



**AMREF INTERNATIONAL UNIVERSITY  
SCHOOL OF MEDICAL SCIENCES  
DEPARTMENT OF NURSING AND MIDWIFERY SCIENCES  
HIGHER DIPLOMA IN CRITICAL CARE NURSING  
END OF TRIMESTER EXAMINATIONS AUGUST 2022**

**Course Unit: ACN119, Foundations of Critical Care Nursing**

**Date: 2<sup>ND</sup> AUGUST 2022**

**Time: 2 hours**

**Start: 9.00 AM Stop: 11.00AM**

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**Instructions**

- 1) This paper has ONE section: Section A
- 2) Answer **ALL** questions in Section A
- 3) Use the University examination booklets provided
- 4) Re-writing the questions on your answer sheet is unnecessary

**SECTION A (MULTIPLE CHOICE QUESTIONS): 70 MARKS**

1. Critically ill patients have muscle wasting due to:-
  - A. High caloric demand
  - B. High oxygen demand
  - C. Increased metabolism
  - D. Nutritional imbalance
  
2. The drug of choice for prophylaxis of deep venous thrombosis is:-
  - A. Warfarin
  - B. Heparin
  - C. Clexane
  - D. Metalase
  
3. Bleeding tendencies are most common in patients with elevated:-
  - A. D -Dimmers
  - B. INR ( International normalized ratio)
  - C. Troponin
  - D. Pro Calcitonin
  
4. Single room intensive care unit (ICU) layout is highly preferred because:-
  - A. It saves space
  - B. Enhances effective infection control
  - C. Requires less staffing
  - D. Patient privacy is maintained
  
5. The following is an emerging stressor for critical care managers due to global changes in critical care medicine:-
  - A. High patient mortality
  - B. Increased clinical incidences
  - C. High staff turnover
  - D. Demotivation among staff members
  
6. As per the current guidelines, the ideal sample for septic screening is:-
  - A. Blood culture
  - B. Urine culture
  - C. Groin swab for culture
  - D. Axillary swab for culture
  
7. Endotracheal aspirate for culture and sensitivity is obtained routinely :-
  - A. Every 24 hours
  - B. After 72 hours
  - C. After every 7 days
  - D. PRN (when necessary)

8. The main goal in patient management in a critical care unit is:-
- To preserve life
  - Prevent complications
  - Restore the patient to his maximum function capacity
  - Improve and safeguard patient outcome
9. Which infection prevention measure do you take when managing a patient with Cytomegalovirus infection (CMV)?
- Airborne precautions
  - Droplet precautions
  - Direct Contact precautions
  - Barrier nursing precautions
10. The following measure is not practiced when managing Covid 19 patients in an intensive care unit:-
- DNR ( Do not resuscitate )
  - Closed suctioning
  - Ventilator guided nebulisation
  - Chest physiotherapy
11. The following sedative does not cause hemodynamic instability:-
- Remifentanyl
  - Propofol
  - Succylcholine
  - Dexemetidine
12. The least desirable characteristic of an ideal sedative is:-
- Anxiolysis
  - Pain relief
  - Amnesia
  - Easy arousability
13. The following is a depolarizing neuromuscular blocker:-
- Rucronium
  - Neostigmine
  - Ephedrine
  - Propofol
14. The following bug in an Intensive Care Unit (ICU) warrants fumigation of the entire department:-
- MRSA( Methicillin resistant staphylococcus aureus)
  - VRSA (Vancomycin resistant staphylococcus aureus)
  - Acinobacter
  - All of the above

15. The best quality indicator in an intensive care unit is:-
- A. Morbidity and mortality
  - B. Incidence reports
  - C. Staff Turnover
  - D. Customer care feedback
16. The following is the sequence of clot formation;
- A. Intrinsic and extrinsic trigger, Thrombin converts fibrinogen to fibrin Serotonin & histamine release Platelets activation, Platelets adherence, Clot contracts and seal the site
  - B. Intrinsic and extrinsic trigger, Platelets activation, Serotonin & histamine release, Platelets adherence, Thrombin converts fibrinogen to fibrin, Clot contracts and seal the site
  - C. Intrinsic and extrinsic trigger, Platelets adherence, Thrombin converts fibrinogen to fibrin Platelets activation, Serotonin & histamine release, Clot contracts and seal the site
  - D. Intrinsic and extrinsic trigger, Platelets activation, Thrombin converts fibrinogen to fibrin, Serotonin & histamine release, Clot contracts and seal the site, Platelets adherence
17. The most-life threatening complications of Idiopathic thrombocytopenia is;
- A. Clotting
  - B. Haemorrhage
  - C. Micro-emboli
  - D. Ecchymosis
18. The following statement is true of monocytes;
- A. Monocytes change to macrophages in the tissues
  - B. Monocytes are not leucocytes
  - C. Monocytes release histamine and heparin
  - D. Monocytes are involved in cell mediated immunity
19. The following statement best describes distributive shock;
- A. Can be caused by loss of intravascular volume
  - B. Can be caused by heart pump failure
  - C. Can be caused by an anaphylaxis
  - D. Can be caused by sitting up rapidly

20. Immunoglobulin G (IgG) is;
- A. Responsible for secondary antibody response
  - B. Produced when an antigen is encountered for the first time
  - C. Responsible for defense against invasion of microorganisms through body mucous membranes
  - D. The mediator of immediate reactions
21. Organ rejection that happens within a few months after transplantation is;
- A. Hyper acute rejection
  - B. Chronic rejection
  - C. Acute rejection
  - D. Delayed rejection
22. For question 22, indicate whether the following statement is TRUE or FALSE  
Autoimmune disorders are caused by a loss of immunologic self-tolerance;
- A. True
  - B. False
23. In HIV disease, the Human immunodeficiency virus invades and incapacitates;
- A. Cytotoxic T cells
  - B. T Helper cells
  - C. B lymphocytes
  - D. Complements
24. The following **BEST** describes the effects of compensatory stage of shock;
- A. Threatened tissue perfusion
  - B. Activation of sympathetic nervous system
  - C. Reduced cardiac output
  - D. Tissue death
25. The following statement is true about the B cells;
- A. They are responsible for cell mediated immunity
  - B. They responsible for generation of white blood cells
  - C. B cells have a role in production of antigens
  - D. They are responsible for humoral immunity
26. Disseminated intravascular coagulation (DIC) has the following effects on the blood works;
- A. PT: prolonged, PTT: prolonged, Platelets: decreased, Fibrin split products: decreased
  - B. PT: prolonged, PTT: prolonged, Platelets: increased, Fibrin split products: increased.
  - C. PT: prolonged, PTT: prolonged, Platelets: decreased, Fibrin split products: increased.
  - D. PT: prolonged, PTT: decreased, Platelets: decreased, Fibrin split products, increased.

27. The following is an intrinsic cause of haemolytic anaemia;
- A. Treatment with certain drugs
  - B. Red cell membrane defect
  - C. Presence of antibodies
  - D. Presence of bacteria
28. In sickle cell patients, blood exchange is indicated in;
- A. In septicemia
  - B. Acute chest syndrome
  - C. In reduced foetal haemoglobin
  - D. In acute myocardial infarction
29. The following condition is characterized by progressive kidney failure, microangiopathic haemolytic anaemia and thrombocytopenia;
- A. Disseminated vascular coagulation
  - B. Idiopathic thrombocytopenia
  - C. Hemolytic-uremic syndrome
  - D. Heparin induced thrombocytopenia
30. Systemic histamine release in the shock state causes;
- A. Bronchial dilation
  - B. Sudden vasodilation
  - C. Hypertension
  - D. Intra-vascular fluid overload
31. In the following null hypothesis "Bullying in nursing does not affect nurses' retention in an organization", the independent variable is;
- A. Bullying
  - B. Nurses' retention
  - C. Intention to leave
  - D. Organization
32. In the following data  
10, 11, 15, 17, 12, 13, 12, 12, 11  
The mode is
- A. 12
  - B. 11
  - C. 6
  - D. 7
33. Probability sampling has the advantage of;
- A. Allowing for a large sample size and purposefully choosing the subjects
  - B. Being economical in terms of resources needed as samples are manageable
  - C. Allowing getting representative samples and generalisation of findings
  - D. Allowing triangulation of data during data collection

34. One of the following factors distinguishes true experimental research from quasi-experimental research;
- A. Size of the sample
  - B. Random assignment of subjects to groups
  - C. The non-probability samples
  - D. The introduction of an experiment treatment
35. A researcher asks a former college student to refer other classmates for the research. This method of subject recruiting is;
- A. Purposive sampling
  - B. Convenience sampling
  - C. Systematic sampling
  - D. Snow-ball sampling
36. External validity refers to;
- A. The extent to which the research is reproducible if repeated
  - B. Whether the participants were blinded in the study
  - C. Whether the findings can be generalized to the population of interest
  - D. The precision of the measurement taken in the research
37. In qualitative research;
- A. Structured instruments are used to collect data
  - B. A large number of study subjects is targeted
  - C. Data is analyzed to form common themes and patterns
  - D. Quantifiable data is collected
38. During data analysis, raw data is transformed into symbols during;
- A. Coding
  - B. Editing
  - C. Tabulation
  - D. Classification
39. A nurse researcher is collecting data from underweight children attending well baby clinic and picks only the babies who are over 5 years and are under 10kg. This type of sampling is classified as:-
- A. Stratified
  - B. Purposive
  - C. Random
  - D. Systematic
40. The following statement describes best the problem statement;
- A. The aims of the study
  - B. The design of the study
  - C. Application of study findings
  - D. The magnitude of study issue

41. The purpose for comparative designs is to;
- A. Describe the phenomena as it occurs in the community
  - B. Establish two causal relationships between two variables
  - C. Look for differences in one variable between two groups
  - D. Measure the extent one variable influences another
42. An error that is created by rejecting a null hypothesis when it is true is;
- A. Sampling error
  - B. Type I error
  - C. Type II error
  - D. False negative error
43. Validity refers to;
- A. The degree to which a study meets the stated objective
  - B. The degree to which an instrument measures what it is supposed to measure
  - C. The degree to which an instrument gives consistent results when used several times
  - D. The degree to which research findings can be generalized to the entire population
44. The following is a threat to external validity of a research;
- A. Instrument is unreliable
  - B. Attrition of the research participants
  - C. Lack of random sample assignment
  - D. Extreme outlier scores
45. The following scale is an example of interval scales;
- A. Calendar
  - B. Gender
  - C. Eggs
  - D. Weighing machine
46. The nurse is reviewing the physician's orders written for a male client admitted to the hospital with acute pancreatitis. Which physician order should the nurse question if noted on the client's chart:
- A. NPO status
  - B. Nasogastric tube inserted
  - C. Morphine sulfate for pain
  - D. An anticholinergic medication
47. A nurse is inserting a nasogastric tube in an adult male client. During the procedure, the client begins to cough and has difficulty breathing. The appropriate nursing action is:
- A. Quickly insert the tube
  - B. Notify the physician immediately
  - C. Remove the tube and reinsert when the respiratory distress subsides
  - D. Pull back on the tube and wait until the respiratory distress subsides



48. A patient has an acute upper GI hemorrhage. Your interventions include:
- A. Treating hypovolemia.
  - B. Treating hypervolemia.
  - C. Controlling the bleeding source.
  - D. Treating shock and diagnosing the bleeding source.
49. Hepatic encephalopathy develops when the blood levels of ..... Increases:
- A. Calcium
  - B. Amylase
  - C. Ammonia
  - D. Potassium
50. The nurse is performing an abdominal assessment and inspects the skin of the abdomen. The nurse performs which assessment technique next:
- A. Palpates the abdomen for size
  - B. Palpates the liver at the right rib margin
  - C. Listen to bowel sounds in all four quadrants
  - D. Percusses the right lower abdominal quadrant
51. A nurse is changing the central line dressing of a client receiving parenteral nutrition (PN) and notes that there are redness and drainage at the insertion site. The nurse next assesses:
- A. Time of last dressing change.
  - B. Allergy.
  - C. Client's temperature.
  - D. Expiration date.
52. Nurse Spencer is caring for an anorexic client who is having total parenteral nutrition solution for the first time. The following assessments requires the most immediate attention:
- A. Dry sticky mouth.
  - B. Temperature of 100° Fahrenheit.
  - C. Blood glucose of 210 mg/dl.
  - D. Fasting blood sugar of 98 mg/dl.
53. Your patient with acute pancreatitis is scheduled for a test that will use a scope to assess the pancreas, bile ducts, and gallbladder. The patient asks you, "What is the name of the test I'm going for later today?" You will tell the patient it is called:
- A. CT scan of the abdomen
  - B. ERCP (Endoscopic retrograde cholangiopancreatography)
  - C. EEG (Electro-Encephalograph)
  - D. MRCP (Magnetic resonance cholangiopancreatography)

54. A patient is admitted to the ER with complaints, mid-epigastric pain felt in the back, elevated glucose, fever, and vomiting. You notice bluish discoloration around the belly button. As the nurse, you know this is called:

- A. Grey-Turner's Sign
- B. Homan's Sign
- C. McBurney's Sign
- D. Cullen's Sign

55. The confirmatory diagnostic test for acute pancreatitis is :

- A. Elevated bilirubin levels
- B. Elevated serum lipase and amylase levels
- C. Low white blood cell count and creatinine levels
- D. Elevated blood alcohol level

56. The nurse is aware that the symptoms of portal hypertension in clients with liver cirrhosis are chiefly due to:

- A. Infection of the liver parenchyma
- B. Fatty degeneration of kupffer cells
- C. Obstruction of the portal circulation
- D. Obstruction of the cystic and hepatic ducts

57. Nurse Oliver checks for residual before administering a bolus tube feeding to a client with a nasogastric tube and obtains a residual amount of 150 mL. What is appropriate action for the nurse to take:

- A. Discard the residual amount and proceed with administering the feeding
- B. Reinstill the amount and continue with administering the feeding
- C. Elevate the client's head at least 45 degrees and administer the feeding
- D. Withhold the feeding

58. An 18-year old is admitted with an acute onset of right lower quadrant pain. Appendicitis is suspected. To determine the etiology of the pain, the client should be assessed for:

- A. Urinary retention
- B. Gastric hyperacidity
- C. Rebound tenderness
- D. Increased lower bowel motility

59. When teaching a client about intussusception, the nurse explains that it is :
- A. Kinking of the bowel onto itself
  - B. A band of connective tissue compressing the bowel
  - C. Telescoping of a proximal loop of bowel into a distal loop
  - D. A protrusion of an organ or part of an organ through the wall that contains it
60. Which measures should the nurse focus on for the client with esophageal varices:
- A. Controlling blood pressure.
  - B. Encouraging nutritional intake.
  - C. Teaching the client about varices.
  - D. Recognizing hemorrhage.
61. The following tests can be used to diagnose ulcers:
- A. Abdominal x-ray
  - B. Barium swallow
  - C. Computed tomography (CT) scan
  - D. Esophagogastroduodenoscopy (EGD)
62. A client has been given Ondansetron (Zofran). For which condition should the nurse administer this medication to the postoperative patient:
- A. Atelectasis.
  - B. Vomiting
  - C. Incisional pain.
  - D. Abdominal infection.
63. A client with a duodenal ulcer is diagnosed with H. pylori infection. The physician prescribed Amoxicillin, Omeprazole, and Clarithromycin. Which statement made by the nurse correctly explains the purpose of these medications:
- A. "These medicines will minimize acid production and will coat the ulcer".
  - B. "These medicines will stop the acid production and will kill the bacteria".
  - C. "The ulcer will corrode, because the medications will kill the bacteria".
  - D. "These medicines will control the ulcer and motion sickness".
64. A geriatric patient is prescribed with Cimetidine (Tagamet) for the treatment of heartburn. The most frequent CNS side effect is:
- A. Vomiting
  - B. Seizures.
  - C. Headache.
  - D. Agitation.

65. A pulsating abdominal mass usually indicates:

- A. Liver cirrhosis
- B. Enlarged spleen
- C. Gastritis
- D. Abdominal aortic aneurysm

66. A patient diagnosed with Abdominal Aortic Aneurysm will present with the following clinical manifestations:

- A. Hypertension, Tachycardia and hyperthermia
- B. Hypotension, cyanosis and tachycardia
- C. Hypotension, bradycardia and chills
- D. Hypertension, bradycardia and seizures

67. The drug used to relieve reactive spasms in a patient diagnosed with Mesenteric Ischemia is:

- A. Ivermectin
- B. Digoxin
- C. Propofol
- D. Papaverine

68. A nurse is changing the central line dressing of a client receiving parenteral nutrition (PN) and notes that there are redness and drainage at the insertion site. The nurse next assesses:

- A. Time of last dressing change.
- B. Allergy.
- C. Client's temperature.
- D. Expiration date.

69. A client receiving parenteral nutrition (PN) complains of shortness of breath and shoulder pain. A nurse notes that the client has an increased pulse rate. The nurse determines that the client is experiencing which complication of PN therapy:

- A. Air embolism.
- B. Hypervolemia.
- C. Hyperglycemia.
- D. Pneumothorax.

70. A patient with a history of peptic ulcer disease presented to Emergency department with signs of abdominal pain and rigid board like abdomen and suspected to have perforated ulcer. What intervention should the nurse anticipate:

- A. Administering and checking gastric PH level
- B. Performing fecal occult blood and administering IV calcium gluconate
- C. Starting IV fluids and inserting NG tube
- D. Starting parenteral nutrition and placing patient in fowlers position