

**UNIVERSITY OF SWAZILAND
FACULTY OF HEALTH SCIENCES
MAIN EXAMINATION
MAY 2018**

COURSE TITLE: **ADVANCED MEDICAL- SURGICAL
NURSING IV**

COURSE CODE: **NUR 511**

DURATION: **2 HOURS**

TOTAL MARKS: **75**

INSTRUCTIONS: **1. Read the instructions carefully**
 2. Answer all questions
 3. There are seven (7) printed pages
 4. Each explained fact/point is worth 1 mark

***DO NOT OPEN THE QUESTION PAPER UNTIL YOU ARE TOLD
TO DO SO BY THE INVIGILATOR !!***

QUESTION 1 Multiple Choice type

1 mark each

Read the question and choose the best answer. Write the letter only in your answer book. e.g 26. A

1. A patient has a suspected subarachnoid hemorrhage. Which examination will supply the most information about this?
 - a. Magnetic resonance imaging (MRI)
 - b. Computed tomography
 - c. skull and spine radiography
 - d. Cerebral angiography

2. The nurse is assisting with a lumbar puncture and notes that the cerebrospinal fluid (CSF) is a smoky colour. The nurse notes that this indicates the presence of:
 - a. Infection.
 - b. Red blood cells
 - c. Elevated protein count
 - d. Increased pressure

3. A patient does not respond to verbal stimuli, so the nurse applies painful stimulus and notes the patient's reaction. The patient clenches his teeth, and his arms are extended, adducted, and hyper-pronated. The nurse recognizes this as:
 - a. A positive Babinski sign.
 - b. Decorticate posturing.
 - c. Localization of pain.
 - d. Decerebrate posturing.

4. Ms. H is drowsy and requires increased stimulation to be awakened. Which of the following terms would you use to describe this finding?
 - a. Lethargic
 - b. Delirious
 - c. Obtunded
 - d. Stuporous

5. Which of the following statements is not correct regarding lumbar puncture (LP)?
 - a. The main purpose of the procedure is to collect cerebral spinal fluid (CSF) for analysis.
 - b. The patient must remain supine for 4 to 6 hours after the procedure.
 - c. Complications of LP include CSF leak, infection, and brainstem herniation.
 - d. During the procedure, position the patient on his or her side with the chin tucked to the chest and the knees pulled up.

6. When performing a neurologic assessment using the Glasgow Coma Scale (GCS), which of the following is not assessed?
 - a. Eye opening
 - b. Verbal response
 - c. Motor response
 - d. Pupillary response

7. A complication associated with peritoneal dialysis (PD) includes fluid obstruction associated with the PD catheter and the drainage of the ultrafiltrate fluid. All of the following are interventions to correct such an obstruction **except**:
- Change the position of the patient.
 - Relieve the patient's constipation.
 - Decrease volume of exchanges as ordered.
 - Ensure that sufficient fluid is in the abdomen.
8. What is the fluid resuscitation choice for the patient with a traumatic brain injury (TBI)?
- 4% albumin
 - 0.9% normal saline
 - .45% NaCl
 - Mannitol
9. Pre renal azotemia could result from:
- Decrease in renal blood flow
 - Decrease in blood pressure
 - Increasing in circulating blood volume
 - Direct renal trauma
10. The most appropriate measures to protect against contrast-induced acute kidney injury (AKI) include all of the following **except**:
- Administration of the smallest dose of ionic, high-osmolar contrast media.
 - Provision of vigorous fluid volume expansion.
 - Stopping all nephrotoxic medications.
 - Avoiding repeat contrast injections within 48 hours.
11. A patient had a serum creatinine of 0.9 mg/dL at 0700 this morning. The nurse on the second shift, 12 hours later, notes that the serum creatinine is now 1.8 mg/dL and that the patient's urine output for the past 12 hours has been 35 mL/hr. The patient weighs 93 kg. Acute kidney injury (AKI) is suspected. Using the RIFLE acronym, this patient's data represents what stage of acute kidney dysfunction?
- Risk
 - Injury
 - Failure
 - Loss
12. The most common cause of acute kidney injury (AKI) in critically ill patients is:
- Heart failure.
 - Shock.
 - Respiratory failure
 - Sepsis.
13. Which digestive enzyme is produced in the stomach and absorbed in the small intestine?
- Pepsin
 - Trypsin
 - Carboxypeptidase
 - Sucrase

14. Which function of the pancreas is not the result of an endocrine product?
- Insulin secretion
 - Glucagon secretion
 - Trypsin inhibitor
 - Gastrin secretion
15. The patient asks what causes "heartburn," or the burning sensation that occurs after eating. What is the appropriate response by the nurse?
- The heart experiences pressure from gas buildup in the stomach."
 - The cardioesophageal sphincter relaxes, allowing food and gastric secretions to back up into the oesophagus."
 - The gastric juices burn through the oesophagus and leak into the heart."
 - The burning sensation originates in the cardia, which is the part of the stomach behind the heart."
16. What clinical manifestation should alert the nurse to possible carbon monoxide poisoning in a client who experienced a burn injury during a house fire?
- Pulse oximetry reading of 80%
 - Expiratory stridor and nasal flaring
 - Presence of carbonaceous particles in the sputum
 - Cherry red color to the mucous membranes
17. The nurse is teaching the diabetic patient about insulin therapy. Which of the following statements by the patient indicates the teaching was effective?
- I will take my long-acting insulin before a meal."
 - I will monitor my blood sugar weekly."
 - If I am not going to eat right away, it is okay to take my short-acting insulin anyway."
 - "I need to rotate the site I use to obtain blood for glucose monitoring."
18. The postoperative craniotomy patient has a serum osmolality of 320 mOsm/L and urine output of 400 mL/hr for the past 3 hours with a urine specific gravity of 1.003. The nurse anticipates which of the following treatments?
- 0.9 NaCl at 150 mL/hr intravenously
 - 1.5 mcg desmopressin acetate (DDAVP) for subcutaneously every 12 hours
 - Insulin drip at 7 units/hr
 - Oral vasopressin 5 units every 12 hours
19. A patient's chart indicates a history of ketoacidosis. Which of the following would you **not** expect to see with this patient if this condition were acute?
- Vomiting
 - Extreme Thirst
 - Weight gain
 - Acetone breath smell
20. A patient who is 4 hours post operative for a surgical repair of gastrointestinal bleeding. Suddenly he begins to experience dyspnea, chest pain and coughing up purulent sputum. What complication is the patient most likely experiencing?
- Pneumothorax
 - Hypostatic pneumonia

- c. Acute respiratory distress syndrome
 - d. Hypovolaemic shock
21. A diabetic client is admitted to the ER by a coworker, who found him unconscious on the floor. A nurse would first do which of these actions?
- a. Check the client's blood sugar level and start an IV infusion.
 - b. Contact the client's family and tell them to come to the hospital immediately.
 - c. Assess the client for head trauma.
 - d. Ask the coworker how long the client was unconscious.
22. A client has been admitted with deep partial thickness burns to the back of the neck. Which intervention is most important to use during the acute phase to prevent contractures associated with the injury?
- a. Place a towel roll under the client's neck and shoulder
 - b. Keep the client supine without pillow supports
 - c. Have the client turn the head from side to side 90 degrees while awake
 - d. Keep the client in a semi Fowler's position and actively raise the arms above the head hourly
23. Collaborative management for the patient with multiple organ dysfunction syndrome includes decreasing oxygen demand with administration of:
- a. Vasoactive and positive inotropic medications.
 - b. Diuretics and antidysrhythmic medications.
 - c. Crystalloids and antibiotics.
 - d. Antipyretics and sedation.
24. Which of the following shock states includes hypotension despite adequate fluid resuscitation along with perfusion abnormalities such as lactic acidosis and oliguria?
- a. Systemic inflammatory response syndrome
 - b. Bacteremia
 - c. Multiple organ dysfunction syndrome
 - d. Septic shock
25. Which type of shock has the following hemodynamic manifestations: increased cardiac output (CO), increased cardiac index (CI), decreased right atrial pressure (RAP), decreased systemic vascular resistance (SVR), and decreased pulmonary artery occlusion pressure (PAOP)?
- a. Septic shock
 - b. Anaphylactic shock
 - c. Cardiogenic shock
 - d. Neurogenic shock

MARKS: 25

QUESTION 2

Scenario: A 77-year-old man slightly undernourished, was admitted to the intensive care unit (ICU) from the operating room after a Hartmann's procedure was performed for fecal peritonitis which resulted from a perforated cancerous sigmoid colon. He has a medical history which includes treatment for hypertension and hypercholesterolemia, previous heavy alcohol intake, and mild cognitive impairment. On arrival in the ICU, he was in septic shock. His arterial blood pressure is supported with a norepinephrine infusion. Analgesia is provided by a continuous morphine infusion. There is some light bleeding observed from the surgical site and from the areas around arterial and central venous catheters. This is determined to be most likely due to low-grade disseminated intravascular coagulation and the physician determines that it does not currently merit any specific treatment other than withholding previously prescribed heparin and repeating the laboratory tests in 8 to 12 hours. His vital signs are as follows:

T = 39°C , BP 100/60, R: 28 P: 96

ABG Lab results : PaO₂= 60mmHg; PaCO₂ = 30mmHg HCO₃⁻

The following questions refer to this scenario.

- 2.1 Identify intrinsic and extrinsic precipitating factors associated with septic shock in this patient. (2)
- 2.2 Other than those mentioned in 2.1 above, state other intrinsic and extrinsic precipitating factors associated with septic shock. (3)
- 2.3 Explain the clinical manifestations the patient exhibited which indicate septic shock. (5)
- 2.4 Discuss the nursing management of this patient under the following nursing diagnoses:
 - i. Decreased cardiac output related to alterations in afterload (5)
 - ii. Imbalanced nutrition: less than body requirements related to increased metabolic demands. (5)
 - iii. Risk for infection. (5)

MARKS: 25

QUESTION 3

Scenario

Mr. N Lukhele was performing his usual job duties as an electrician when a power box exploded and he was engulfed in a fireball that caused third degree burns to 85% of his body. When describing his injuries, it is easier to say what was spared than what was burned. The only areas where the skin was not destroyed were his mid-back, left buttock cheek, perineum, genitalia, and his ankles and feet as they were protected by work boots. During the explosion he also breathed in the super-heated air, essentially burning the insides of his lungs.

Mr. Lukhele was rushed to hospital where he remained in the burn ICU for more than four months.

The next two questions relate to this condition.

3.1 Discuss the emergency burn management of Mr Lukhele on arrival in the ICU. (10)

3.2 Explain the nursing management of the inhalation injury. (5)

3.3 Research has shown that hospital- acquired anaemia (HAA) is a common problem in critically ill patients. State the possible causes for this. (5)

3.4 Discuss strategies that can be used to reduce the risk of patients developing HAA. (5)

MARKS : 25