?

- A. It begins on the trunk and spreads outward to the extremities.
- B. It begins in the face and neck and spreads over the rest of the body over three days.
- C. It appears first in the feet and then spreads throughout the body.
- D. It has no particular pattern; it can start anywhere on the body.

18. The most common causative organisms for otitis media are:

- A. Hemophilus influenza and Streptococcus pneumonia
- B. Candida albicans and Pseudomonas aeruginosa
- C. Hemophilus influenza and various anaerobes
- D. Pseudomonas aeruginosa and viruses.

19. Clinical presentation of type 1 diabetes may be characterized by:

- A. Recent weight gain.
- B. Ketosis
- C. Non-ketotic coma
- D. Rapid response to oral sulfonamides.

20. Bonisile, age 3 years, enters with biphasic stridor. Your differential should include

- A. Asthma.
- B. Bronchiolitis.
- C. Beta strep pharyngitis.
- D. Foreign body obstruction.

21. Which of the following characteristics applies to type 1 diabetes?

- A. This condition is commonly found on routine examination.
- B. Initial response to sulfonamides is usually good.
- C. Insulin resistance is a hallmark of the disease.
- D. Significant hypoglycaemia can occur.

22. Musa's mother brings him in for his 10-week immunizations, at age 12/52. He has a URI with a temperature of 39 degrees C. You defer his immunizations because

- A. Deferring the immunizations for another week or two will increase his immune response.
- B. He is now too old for the rotavirus vaccine.
- C. He should not receive the vaccines with his current elevated temperature.
- D. He should not receive the vaccine while ill with URI symptoms.



23. Rheumatic heart disease

- A. Is rare in Africa.
- B. Can lead to mitral valve stenosis.
- C. Is a mild, self-limiting disease.
- D. Cannot be prevented.

24. One characteristic that differentiates a febrile seizure from other causes is that they

- A. Are not associated with abnormal neurological findings.
- B. Occur in conjunction with fevers, which is not true for other aetiologies.
- C. Never last more than five (5) minutes.
- D. Are often focal.

25. Glomerulonephritis is characterized by all of the following EXCEPT:

- A. Haematuria
- B. Recent beta haemolytic strep infection.
- C. Age under 5 years.
- D. Reduced urine production.

26. Symptoms of hypothyroidism include:

- A. Dry skin and hair; constipation.
- B. Moist skin and oily hair.
- C. Enlarged thyroid gland.
- D. Tachycardia.

27. Childhood sexual abuse

- A. Is rare.
- B. Is difficult to prove if the child does not believe he/she is being abused.
- C. Is most often perpetrated by strangers.
- D. By law cannot occur if the child is aged 16 or older.

28. Strains can be differentiated from sprains

- A. Sprains are usually caused by trauma whereas strains can be congenital.
- B. A sprain is a tear in a ligament whereas a strain are tears of muscle or fascia.
- C. They are synonyms; there is no difference.
- D. A strain refers to bleeding in the muscle whereas a sprain is a muscle tear.

29. Which is a characteristic of GERD in children?

- A. It is seen most often from age 1-5 years.
- B. Breastfed babies have higher rates of GERD than formula fed babies.
- C. Babies who do not sit up have increased abdominal pressure which contributes to GERD.
- D. Lower oesophageal sphincter (LES), increased gastric emptying, and impaired mucosal barrier are the most common reasons for GERD in children.

30. Barlow's and Ortolani's tests are part of the examination for

- A. Knee displacement.
- B. Carpal Tunnel Syndrome
- C. Club Foot
- D. Hip dislocation.

**Case A. (20 MARKS)**

Melusi is a male aged 6/12 brought to the clinic by his Gogo. She lives with the baby and his mother and cares for him while his mother works. She reports that for the past week he has had upper respiratory symptoms. He has been increasingly fussy and has not been nursing well for the past two days. He is just beginning to take supplemental feedings and has refused any additional food or fluids. This morning she noticed he was having difficulty breathing and he felt hot to touch. Melusi is HIV negative.

On exam he has a weight of 6.8 kg, apical pulse 220, axillary temperature 39.0 degrees C, respiratory rate of 34 per minute. You confirm the chest indrawing.

1. What is the most likely primary diagnosis for this patient? **(4 Marks)**
  
2. What are other possibilities (differential diagnosis)? **(3 Marks)**
  
3. Briefly explain the physiology you are considering while formulating a diagnosis. **(3 Marks)**
  
4. What is your initial treatment for him? **(4 Marks)**
  
5. How would your initial treatment differ if he was HIV positive? **(3 Marks)**
  
6. What would your initial diagnosis and treatment be if Melusi's respiratory rate was 48 on initial examination and he had chest indrawing? **(3 Marks)**

**Case B****(20 MARKS)**

Phetsile is a two-year-old child who was developing normally her first year. At her first birthday she weighed 12 kg, but by 18 months had only gained 2 kg. She now has pale mucus membranes, has a flat affect, does not smile or try to communicate with adults and cries easily. She has decreased subcutaneous tissue, lower extremity oedema, and abdominal distention. Her Z-score is -3.

1. What is the most likely primary diagnosis for this patient? **(2 Marks)**
2. What are other possibilities (differential diagnosis)? **(2 Marks)**
3. Should this child be treated as an outpatient or an inpatient? **(2 Marks)**
4. Outline the first four steps of the World Health Organization (WHO) 10-steps to treat malnutrition. Name the step, describe it and tell why it is critical that this step take place today. **(8 Marks)**
5. Name the other six (6) steps in the World Health Organization (WHO) 10-steps to treat malnutrition and briefly describe each. **(6 Marks)**

**Case C****(10 MARKS)**

12-year-old Thandeka has had recurrent sore throats throughout her childhood. Since she lives in a remote area with difficult access to the clinic, they have sometimes been treated and others not. She is in the clinic to see you today with a complaint of fatigue and swelling of her lower extremities. With her history of multiple episodes of pharyngitis, you suspect that she may have had a group B Haemolytic strep infection and possibly rheumatic fever at some point. You suspect that she may have heart failure.

1. What laboratory and other investigations will you order to determine if her problem is due to heart failure? **(4 Marks)**
2. If her heart problem is due to rheumatic heart disease, what is the most likely pathology in her heart causing the heart failure? **(2 Marks)**
3. Describe where on her chest will you listen for an abnormality (2) and what are you listening for (2)? **(4 Marks)**

**Case D****(10 MARKS)**

8-year-old Siphiso has had asthma since he was five. He has a rescue inhaler that he uses when he is short of breath or wheezing. He has awoken three nights this week with coughing and shortness of breath. He has been using Inhaled salbutamol (short acting) 200 micrograms via spacer every 4 hours with minimal relief. He comes to you with a respiratory rate of 44 and chest indrawing. You auscultate wheezes throughout his posterior lung fields.

1. What initial treatment will you give him? **(5 Marks)**
2. What treatment will you send him home on? **(5 Marks)**

**Part 3 Short Answer****(10 MARKS)****Question**

According to WHO Standards-Nurturing Care for Early Childhood Development, right number three is Responsive Caregiving. Answer the following questions about that right.

1. Define responsive caregiving. **(3 Marks)**
2. Define positive discipline. **(3 Marks)**
3. Three year old Colile is playing with her four year old brother. She becomes angry with him and bites his hand. Describe a method to discipline Colile in a positive manner and give your rationale for this method. **(4 Marks)**