



Final Exam Model Answer

Second Year – Second Term

Program : Technical Nursing Diploma (critical nursing specialty)

Course Name : (NUR 221) تمريرض تخصصي متقدم

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Section I- Please , choose the correct answer(20 score)

1-Nonmodifiable risk factors for coronary artery disease include all of the following EXCEPT:

- a) Family history of CAD
- b) Increasing age (more than 45 years for men; more than 55 years for women)
- c) Gender
- d) Obesity

2- To promote physical rest for patient with myocardial infarction you should do all of the following EXCEPT:

- a) Use of the bedside commode with assistance
- b) Backrest elevated to promote comfort
- c) Use of stool softener to prevent straining at stool.
- d) Obtain ECG recording

3- Patient with congestive heart failure have :

- a) Third heart sound (S3)
- b) Tachycardia
- c) Increased jugular venous distention (JVD)

d) All of the above

4-The person's prodromal symptoms that suggest anginal ischemia, include:

- a) Sensations of indigestion or nausea
- b) Choking
- c) Heaviness, and weakness or numbness in the upper extremities
- d) All of the above

5- For patient with congestive heart failure ,the nurse monitor the patient for factors that increase the risk of digoxin toxicity such as:

- a) Oral antibiotics
- b) Decreased potassium level (hypokalemia)
- c) Impaired renal function, particularly in patients age 65
- d) All of the above

6-A patient receiving an insulin injection for the first time asks the nurse how it works to reduce the blood glucose. Which of the following would be the best response for the nurse to make to the patient?

- a) "Insulin makes sure that fat is used as the body's main energy source."
- b) "Insulin helps prevent fluid overload in the cells."
- c) "Insulin helps break down protein."
- d) "Insulin helps with cellular uptake of glucose."

7- Mechanical ventilation is:

- a) Chest compressions performed during cardiopulmonary arrest.
- b) Use of a heart-lung machine during coronary artery bypass surgery.
- c) Use of a machine to breathe for a patient who can't breathe on his or her own.
- d) Use of an intra-aortic balloon pump for cardiogenic shock.

8- Which of the following is not an indication for mechanical ventilation?

- a) Myocardial infarction
- b) Respiratory failure
- c) Provide stability of the chest wall after trauma or surgery
- d) Brain injury requiring a barbituate-induced coma

9- Ventilator weaning means:

- a) Turning off the ventilator and letting the patient breathe spontaneously
- b) Changing to a noninvasive form of ventilation
- c) Increasing the tidal volume delivered by the ventilator
- d) Decreasing the number of ventilator breaths while allowing an patient's breaths

10- Which of the following should be done to assess respiratory status after extubation?

- a) ABG
- b) Electrolyte panel
- c) Monitor end tidal CO₂
- d) Bronchoscopy

11- An artificial airway, like an endotracheal tube, is used in the following type of ventilation.

- a) Positive Pressure
- b) Negative pressure
- c) Pressure Support Ventilation
- d) T-piece trial

12- Auscultation of a client's lungs reveals crackles in the left posterior base. The nursing intervention is to:

- a) Repeat auscultation after asking the client to deep breathe and cough.
- b) B-Instruct the client to limit fluid intake to less than 2000 ml/day.
- c) C-Inspect the client's ankles and sacrum for the presence of edema.
- d) D- Place the client on bedrest in a semi-Fowler's position.

13- To evaluate the effectiveness of prescribed therapies for a patient with ventilatory failure, which diagnostic test will be most useful to the nurse?

- a) Chest x-rays
- b) Pulse oximetry
- c) Arterial blood gas (ABG) analysis
- d) Pulmonary artery pressure monitoring

14- A patient with respiratory failure has a respiratory rate of 8 and an SpO₂ of 89%. The patient is increasingly lethargic. The nurse will anticipate assisting with

- a) Administration of 100% oxygen by non-rebreather mask.

- b) Endotracheal intubation and positive pressure ventilation.
- c) Insertion of a mini-tracheostomy with frequent suctioning.
- d) Initiation of bilevel positive pressure ventilation.

15- When admitting a patient in possible respiratory failure with a high PaCO₂, which assessment information will be of most concern to the nurse?

- a) The patient is somnolent.
- b) The patient's SpO₂ is 90%.
- c) The patient complains of weakness.
- d) The patient's blood pressure is 162/94.

16- A patient with type 2 diabetes mellitus, lethargy, and a blood glucose level of 650 mg/dL has been diagnosed with hyperglycemic hyperosmolar syndrome (HHS). The nurse monitors this patient for the development of which complication?

- a) Hyperkalemia
- b) Seizures
- c) Metabolic acidosis
- d) Fluid volume overload

17- Which of the following is Criteria for calling intensive care staff to critical ill patients except ?

- a) Respiratory rate more than 40 or less than 8 breaths/min.
- b) Oxygen saturation more than 90%.
- c) Pulse rate less than 40 or more than 140 beats /min.
- d) Systolic blood pressure less than 90 mm Hg or more than 180 mm

18- Which of the following are the roles of critical care nurses except?

- a) Respect and support the right of the patient.
- b) Intervene when the doctor order .
- c) Help the patient obtain necessary care.
- d) Respect the values, beliefs and rights of the patient.

19- Which of the following is the primary cause of Addison's disease?

- a) Idiopathic autoimmune dysfunction
- b) thyroid dysfunction
- c) Insulin dysfunction
- d) Renal dysfunction

20- Which of the following are the manifestation of Impaired Gas exchange except ?

- a) diminished breath sounds
- b) breath sounds crackles
- c) wheezes and sputum production.
- d) Diminished of pulse rat

Section II-Please read each statement carefully, and write (T) if the statement True ,and (F) if the statement False (30 scores)

Statement	t/f
1-The patient with diabetes mellitus have severe pain with angina.	F
2- In patient with angina pectoris, Electrocardiogram (ECG) may show changes indicative of ischemia such as T-wave inversion.	T
3- The objectives of the medical management of angina are to increase the oxygen demand of the myocardium and to decrease the oxygen supply.	F
4- The major indication of heparin administration for patient's with angina pectoris is prevention of thrombus formation.	T
5- The nurse administers oxygen therapy if the patient's respiratory rate is increased	T
6- For patient's with angina pectoris , If the chest pain is unchanged or is lessened but still present, nitroglycerin administration is repeated up to three doses.	T
7- When a patient experiences angina, the patient is directed to stop all activities and sit or rest in bed in a supine position to increase the oxygen requirements of the ischemic myocardium.	F
8- The angina pain radiate to the neck, jaw, shoulders, and inner aspects of the upper arms, usually the right arm.	F
9- Systemic & pulmonary hypertension can lead to congestive heart failure	T
10- The patient's with myocardial infarction has a cool, clammy, diaphoretic, and pale skin	T
11- The patient with congestive heart failure complains from increased urinary frequency during the day	F
12-The aspirin is used for patient with myocardial infarction to decrease platelet aggregation	T
13- Hypoxemia often occurs in patients with a myocardial infarction because of pulmonary edema.	T
14- Morphine is the drug of choice to relieve the pain for patients with a myocardial infarction	T
15- The purpose of thrombolytics therapy for patients with myocardial	T

infarction is to dissolve and lyse the thrombus in a coronary artery	
16- Patient have myocardial infarction should adhere to low-sodium, low calorie diet	T
17- When a patient experiences angina, the patient is directed to stop all activities and sit or rest in bed in a supine position to reduce the oxygen requirements of the ischemic myocardium.	F
18- Nitroglycerin is given for patient with angina pectoris to increase myocardial oxygen consumption	F
19- Digoxin (Lanoxin) decreases the force of myocardial contraction and increase conduction through the AV node.	F
20- The nurse monitor serum potassium levels in patients receiving digoxin, especially those receiving both digoxin and diuretics. Because an undetected, uncorrected potassium imbalance predisposes patients to digoxin toxicity and dysrhythmias	T
21- Ventilator-associated pneumonia is a type of Hospital acquired pneumonia that develops more than 48 to 72 hours after endotracheal intubation.	T
22- Corticosteroids drugs may cause affect carbohydrate metabolism.	T
23- The mortality rate in patients with diabetic ketoacidosis are more higher than with hyperosmolar hyperglycemic.	F
24- Managing diabetic ketoacidosis (DKA) and HHS in an intensive care unit during the first 24-48 hours always is advisable.	T
25- Addisonian crisis known as acute adrenal insufficiency	T
26- The aim of the critical care is to provides the patients with a care that improves and survives .	T
27- Respiratory failure is “inability to maintain either normal delivery of O ₂ to the tissues or the normal removal of CO ₂ from the tissues”	T
28- Severe morning headache is sign of decrease o ₂ in the brain	T
29- -ABGs and breath sounds within baseline of respiratory failure assessment .	T
30- The first manifestation of ineffective Airway clearance is cyanosis	F

III-Matching Type Questions (20 degree)

Part (1)- (10 degrees)

Column A	Column B
1-Stable angina	A- Inability of the heart to pump sufficient blood to meet the needs of the tissues for oxygen and nutrients.
2- Myocardial infarction	B- A clinical syndrome usually characterized by episodes of pain or pressure in the anterior chest.
3-Refractory angina	C- Predictable and consistent pain that occurs on exertion and is relieved by rest and/or nitroglycerin
4- Congestive heart failure	D- Pain at rest with reversible, ST-segment elevation; caused by coronary artery vasospasm
5- Unstable angina:	E-Severe incapacitating chest pain
6- Primary percutaneous transluminal coronary angioplasty (PTCA)	F-Symptoms increase in frequency and severity; may not be relieved with rest or nitroglycerin
7-Troponin	G-Medications used to increase the rate of urine production and the removal of excess extracellular fluid from the body
8- Diuretics	H- A contractile protein that are highly specific for cardiac muscle
9-Angina pectoris	I- Invasive procedure in which the infarct-related coronary artery is dilated during the acute phase of an MI without prior administration of thrombolytic agents.
10-Variant angina	J- Death of heart tissue caused by lack of oxygenated blood flow.

1	2	3	4	5	6	7	8	9	10
C	J	E	A	F	I	H	G	B	D

Part (2) - (10 degrees)

Column A	Column B
1-Myxoedematous coma	A-It manifested by hypothyroidism.
2-Diabetic ketoacidosis	B-It Manifested by hyperthyroidism.
3-Hyperosmolar hyperglycemic	C-It Manifested by insufficient levels of cortisol
4-Hypercapnic failure:	D-It is characterized by ketoacidosis and hyperglycemia.
5-Apnea	E-It is characterized by more severe hyperglycemia but no ketoacidosis
6-Hypoxemic failure	F-Temporary cessation of breathing.
7-Hypoxemia	G-Low oxygen levels in the blood.
8-hypoxia	H-Low oxygen levels in the tissues .
9-Addisonian crisis	I-There is too much carbon dioxide in blood and increase or not enough oxygen.
10- Thyrotoxic Crisis	J-There is insufficient oxygen in blood but increase carbon dioxide

1	2	3	4	5	6	7	8	9	10
A	J	I	B	C	e	g	h	d	f

Section IV- Short note questions (25 degree)

1-Write three nursing diagnoses for patient's with angina pectoris (3)

- A- Ineffective cardiac tissue perfusion secondary to CAD as evidenced by chest pain or other prodromal symptoms
- B- Death anxiety related to cardiac symptoms
- C- Deficient knowledge about the underlying disease and methods for avoiding complications
- D- Noncompliance, ineffective management of therapeutic regimen related to failure to accept necessary lifestyle changes

2-List Three nursing considerations for patient's with thrombolytics therapy (3)

- A- Minimize the number of times the patient's skin is punctured.
- B- Avoid intramuscular injections.
- C- Draw blood for laboratory tests when starting the IV line.
- D- Start IV lines before thrombolytic therapy; designate one line to use for blood draws.
- E- Monitor for acute dysrhythmias, hypotension, and allergic reaction.
- F- Monitor for reperfusion: resolution of angina or acute ST-segment changes.
- G- Check for signs and symptoms of bleeding: decrease in hematocrit and hemoglobin values, decrease in blood pressure, increase in heart rate, oozing at invasive procedure sites, changes in level of consciousness, complaints of headache
- H- Treat major bleeding by discontinuing thrombolytic therapy and any anticoagulants; apply direct pressure and notify the physician immediately.
- I- Treat minor bleeding by applying direct pressure if accessible and appropriate; continue to monitor.

3-Enumerate absolute Contraindications for thrombolytics therapy (6)

- Active bleeding
- History of hemorrhagic stroke
- Uncontrolled hypertension
- Known bleeding disorder
- Recent major surgery or trauma
- Pregnancy

4-Enumerate general signs and symptoms for patient's with congestive heart failure (3)

A-Pale, cyanotic skin (with decreased perfusion to extremities)

B-Dependent edema (with increased venous pressure)

C- Decreased activity tolerance

5-Give short notes for nursing management for patient under mechanical ventilator (10 marks)

Assessment:

- Assess the patient
- Assess the artificial airway (tracheostomy or endotracheal tube)
- Assess the ventilator

Assess the patient at least hourly for the following:

● Vital signs. Regularly monitor the vital signs (according to policy)

● Respiratory status; Respiratory rate for a full minute & compared with the set ventilatory rate.

(To identify whether they are machine-controlled breaths or combined machine-controlled and spontaneous breaths.)

- Symmetry of chest movement during machine breath
- Breath sounds q2–4h and PRN. (lack of breaths sounds may indicate that the ETT is displaced)
- Pulse oximetry and end-tidal CO₂.
- ABGs

Intervention

- Observe changes in respiratory rate and depth; observe for SOB and use of accessory muscles.
- Observe for tube misplacement- note and post cm. Marking at lip/teeth/nares after x-ray confirmation and q. 2 h.

- Prevent accidental extubation by taping tube securely, checking q.2h.; restraining/sedating as needed.
- Assess for pain
- Elevate head of bed 60-90 degrees.
- Monitor ABG's.
- Assess LOC, listlessness, and irritability.
- Observe skin color and capillary refill.
- Observe for tube obstruction; suction prn; ensure adequate humidification.
- Reposition patient q. 1-2 h.
- Provide nutrition as ordered, e.g. TPN, lipids or enteral feedings.
- Provide good oral care q. 4 h.; suction when need indicated using sterile technique; handwashing with antimicrobial for 30 seconds before and after patient contact.
- Use disposable saline irrigation units to rinse in-line suction; ensure ventilator tubing changed q. 7 days, in-line suction changed q. 24 h.; ambu bags changes between patients and whenever become soiled.
- Assess for GI problems. Preventative measures include relieving anxiety, antacids or H2 receptor antagonist therapy, adequate sleep cycles, adequate communication system.
- Observe skin integrity for pressure ulcers; preventative measures include turning patient at least q. 2 h.; 30 degree side-lying position; use pressure relief mattress or turning bed if indicated; follow prevention of pressure ulcers plan of care; maintain nutritional needs.
- Maintain muscle strength with active/active-assistive/passive ROM and prevent contractures with use of span-aids or splints.

6-Give short note about care of patients with thyroid storm

(5 marks)

Patient Assessment

- Assess cardiovascular status; extra heart sounds.
- Assess hydration status .
- Assess for pressure ulcer development.

Diagnostic Assessment

- Review thyroid studies as available.
- Review serial serum electrolytes, serum glucose, and serum calcium levels to evaluate the patient's response to therapy.
- Review serial ABGs.
- Review serial chest radiographs for cardiac enlargement and pulmonary congestion.

Nursing Diagnosis:

- 1- Decreased cardiac output related to increased cardiac work.
- 2- Deficient fluid volume secondary to increased metabolism and diaphoresis.

Patient Management

- Administer dextrose-containing intravenous fluids as ordered to correct.
- Carefully assess the patient for heart failure or pulmonary edema.
- Dopamine may be used to support blood pressure.
- Provide supplemental oxygen as ordered to help meet increased metabolic.
- Once the patient is hemodynamically stable, provide pulmonary hygiene .
- If the patient is in heart failure, typical pharmacologic agents for treatment of heart failure may also be indicated.
- Reduce oxygen demands by decreasing anxiety, reduce fever, decrease pain.
- Anticipate aggressive treatment of precipitating factor.

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