

UNIVERSITY OF SWAZILAND
FACULTY OF HEALTH SCIENCES
FINAL EXAMINATION PAPER
SEMESTER 11 MAY 2011

COURSE TITLE: ADVANCED MEDICAL – SURGICAL NURSING IV

COURSE CODE: NUR 511

TIME ALLOWED: 2 HOURS

TOTAL MARKS: 75

- INSTRUCTIONS:**
- 1. ANSWER ALL QUESTIONS.**
 - 2. READ QUESTIONS CAREFULLY.**
 - 3. SECTION A IS A MULTIPLE CHOICE TYPE, WITH 25 QUESTIONS CARRING 1 MARK EACH, SELECT THE BEST ANSWER.**
 - 4. SECTION B HAS ESSAY QUESTIONS.**
 - 5. WRITE CLEARLY.**

DO NOT OPEN THE PAPER UNTIL PERMISSION IS GRANTED BY THE INVIGILATOR!

SECTION A

MULTIPLE CHOICE QUESTIONS

CHOOSE THE BEST ANSWER!

1. The five major components of neurological examination in critically ill patients are;
 - A. Level of consciousness, motor function, auditory function, cardiovascular and vital signs.
 - B. Level of consciousness, motor function, pupillary function, respiratory function and vital signs.
 - C. Pupillary function, respiratory function, vital signs, sensory function and evaluation of muscles
 - D. Awareness appraisal, evaluation of reflexes , respiratory function, motor function and cardiovascular function

2. Evaluation of respiratory pattern is important when assessing a critically ill patient with neurological alterations, Cheyne-Stokes respirations indicate
 - A. Lesions of the Medulla
 - B. Bilateral deep cerebral lesion or cerebella lesions
 - C. Lesion of the pons
 - D. Lesion of the heart

3. Magnetic Resonance Imaging (MRI)
 - A. Can identify small tumors, small hemorrhages, Infarcts, Inflammatory processes and spinal cord injuries.
 - B. Is not recommended for patients with neurological alterations
 - C. Is a very short procedure
 - D. Can be performed when the patient is moving the head

4. The following are common neurological signs and symptoms EXCEPT.
 - A. Headache
 - B. Memory loss
 - C. Fainting
 - D. Backache

5. Which of the four types of intracranial pressure monitoring provides accurate ICP measurement?
- A. Ventriculostomy- intraventricular space
 - B. Subarachnoid – subarachnoid space
 - C. Subdural or epidural catheter
 - D. Intraparenchymal site

Scenario: A 50 year old female is in the intensive care unit following a head injury from a fall down the stairs. Currently she is unconscious, opens her eyes with painful stimuli, withdraws to pain in a decerebrate manner, and makes groaning noises when she is given painful stimulus. You notice that her left pupil is larger than the right, whereas previous examinations noted pupillary equality.

6. Based on the above information, what is the Glasgow coma scale score for this patient?
- A. 3
 - B. 6
 - C. 9
 - D. 15
7. What does the change in pupillary size potentially indicate?
- A. Decrease in cerebral perfusion pressure
 - B. Loss of upper motor neuron function
 - C. Loss of cerebellar function
 - D. Increased intracranial pressure (ICP)
8. Laboratory tests (serum and urine) when reviewed daily provide valid information concerning the status of kidneys. The normal value for blood urea nitrogen (BUN) is:
- A. 110 to 120mL/min
 - B. 5 to 25 mg/ dl
 - C. 0.5to 1.5 mg/dl
 - D. 2.2 to 4 L/ min/m
9. The kidneys regulate acid-base balance by excreting more hydrogen ions than bicarbonate ions, the normal urine pH range is:
- A. 6 to 7
 - B. 4.5 to 9.5
 - C. 4.5 to 8.0
 - D. 2.5 to 4.5

10. Ultrafiltration in relation to hemodialysis is whereby
- A. Hemodialysis requires access to the bloodstream
 - B. The dialysis works by circulating blood outside the body through synthetic tubing or dialyzer
 - C. Heparin or sodium citrate is added to the system just before the blood enters the dialyzer
 - D. A positive hydrostatic pressure is applied to the blood and a negative pressure is applied to the dialysate bath.
11. Critically ill patients with acute kidney injury (AKI) have longer length of Hospital stay and more complications because:
- A. Critical care patients often have co-existing nonrenal health problems
 - B. AKI accounts for 1% of acute hospital admissions
 - C. It accounts for more than 7% of inpatients especially older people
 - D. Urine output is sometimes a problematic measure to use because of diuretics.

Questions 12 to 16 true or false

12. The following statements are TRUE for Subarachnoid Hemorrhage EXCEPT
- A. It is bleeding into the subarachnoid space
 - B. It is a structural cause of coma
 - C. It is bleeding into cerebral tissue
 - D. It is a medical emergency, and time is of essence
13. Which of these statements is FALSE about post-operative care for craniotomy?
- A. Preserving adequate cerebral perfusion pressure.
 - B. Promoting arterial oxygenation.
 - C. Administering low dose heparin as prophylaxis to patients at risk for Deep vein thrombosis
 - D. Maintaining surveillance for complications

14. Which of the following statements is TRUE?

- A. Careful evaluation of weight is important in assessing kidney function.
- B. Creatinine clearance is the best estimation of glomerular function and therefore, kidney function.
- C. Urinalysis does not necessarily detect kidney dysfunction
- D. Urine output does not necessarily change in kidney dysfunction.

15. Provision of accurate uncomplicated information to family and the patient with acute renal failure is important, which of the following statements is FALSE?

- A. Explain that it is a sudden decline in kidney function that causes acute buildup of toxins in the blood.
- B. Explain the causes i.e. pre-renal, intrarenal, and post renal
- C. Explain the need for surgery on the affected kidney.
- D. Discuss good hygiene and how to avoid infection.

16. Which of these statements is TRUE for trauma patients admitted in emergency department?

- A. Avoid inserting an indwelling catheter as this may cause infection.
- B. Hypovolemic shock is the most common type of shock that occurs in trauma patients.
- C. Secondary survey begins before resuscitation is established
- D. A gastric tube is contraindicated as it may increase the risk of aspiration.

Questions 17 & 18 fill in blank spaces

17. Spinal injury can affect respiratory function resulting in the patient unable to sustain ventilation without mechanical assistance, when the level of injury is _____

- A. C3 TO C5
- B. C6 to T11
- C. Complete, above C3
- D. Below T12

18. The _____ is the anatomic division used to differentiate between bleeding that occurs in lower and upper gastrointestinal tract.

- A. Ligamentum Treitz
- B. Upper esophageal sphincter
- C. Lower esophageal sphincter
- D. Crypts of Lieberkuhn

19. Auscultation of bowel sounds in the chest may indicate:

- A. Flail chest
- B. Rib fractures
- C. Ruptured diaphragm
- D. Pulmonary contusion

20. As soon as severe sepsis is recognized, resuscitation should be initiated with the following targets:

- A. CVP between 8 and 12mm Hg, MAP of 65 mm Hg or greater, urine output of 0.5ml/kg/hr. and central venous oxygen saturation 70% or greater.
- B. CVP between 2 and 6 mm Hg, MAP of 20 mm Hg, urine output of 0,4ml/kg/hr. and central venous oxygen saturation of 70%
- C. CVP between 10 and 14 mmHg, MAP of 40 mm Hg, central venous oxygen saturation of 70% and urine output of 5ml/kg/hr.
- D. CVP between 0 to 12 mm Hg, MAP of 110mm Hg, urine output of 0.1ml/kg/hr.

21. Initially the clinical manifestations of cardiogenic shock relate to:

- A. The decrease in CO
- B. Diminished heart sounds
- C. Dysrhythmias
- D. Tachypnea

22. Secondary MODS results from

- A. A well-defined insult in the organ dysfunction
- B. An altered regulation of patient's acute immune and inflammatory responses
- C. Widespread systemic inflammation that results in dysfunction of organs not involved in the initial insult.
- D. Failure to control the source of inflammation to infection

23. Burn injuries greater than 35% of total body surface area (TBSA) can result in:

- A. Septic shock
- B. Cardiogenic shock
- C. Burn edema
- D. Burn shock

24. The initial goal of acute care of patients with thermal injuries is

- A. To secure and protect the airway
- B. To assess the extent and degree of burns
- C. To save life, minimize disability, and prepare the patient for definitive care
- D. To assess hypovolemic shock and intravascular changes

25. Disseminated intravascular coagulation (DIC)

- A. Does not occur in burns
- B. Bleeding is easily controlled
- C. If not treated quickly will progress to multiple organ failure and death
- D. Is worsened by administration of intravenous blood products.

[25 MARKS]

SECTION B

1. a) Describe the three causes of increased intracranial pressure. (6 marks)
- b) Discuss the seven categories of consciousness. (7 marks)
- c) Discuss the nursing care of a patient with stroke, using the nursing diagnosis "Ineffective tissue perfusion: cerebral related to decreased blood flow" under the following headings.
 - i) Defining characteristics (4 marks)
 - ii) Outcome criteria (2 marks)
 - iii) Nursing intervention and rationale (6marks)

[25 MARKS]

- 2 a) Discuss the patient/ family education you would carry out for the patient undergoing hemodialysis (10marks)
- b) Describe the five different types of shock. (5marks)
- c) Describe the five steps of primary survey on arrival of a trauma patient in the emergency department. (10 marks)

[25 MARKS]