



AMREF INTERNATIONAL UNIVERSITY
SCHOOL OF MEDICAL SCIENCES
DEPARTMENT OF NURSING AND MIDWIFERY

End of Semester Examination August 2026

COURSE CODE AND NAME: ACN119: Foundation of critical care nursing

DATE: 3RD AUGUST 2026

TIME: 9AM-11AM

MULTIPLE CHOICE QUESTIONS (160 Marks)

1. The findings for a blood gas show a Ph 7.47, PaCO₂ 40, HCO₃ 28mmol/L, BE of +4meq/L. This indicates:
 - A. Metabolic alkalosis
 - B. Metabolic acidosis
 - C. Respiratory alkalosis
 - D. Respiratory acidosis
2. During endotracheal suction, the point of resistance encountered upon inserting suction tube is the:
 - A. Carina
 - B. Hilum
 - C. Bronchi
 - D. Alveolar
3. The lung capacity that keep the alveolar inflated at the end of expiration is the:
 - A. Expiratory reserve capacity
 - B. Total lung capacity

- C. Functional residual capacity
 - D. Inspiratory capacity
4. During external respiration:
- A. Inspired air is channeled into the alveoli
 - B. Inspired oxygen diffuses across respiratory membrane into pulmonary capillary
 - C. Carbon dioxide is transported from systemic circulation into pulmonary capillary bed
 - D. Oxygen in the plasma diffuses into the tissues and cells
5. First-line treatment in acute anaphylactic airway compromise includes:
- A. Albuterol
 - B. Salbutamol
 - C. Epinephrine
 - D. Hydrocortisone
6. The following ABG values is consistent with respiratory alkalosis:
- A. pH 7.52, PaCO₂ 28 mmHg
 - B. pH 7.31, PaCO₂ 50 mmHg
 - C. pH 7.25, PaCO₂ 20 mmHg
 - D. pH 7.48, PaCO₂ 48 mmHg
7. The following is a long-term complication of COPD:
- A. Pulmonary embolism
 - B. Cor pulmonale
 - C. Pleural effusion
 - D. Tuberculosis
8. Home oxygen therapy is indicated for COPD patients when:
- A. PaO₂ is < 80 mmHg
 - B. SaO₂ is < 94%
 - C. PaO₂ is < 55 mmHg or SaO₂ < 88%
 - D. Only during sleep
9. A nursing priority for a patient with chest tube and underwater seal drain includes:
- A. Keeping the drain at chest level
 - B. Clamping the tube during ambulation
 - C. Checking for continuous bubbling in water seal
 - D. Removing the tube once the lung inflates
10. The hallmark feature of Acute Respiratory Distress Syndrome (ARDS) is:
- A. Hemoptysis
 - B. Hypoxemia refractory to oxygen therapy
 - C. Productive cough
 - D. Cyanosis relieved by oxygen
11. Chest X-ray findings in a patient with COPD include:
- A. Flattening of the chest

- B. Elevated hemi-diaphragm
 - C. Increased radiolucency
 - D. Blunting of costophrenic angles
12. Oxygen toxicity affects pulmonary system by:
- A. Increasing oxygen free radicals
 - B. Increasing mucus production
 - C. Increasing surfactant production
 - D. Increasing cilia mobility
13. During fibrotic stage of ARDS:
- A. It occurs between 7-8 days after initial attack
 - B. There is marked lung tissue improvement
 - C. Numerous connective tissues continue to destroy the lung
 - D. Hypoxemia is most severe following lung tissue injury
14. Avoiding Auto PEEP in permissive hypercapnia is achieved by:
- A. High minute ventilation
 - B. High Tidal volume
 - C. Low FiO₂
 - D. Increased respiratory rate
15. The hallmark of Acute respiratory failure is:
- A. V/Q Mismatch
 - B. Pulmonary shunting
 - C. Hyperemia
 - D. Hypocapnia
16. When the mechanical defense system of the upper airway is disrupted in acute pneumonia:
- A. The alveoli sacs are filled with fluid
 - B. Air sac colonization is halted
 - C. There is no further consolidation of lung tissue
 - D. Alveoli inflammation is controlled
17. Signs of impending respiratory failure include:
- A. Tachypnea, confusion, and accessory muscle use
 - B. Cough, low-grade fever, and nasal flaring
 - C. Wheezing and chest tightness only
 - D. Tachycardia without hypoxia
18. The initial step in managing a suspected tension pneumothorax is:
- A. Chest X-ray
 - B. High-flow oxygen
 - C. Needle decompression
 - D. Chest physiotherapy
19. Flail chest is best described as:

- A. A lung filled with air
 - B. A paradoxical movement of a rib segment
 - C. A collection of fluid in the lungs
 - D. A rigid chest wall due to fibrosis
20. Mode of action of adrenaline in an asthmatic patient is:
- A. Increase in microvascular leakage
 - B. Prevent broncho-constriction
 - C. Reduction of bronchial secretions
 - D. Eliminate the effects of the allergens
21. The appropriate endotracheal tube size for a 6 year old is:
- A. 3mm
 - B. 4mm
 - C. 5.5mm
 - D. 6.5mm
22. The cells that are found in the respiratory system are:
- A. Pseudo stratified columnar epithelium
 - B. Stratified epithelium
 - C. Squamous epithelium
 - D. Stratified squamous epithelium
23. The role of type II alveoli cells is to:
- A. Secrete surfactant
 - B. Form the part of alveoli wall
 - C. Protect the alveoli against invading microbes
 - D. Equalize air pressure throughout the lungs
24. The breathing technique that helps prevent alveolar collapse is:
- A. Deep sighing
 - B. Pursed-lip breathing
 - C. Holding breath
 - D. Forced expiration
25. A common symptom of sleep apnea is:
- A. Nocturia
 - B. Headache
 - C. Daytime sleepiness
 - D. Chest pain
26. Albuterol acts primarily as a:
- A. Long-acting beta agonist
 - B. Beta-2 agonist for bronchodilation
 - C. Steroid anti-inflammatory
 - D. Leukotriene modifier

27. The drug commonly used as prophylaxis in asthma is:
- A. Albuterol
 - B. Montelukast
 - C. Ipratropium
 - D. Prednisone
28. Ipratropium is contraindicated in patients with:
- A. Glaucoma
 - B. Asthma
 - C. COPD
 - D. Hypertension
29. The respiratory medication associated with oral thrush is:
- A. Beta-agonists
 - B. Inhaled corticosteroids
 - C. Leukotriene modifiers
 - D. Antihistamines
30. Systemic corticosteroids in respiratory care are primarily used for:
- A. Antiviral effects
 - B. Long-term bronchodilation
 - C. Reducing airway inflammation
 - D. Sedation
31. A patient with newly diagnosed asthma should be taught to:
- A. Use a rescue inhaler only at night
 - B. Avoid peak flow meters
 - C. Identify triggers and follow an action plan
 - D. Take steroids during attacks only
32. The best indicator of treatment response in acute asthma is:
- A. Resolution of cough
 - B. Peak expiratory flow rate
 - C. Temperature normalization
 - D. Decreased respiratory rate
33. The position that best facilitates lung expansion in dyspneic patients is:
- A. Supine
 - B. High Fowler's
 - C. Prone
 - D. Lateral
34. Smoking cessation is especially important in COPD to:
- A. Reduce weight
 - B. Improve mood
 - C. Slow disease progression
 - D. Increase appetite

35. Before administering nebulized bronchodilator, the nurse should:
- Ask the patient to lie down
 - Ensure humidification
 - Assess lung sounds and respiratory rate
 - Give corticosteroids first
36. In ventilation/perfusion relationship:
- Pulmonary capillary vasoconstriction occurs due to alveolar hypoxia
 - There is increased capillary blood flow to the poorly ventilated alveolar
 - Retained carbon dioxide in the alveoli causes vasodilation of pulmonary capillaries
 - Increased carbon dioxide levels in the alveoli causes constriction of the bronchioles
37. On auscultating the patient's chest, a nurse noted high pitched musical sound on expiration. The nurse concludes that:
- The upper airway is obstructed with secretions
 - The patient's airway is patent
 - The lower airway is narrowed
 - There are retained secretions in the airway
38. Patient with asthmatic attack develops respiratory alkalosis due to:
- Air trapping in the lower airways
 - Hyperventilation
 - Respiratory muscles fatigue
 - Prolonged inspiratory time
39. The appropriate adjustment on mechanical ventilation for a patient with an ABG showing pH 7.35, PaCO₂ 55mmHg, PaO₂ 80mmHg, HCO₃ 24mmol/L is:
- Increase FiO₂
 - Increase the respiratory rate
 - Maintain FiO₂
 - Increase PEEP
40. The possible cause of airway pressure of 36cmH₂O in a ventilated patient would be:
- Tube kinking, presence of secretions
 - Wheezes, tube leakage
 - Reduced FiO₂, tube leakage
 - Increased respiratory rate, reduced FiO₂

PART II: CARDIAC CRITICAL CARE — MULTIPLE CHOICE QUESTIONS

41. During cardiac embryology, the sinus venosus develops into:
- The right ventricle
 - The right and left ventricle
 - The right and left atria
 - The right atrium

42. A nurse managing stroke understands that the drug of choice for a patient with systolic BP of >180mmHg is:
- A. Labetalol, Nicardipine, Clevidipine, Alteplase
 - B. Hydralazine, Nicardipine, Clevidipine, Alteplase
 - C. Clevidipine, Nicardipine, Clevidipine, Alteplase
 - D. Hydralazine, Labetalol, Nicardipine, Clevidipine
43. Frank Starling law suggests the following regarding Cardiac output:
- A. The higher the afterload, the more easily blood is ejected from a ventricle
 - B. Stroke Volume is equivalent to the blood that returns to the heart during diastole
 - C. The more blood that is returned to the heart, the greater the volume of blood pumped during the next contraction
 - D. An inverse relationship exists between venous return and preload; increased venous return decreases preload
44. What is the most common symptom of myocardial ischemia and infarction:
- A. Jaw or neck pain
 - B. Discomfort along the superior thoracic vertebral region
 - C. Retrosternal discomfort
 - D. Radiating pain in one of the upper limbs
45. A patient has presented to the emergency room with symptoms of acute coronary syndrome. The goal is to conduct PCI from arrival in:
- A. 180 minutes
 - B. 120 minutes
 - C. 90 minutes
 - D. 30 minutes
46. Which of the following interventions is crucial in the risk and treatment stratification process of the ACLS acute coronary syndrome algorithm:
- A. Obtaining a family history
 - B. Using the primary assessment to identify a potential myocardial infarction
 - C. Assessing pain level
 - D. Obtaining a 12-lead ECG
47. According to the ILCOR ACLS acute coronary syndrome protocol, what is the recommended dosage of oral aspirin:
- A. 81 mg
 - B. 162–325 mg
 - C. 120–200 mg
 - D. 300 mg
48. A critical care nurse is having Excessive Triggering of Heart Rate Alarms on the monitor. To troubleshoot, the nurse should:
- A. Check if the monitoring lead has been properly selected
 - B. Check the power cord on or near the monitor cable
 - C. Check if there are muscle tremors from anxiety or shivering

- D. Confirm if proper skin preparation and application procedures were followed
49. The following cardiac biomarker level indicates heart failure:
- A. BNP level more than 400 pg/mL
 - B. NT-proBNP more than 300pg/mL
 - C. NT-proBNP more than 100 pg/ml
 - D. BNP level more than 100 pg/mL
50. Which heart valve is most commonly affected in rheumatic heart disease?
- A. Pulmonary valve
 - B. Tricuspid valve
 - C. Mitral valve
 - D. Aortic valve
51. Which triad is commonly associated with severe aortic stenosis?
- A. Fever, chills, and rash
 - B. Dyspnea, syncope, and angina
 - C. Hypertension, edema, and cough
 - D. Cyanosis, jaundice, and ascites
52. A patient with aortic dissection typically reports:
- A. Gradual chest discomfort relieved by rest
 - B. Sharp, tearing chest pain radiating to the back
 - C. Burning epigastric pain after meals
 - D. Pleuritic pain relieved by sitting forward
53. Which laboratory test is monitored to assess the effectiveness of heparin during surgery?
- A. INR
 - B. APTT
 - C. Hemoglobin
 - D. Troponin
54. A patient develops protamine reaction after CPB. Which manifestation is expected?
- A. Severe hypotension
 - B. Hyperglycemia
 - C. Bradypnea only
 - D. Polyuria
55. The causative organism of rheumatic fever is:
- A. A Group of Staphylococcus aureus
 - B. A group of Streptococcus pneumoniae
 - C. Group A β -hemolytic Streptococcus
 - D. Escherichia coli bacteria
56. The normal ejection fraction (EF) is approximately:
- A. 10–20%
 - B. 25–35%

- C. 55–70%
- D. 80–90%

57. The critical care nurse understands that priority treatment of a patient with bradyarrhythmia of Mobitz II will be:
- A. Atropine 1mg i.v to a maximum of 3mg
 - B. Epinephrine 1mg repeated dosage
 - C. Transcutaneous pacing using pads
 - D. Dobutamine 20mcg iv infusion
58. The atrial kick accounts for the following amount of blood flowing into the ventricles:
- A. 30%
 - B. 70%
 - C. 80%
 - D. 20%
59. Which of the following factors directly decreases ejection fraction:
- A. Increased contractility
 - B. Decreased afterload
 - C. Increased preload
 - D. Increased end-systolic volume
60. Which of the following best represents the physiological basis of the Frank-Starling law:
- A. Increased calcium influx during depolarization due to increased venous return
 - B. Optimal overlap of actin and myosin filaments when muscle fibers are stretched
 - C. Enhanced sympathetic stimulation because of increased venous return
 - D. Reduced end-systolic volume
61. The objective of zeroing in an arterial line system is:
- A. Correction of atmospheric pressure
 - B. Correct for the hydrostatic pressure
 - C. To reduce preload
 - D. To increase afterload
62. A damped waveform on the arterial trace usually indicates:
- A. Air bubbles in the line
 - B. Increased cardiac output
 - C. Tachycardia
 - D. Loose connections in the lines
63. The 'c' wave in the CVP waveform is caused by:
- A. Closure of the tricuspid valve and bulging into the right atrium
 - B. Contraction of the right atrium outward flow of blood out of the heart
 - C. Rapid filling of the ventricle after opening atrioventricular valves
 - D. Opening of the tricuspid valve
64. Beck's triad, which is associated with cardiac tamponade, consists of distended neck veins, along with:

- A. Tachycardia and a bounding pulse
 - B. Bradycardia and a bounding pulse
 - C. Oliguria and distant heart sound
 - D. Hypotension and distant/muffled heart sound
65. The sequence of ECG changes in acute myocardial infarction is usually:
- A. Q wave → ST elevation → T inversion
 - B. ST elevation → T inversion → Q wave formation
 - C. T inversion → ST elevation → Q wave
 - D. ST depression → ST elevation → Q wave
66. A nurse's priority in managing a patient with rheumatic heart disease is to:
- A. Promote rest during the acute phase
 - B. Encourage routine dental hygiene
 - C. Monitor antibiotic levels
 - D. Avoid prophylactic therapy
67. Which of the following is a Class IA antiarrhythmic:
- A. Lidocaine
 - B. Quinidine
 - C. Amiodarone
 - D. Verapamil
68. A common nursing precaution when administering beta-blockers is:
- A. Check pulse and blood pressure before giving
 - B. Administer with high-sodium foods
 - C. Encourage sudden withdrawal
 - D. Give to patients with severe asthma
69. The main action of diltiazem is to:
- A. Prolong depolarization
 - B. Slow AV node conduction
 - C. Increase heart rate
 - D. Increase myocardial contractility
70. Dopamine has dose-dependent actions. At low doses, it:
- A. Causes renal vasodilation
 - B. Causes renal vasoconstriction
 - C. Decreases renal perfusion
 - D. Increases afterload only
71. The unit intensivist prescribed 7mcg/min of norepinephrine infusion. If 4mgs of the drug is reconstituted in 50cc of normal saline, the infusion rate will be:
- A. 367mls/hr
 - B. 5.25mls/hr
 - C. 2.5mls/hr
 - D. 184mls/hr

72. The primary laboratory test used to monitor unfractionated heparin therapy is:
- A. Checking values of Prothrombin time (PT)
 - B. Activated partial thromboplastin time (aPTT)
 - C. International normalization ratio (INR)
 - D. Bleeding time in seconds
73. The antidote for thrombolytic overdose is:
- A. Vitamin K
 - B. Protamine sulfate
 - C. Aminocaproic acid
 - D. Heparin
74. Hydrochlorothiazide lowers blood pressure by:
- A. Vasoconstriction
 - B. Increasing sodium and water excretion
 - C. Increasing heart rate
 - D. Suppressing renin release
75. A common side effect of Enalapril is:
- A. Bradycardia
 - B. Dry cough
 - C. Constipation
 - D. Hypoglycemia
76. The following drug is contraindicated in Asthma:
- A. Propranolol
 - B. Atenolol
 - C. Metoprolol
 - D. Bisoprolol
77. A patient diagnosed as having an inferolateral myocardial infarction will have ST segment changes in the following contiguous leads:
- A. II, III, aVF, V1
 - B. I, V4, V5, V6
 - C. V3, V4, V5, III
 - D. aVL, V6, III, II
78. The auscultation point for Aortic valve closure is:
- A. 5th intercostal space left of the sternum, mid clavicular line
 - B. 4th intercostal space left of the sternal border
 - C. 2nd intercostal space, left sternal border
 - D. 2nd intercostal space, right sternal border
79. In lead II, the positive electrode is placed on the:
- A. Left leg
 - B. Right leg
 - C. Right arm

D. Left wrist

80. The nurse caring for a patient with dizziness and chest pain at a heart rate of 240bpm prepares the management of:
- A. Atropine 1mg
 - B. Transcutaneous pacing
 - C. Synchronized cardioversion
 - D. Defibrillation
81. The nurse interprets the rhythm strip as:
- A. Atrial fibrillation
 - B. Atrial flutter
 - C. Supraventricular tachycardia
 - D. Premature atrial contraction
82. The standard limb leads (I, II, III) record electrical activity in which plane:
- A. Horizontal plane
 - B. Frontal plane
 - C. Sagittal plane
 - D. Coronal plane
83. If Lead I is positive and aVF is negative, the likely finding is:
- A. Normal axis
 - B. Left axis deviation
 - C. Right axis deviation
 - D. Indeterminate axis
84. Adenosine is contraindicated in treatment of the following dysrhythmia:
- A. Atrial fibrillation
 - B. Atrial flutter
 - C. Supraventricular tachycardia
 - D. Monomorphic ventricular tachycardia
85. DDD pacemaker pacing spikes can appear:
- A. Before P waves
 - B. Before QRS complex
 - C. Before both P and QRS
 - D. Randomly
86. A nurse monitoring an open heart patient understands that post-extubation care includes:
- A. Deep breathing
 - B. Keeping the patient flat
 - C. Restricting fluids
 - D. Avoiding oxygen

PART III: HAEMATOLOGY & IMMUNOLOGY — MULTIPLE CHOICE QUESTIONS

87. A client is receiving a platelet transfusion. The nurse determines that the client is gaining from this therapy if the client exhibits:
- A. Less frequent febrile episodes
 - B. Increased level of hematocrit
 - C. Less episodes of bleeding
 - D. Increased level of hemoglobin
88. Humoral mediated immunity is carried out by:
- A. B lymphocytes
 - B. T lymphocytes
 - C. Antigen mediated immunity
 - D. Macrophages
89. Which statement below BEST describes how Heparin works as an anticoagulant?
- A. It inhibits the synthesis of vitamin K in the liver
 - B. It binds to prothrombin and reverses the clotting process
 - C. It potentiates the inhibitory effect of factor X and thrombin
 - D. It potentiates aggregation of platelets
90. The nurse suspects the patient with severe sepsis has now developed Disseminated Intravascular Coagulation (DIC). Which finding, if observed, helps confirm this suspicion?
- A. Bradycardia
 - B. Polyuria
 - C. Petechiae
 - D. Polyphagia
91. The proteins that promote phagocytosis of antigens through binding are known as:
- A. Macrophages
 - B. Phagocytes
 - C. Opsonins
 - D. Interleukins
92. The nurse concludes both bleeding and clotting occur during DIC due to which process?
- A. Activation of intrinsic pathways results in excess release of clotting factors
 - B. Tissue damage from bleeding uses up clotting factors quicker than they can be replaced
 - C. Only clotting occurs when Factor VI is activated
 - D. Excess release of thrombin uses up clotting factors quicker than they can be replaced
93. Rhesus hemolytic disease of the newborn involves:
- A. Soluble immune complexes
 - B. Antibody to cell surfaces
 - C. Cytokine release from T cells
 - D. Stimulatory antibodies

94. A client is brought to the emergency department having experienced blood loss due to a deep puncture wound. A 3 unit Fresh-frozen plasma (FFP) is ordered. The nurse determines that the reason behind this order is to:
- A. Provide clotting factors and volume expansion
 - B. Increase hemoglobin, hematocrit, and neutrophil levels
 - C. Treat platelet dysfunction
 - D. Treat thrombocytopenia
95. A 12-year-old boy admitted with Sickle cell crisis. The following nursing intervention will be of highest priority:
- A. Taking hourly blood pressure
 - B. High Fowler's position
 - C. Encouraging fluid intake of at least 200ml/hour
 - D. Administer Acetaminophen as ordered
96. A client is diagnosed with aplastic anemia. The nurse monitors for alteration in one of the most important pathophysiological functions:
- A. Decreased bowel movement
 - B. Bleeding tendencies
 - C. Decreased urine output
 - D. Decreased appetite
97. Which of the following disorders is a deficiency of factor VIII?
- A. Sickle cell disease
 - B. Christmas disease
 - C. Hemophilia A
 - D. Hemophilia B
98. What sign and symptoms in your patient with HIV indicates the disease is worsening and the immune system is severely compromised?
- A. Open, oozing lesions around the mouth
 - B. White hair-like spots on the side of the tongue
 - C. Cheesy white film on the tonsils and inside cheeks
 - D. Vision changes
99. Hemolytic uremic syndrome (HUS) is a triad of clinical manifestations as follows:
- A. Hemolytic anemia, polyuria and pedal oedema
 - B. Micro-angiopathic hemolytic anemia, renal insufficiency, thrombocytopenia
 - C. Micro-angiopathic hemolytic anemia, renal failure, neutropenia
 - D. Micro-angiopathic hemolytic anemia, nephrolithiasis, thrombocytopenia
100. A nurse is monitoring a patient receiving intramuscular cyanocobalamin therapy. Which of the following is a common side effect of this medication?
- A. Rash and anaphylaxis
 - B. Hypokalemia and polycythemia
 - C. Mild diarrhea, nausea, and headache
 - D. Peripheral edema and fluid retention

101. A nurse is explaining the action of hematopoietic growth factors to a group of students. The statement that correctly describes the role of epoetin alfa is:
- A. It is a glycosylated long acting form of erythropoietin
 - B. It stimulates the bone marrow to produce mature red blood cells
 - C. It suppresses bone marrow activity to prevent anemia
 - D. It increases platelet production in the bone marrow
102. Which result will most likely be abnormal in a child with Hemophilia?
- A. Platelet count
 - B. Hemoglobin level
 - C. Partial thromboplastin time
 - D. Hematocrit level
103. The following protease inhibitor drug is used as a highly active antiretroviral therapy (HAART), in a combination regimen with other antiretroviral drugs:
- A. Efavirenz
 - B. Indinavir
 - C. Ritonavir
 - D. Zidovudine
104. The common cause of iron deficiency anemia in men is:
- A. Vegetarian diet
 - B. Chronic occult bleeding
 - C. Vitamin C deficiency
 - D. Chronic intravascular hemolysis
105. During the engraftment phase, where do the stem cells move?
- A. Stem cells find their way to the spleen and begin making new cells
 - B. Stem cells find their way to the marrow and begin making new blood cells
 - C. Stem cells find their way to the thymus gland and begin making new blood cells
 - D. Stem cells go to resting phase and remain dormant
106. A 25 year old female with a diagnosis of Hemolytic uremic syndrome is admitted with severe diarrhea and vomiting. The priority nursing diagnosis will be:
- A. Ineffective breathing pattern
 - B. Impaired skin integrity
 - C. Fluid and electrolyte imbalance
 - D. Ineffective thermoregulation
107. The role of immunosuppressants in patients who have undergone Bone marrow transplant is:
- A. Reduction of White blood cells
 - B. Prevent graft versus host disease
 - C. Increase production of Red blood cells
 - D. Prevent allergic reactions
108. Which statement is true about the pathogenesis of Systemic Lupus Erythematosus?

- A. The phagocytosis process is defective, which causes the nuclear material inside the dying cell to be seen as a foreign invader and antinuclear antibodies are created
 - B. During cell death the nucleus of the cell fails to condense, which leads to the development of autoantibodies
 - C. Red blood cells proliferate and attach within the structures of liver and spleen causing abdominal distension
 - D. Neutrophil activity is decreased and this causes B-cells to attack phagocytes and nuclear material within the cells, which leads to the activation of the complement cascade system and inflammation
109. The 24-year-old patient is diagnosed with onset of Guillain-Barré Syndrome. The most essential assessment for the nurse to carry out is:
- A. Monitoring the cardiac rhythm continuously
 - B. Determining the level of consciousness every 2 hours
 - C. Evaluating sensation and strength of the extremities
 - D. Constantly evaluating the respiratory function
110. What happens with the immune system of a patient diagnosed with Autoimmune disease?
- A. The immune cells die
 - B. Antibodies from your immune system mistakenly attack tissues in the body
 - C. The immune system makes too many immune cells to counteract the number of immune cells being damaged
 - D. The immune system produces high amount of antibodies to fight against the pathogens and antigens
111. A patient diagnosed as Rheumatoid arthritis was started on Methotrexate. The nurse needs to educate the patient to observe for adverse effects such as:
- A. Discoloration of teeth, constipation and polyuria
 - B. Alopecia, diarrhoea, shortness of breath
 - C. Excessive bleeding, constipation, alopecia
 - D. Diarrhea, anorexia and seizures
112. The mechanism of action of Azathioprine is:
- A. Inhibition of macrophages proliferation
 - B. Inhibition of production of cytokines
 - C. Inhibit purine synthesis along with B and T cells
 - D. Suppression of polymorphonuclear leukocytes
113. Severe anemia can lead to serious complications such as:
- A. Hepatic coma
 - B. Cardiac congestive failure
 - C. Cardiac tamponade
 - D. Renal failure
114. A patient with a diagnosis of Hemophilia has been involved in a serious road traffic accident. The patient is at risk for the complication:
- A. Paralysis
 - B. Myocardial infarction

- C. Bleeding in the brain
 - D. Infections
115. The antidote for Heparin toxicity is:
- A. Magnesium sulphate
 - B. Calcium carbonate
 - C. Protamine sulphate
 - D. Calcium sulphate
116. Cell mediated immunity is carried out by:
- A. B lymphocytes
 - B. T lymphocytes
 - C. Antigen mediated immunity
 - D. Macrophages
117. The following is true about IgG of humans:
- A. Can cross placenta
 - B. Produced by low affinity plasma cells
 - C. Primarily is restricted in circulation
 - D. Cannot cross the placenta
118. A patient is to undergo Bone marrow transplant and a family member requests to understand the meaning of allogeneic transplant. The correct response is:
- A. Replacing healthy stem cells with diseased cells, from one's own body
 - B. Replacing healthy stem cells from a donor to a recipient
 - C. Treatment for Von Willebrand disease
 - D. Replacing platelets from a donor
119. Chemotaxis refers to:
- A. Blood cells move away from source of infection
 - B. Blood cells move towards source of infection
 - C. Blood cells undergo apoptosis
 - D. Blood cells clump together to form a clot
120. A 45-year-old man is diagnosed with AIDS; he was tested positive for HIV 5 years ago. Which of the following statements is true regarding the diagnosis of the disease?
- A. A low CD4⁺ T cell count (>200 cells/mm³)
 - B. It occurs at the early stage of the HIV infection
 - C. The person with AIDS can live up to 10 years
 - D. The virus is usually in a dormant state during this stage
121. Which of the following is the site for T cell maturation?
- A. Bone marrow
 - B. Tonsils
 - C. Thymus
 - D. Spleen

122. A patient receiving high dose chemotherapy develops severe bone marrow suppression. Which complication should the nurse anticipate as most life threatening?

- A. Pain from mucositis
- B. Anemia and low haemoglobin levels
- C. Bacterial infection
- D. Gastrointestinal irritation

123. A patient develops acute hemolytic transfusion reaction after receiving mismatched packed red blood cells. The nurse notes fever, chills, flank pain, hypotension and the priority nursing action is:

- A. Stop the transfusion, maintain IV access with normal saline, and notify the provider
- B. Administer prescribed antihistamines and corticosteroids to reduce immune response
- C. Monitor urine output closely and prepare to administer diuretics
- D. Send the blood bag and patient samples to the blood bank for cross matching investigation

124. A 6 year old child with a known peanut allergy suddenly develops wheezing, stridor, generalized urticaria, and hypotension after accidental ingestion of peanut butter. Which immunologic mechanism best explains this reaction?

- A. Type II hypersensitivity: antibody mediated cytotoxicity
- B. Type III hypersensitivity: immune complex deposition
- C. Type I hypersensitivity: IgE mediated mast cell degranulation
- D. Type IV hypersensitivity: delayed T cell mediated response