

**UNIVERSITY OF SWAZILAND**  
**FACULTY OF HEALTH SCIENCES**  
**FINAL EXAMINATION PAPER, DECEMBER 2013**

**TITLE OF PAPER: NURSING SCIENCE AND ARTS III**

**COURSE CODE: NUR 340**

**TIME ALLOWED: TWO (2) HOURS**

**MARKS: 75**

**THIS EXAMINATION HAS EIGHT (8) PAGES**

**INSTRUCTIONS:**

1. THERE ARE THREE (3) QUESTIONS IN THIS PAPER.
2. ANSWER ALL THREE QUESTIONS.
3. EACH QUESTION IS ALLOCATED 25 MARKS.
4. EACH CORRECT STATEMENT OR FACT WITH SCIENTIFIC RATIONALE  
CARRIES ONE (1) MARK.
5. WRITE LEGIBLY.

**THIS PAPER IS NOT TO BE OPENED UNTIL THE INVIGILATOR HAS GRANTED  
PERMISSION.**

### QUESTION 1

Situation: Mrs. Mahlobo is a 55 year old female who has been admitted to your ward with recurrent poor wound healing, polyuria, polyphagia, and weight loss.

- A. Identify the condition which Mrs. Mahlobo likely to be suffering from. (2)
- B. Explain how you reached your conclusion in A. (3)
- C. List confirmatory diagnostic tests would you recommend for Mrs. Mahlobo, indicate the possible findings. (5)
- D. Develop and implement a nursing care plan for Mrs. Mahlobo based on three (3) nursing diagnoses. (15)

### QUESTION 2

Situation: Mr. Mafu a 35 year old male is admitted to the surgical ward after having sustained both second and third degree burns of the front chest, front abdomen and both legs.

- A. Compute the percentage of Mr. Mafu's burnt body? Show your calculations. (3)
- B. Describe the pathophysiology of fluid-electrolyte shift in Mr. Mafu. (7)
- C. State three (3) potential complications which you will closely monitor Mr. Mafu for. (3)
- D. Explain how each of these potential complications in C occurs. (3)
- E. Describe the nursing management of Mr. Mafu. (9)

### QUESTION 3

Instructions: For each of the following statements choose the most appropriate answer, and write it in your answer sheet e.g. 1. A.

Situation: Ms Zethu was diagnosed HIV positive in 2010; she started ART in 2012 December. Now she presents with oedema of the face and some haematuria, she has been admitted to hospital for monitoring and possible dialysis.

Questions 1 – 9 relate to the above situation.

1. Glomerular filtrate and blood plasma are essentially the same, EXCEPT that the filtrate does not have:

- A. water
- B. sodium
- C. potassium
- D. globulin

2. As the blood passes through the glomerulus, which element is too large to pass through the semi permeable membrane?
- A. serum sodium
  - B. serum potassium
  - C. albumin
  - D. glucose
3. The normal pH of urine is:
- A. 1.0 – 3.0
  - B. 4.5 – 8.0
  - C. 8.5 – 10.0
  - D. 10.5 – 3.0
4. Two substances that are present in blood but NOT normally present in urine are:
- A. sodium and chloride
  - B. glucose and protein
  - C. calcium and magnesium
  - D. potassium and bicarbonate
5. A hormone that helps maintain normal serum calcium and phosphate levels is:
- A. antidiuretic hormone
  - B. epinephrine
  - C. parathormone
  - D. aldosterone
6. Ms Zethu has a deficiency in erythropoietin, which causes her to have;
- A. pneumonia
  - B. anemia
  - C. seizures
  - D. hypertension

7. If crystals on the skin are observed during the examination of Ms Zethu who has a renal disorder, this is recorded as:

- A. ashen skin
- B. edema
- C. uremic frost
- D. scaly skin

8. Skin turgor is evaluated in Ms Zethu who has a renal disorder to detect:

- A. uremic frost
- B. hiccups
- C. dehydration
- D. kussmal's respirations

9. The eyes of Ms Zethu are examined for periorbital edema, the presence of which suggests:

- A. dehydration
- B. fluid retention
- C. uremic frost
- D. kussmal's respirations

**Situation:** Mrs. Dladla who is aged 48 presents at the Breast Clinic, she looks quite stressed, she reports the presence of a lump on her right breast which she noted four (4) weeks ago and it does not seem to be subsiding. The nurse suspects breast cancer, consequently Mrs. Dladla is scheduled for several diagnostic tests.

Questions 10 – 14 relate to the above situation.

10. Breast cancer may be described as follows:

- (i) ductal carcinoma (invasive)
  - (ii) lobular carcinoma (invasive)
  - (iii) ductal carcinoma in situ (noninvasive)
  - (iv) glandular carcinoma
- A. ii, iii, iv
  - B. i, ii, iii
  - C. i, iii, iv
  - D. iv only

11. Some risk factors for breast cancer which Mrs Dladla cannot change include:

- (i) exercise
- (ii) ethnicity
- (iii) hormone Replacement Therapy (HRT)
- (iv) genetics

- A. i & ii
- B. ii & iii
- C. ii & iv
- D. i & iii

12. Which of the following is NOT a sign of breast cancer?

- A. a lump in the breast
- B. unusual discharge from the nipple
- C. change in the size or shape of the breast
- D. darkened areola

13. Screening for breast cancer includes \_\_\_\_\_:

- A. barium testing
- B. mammogram
- C. magnet sensors
- D. intravenous pyelogram

14. If breast cancer is suspected in Mrs. Dladla, the physician may use which of the following to confirm the diagnosis?

- (i) Breast ultrasound
- (ii) Fine needle aspiration biopsy
- (iii) Magnetic resonance imaging (MRI)
- (iv) an x-ray

- A. ii, iii, iv
- B. i, ii, iii
- C. ii, iii, iv
- D. iv, ii, i

**Situation:** Mrs. Muzu who is aged 28 has been admitted to the gynaecology ward because she has missed her menstrual period for three months; however she began to experience vaginal bleeding yesterday hence the admission.

Question 15 relate to the above situation.

15. Threatened abortion is characterized by vaginal bleeding and a (an):
- A. open cervical os
  - B. closed cervical os
  - C. eroded cervical os
  - D. open and eroded cervical os
16. Plasma loss resulting from a massive burn injury can cause what type of shock?
- A. septic
  - B. neurogenic
  - C. cardiogenic
  - D. hypovolemic
17. A burn to the skin that results from the ignition of clothing as a result of contacting a high output electrical source is described as what type of burn?
- A. electrical
  - B. thermal
  - C. chemical
  - D. radiation
18. Which of the following burn injuries is most critical?
- A. burns of fingers
  - B. burns of the airway
  - C. burns of the anterior chest
  - D. burns of both arms

19. Ms X is a client suffering from liver cirrhosis. Her jaundice has disappeared. However, based on her Hgb, Hct, and reticulocyte count, the doctor argues that she must still be hemolyzing, and proposes to increase her prednisone to 60 mg/day. By contrast, the attending doctor declares that the hemolysis has essentially ceased, and orders a continuation of the current prednisone dose. He predicts that the results of a similar group of tests at follow-up in a week will allow them to start reducing her prednisone dose. When the patients returns a week later her Hgb is 11.8 mg/dL, Hct 35%, reticulocytes 2%, and total bilirubin 0.5 mg/dL. The strongest indication that hemolysis had appreciably decreased after 1 week of prednisone was which of the following?

- A. An increase in hemoglobin from 7.0 to 8.2 g/dL.
- B. A fall in reticulocytes from 12% to 10%.
- C. A decrease in total bilirubin from 4.0 to 0.4 mg/dL.
- D. A fall in platelet count from 285,000 to 240,000.

20. Which of the following statements describes functional renal failure in liver cirrhosis?

- A. Renal failure where there is no structural damage in the kidneys.
- B. Diagnosed when the serum creatinine is  $>2$  mg/dL.
- C. Acute renal failure that occurs in patients with cirrhosis.
- D. The same as hepatorenal syndrome.

**Situation:** Mr Solo is a 68-year old male who complains of difficulty in micturition and the feeling of incomplete bladder emptying after micturition. You suspect that Mr. Solo may have prostate hyperplasia.

Questions 21 – 23 relate to the above situation.

21. Which of following is incorrect regarding benign prostate cancer?

- A. may lack obvious symptoms in the early stage
- B. is more common among white than black men
- C. is relatively rare
- D. is usually fatal, even with early diagnosis

22. What does screening for Mr Solo for prostate cancer include?
- A. a blood test for prostate specific antigen [PSA]
  - B. a stool test
  - C. an x-ray
  - D. a blood test for calcitonin
23. When a screening test for prostate cancer in Mr. Solo, the doctor indicates a concern, further testing may include all the following EXCEPT \_\_\_\_\_:
- A. trans-rectal ultrasound
  - B. computed tomography
  - C. biopsy
  - D. electroencephalogram
24. Which of the following is removed when a male is circumcised?
- A. corpus spongiosum
  - B. septum
  - C. prepuce
  - D. tunica albuginea
25. A Papanicolaou smear test examines the \_\_\_\_\_ cells of the cervix.
- A. epithelial
  - B. exfoliative
  - C. mucoid
  - D. striated

**TOTAL 25 MARKS**