UGANDA NURSES AND MIDWIVES EXAMINATIONS BOARD

Diploma in Nursing (Extension) - Paper Code: DNE 111
Foundations of Nursing III

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Duration: 3 Hours

SECTION A: OBJECTIVE QUESTIONS — 20 MARKS

1. The nurse should recognise that the patient's tracheostomy is blocked when there is

(a) abnormal sound from the patient's trachea.
(b) no air felt by the patient through tracheostomy tube.
(c) desaturation on the oxygen saturation monitor.
(d) inability to pass the suction catheter to the correct depth. ✓

Explanation: While desaturation and lack of airflow are clinical consequences of a blockage, the definitive mechanical indicator that a mucus plug has completely obstructed the lumen of the tracheostomy tube is the physical *inability to pass a suction catheter* down the tube.

2. When should nurses perform suction of the tracheostomy?

(a) As clinically indicated. ✓
(b) When secretions are visible only.
(c) Every 24 hours.
(d) Every 4 hours.

Explanation: Suctioning should *never* be done on a routine or fixed schedule (e.g., every 4 hours) because unnecessary suctioning causes severe mucosal trauma, hypoxia, and stimulates even more mucus production. It must only be performed PRN (when clinically indicated by rhonchi, desaturation, or visible distress).

3. While assessing a patient on traction, the nurse should intervene immediately when the

(a) patient's extremities change to blue colour and have no sensations. ✓
(b) pin punctures are dry.
(c) cords and pulleys are free and smooth.
(d) heights are freely hanging.

Explanation: Blue color (cyanosis) and lack of sensation (paresthesia/anesthesia) are late, critical signs of severe neurovascular compromise (Compartment Syndrome). This is a surgical emergency that requires immediate intervention to save the limb from irreversible ischemia and necrosis.

4. Which of the following actions should the nurse take to facilitate cast drying, in a patient who has just had a P.O.P?

(a) Cover the cast with blankets to provide extra warmth.
(b) Turn the patient every 2 hours. ✓
(c) Increase the room temperature.
(d) Apply a heating pad.

Explanation: A fresh Plaster of Paris (P.O.P) cast must dry evenly. Turning the patient every 2 hours exposes all surfaces of the cast to circulating room air, promoting even drying. Covering the cast traps moisture, and using artificial heat (heating pads) can burn the patient and dry the outside while leaving the inside dangerously wet.

5. Which of the following nursing interventions is appropriate to properly care for a patient with external fixation pins?

(a) Do not touch the pins.

(b) Loosen the screws holding the pins during cleaning.

(c) Follow hospital protocol for pin care. ✓

(d) Cleanse with hydrogen peroxide liquid.

Explanation: Pin site care varies heavily by institution and surgeon preference (some use chlorhexidine, some use sterile saline). Therefore, strictly adhering to the specific *hospital protocol* or surgeon's orders is the safest and most legally appropriate nursing action. (Hydrogen peroxide is often avoided as it can destroy healthy granulating tissue).

6. If the nurse does NOT put a patient for lumbar puncture in a side-lying position with the back close to the edge of the bed, then the nurse should make the patient to

(a) sit with the back perpendicular to the edge of the bed leaning over a bedside table.

(b) stand straight leaning over the wall.

(c) sit with the back straight supported with pillows.

(d) bend the back towards the edge of the bed. ✓

Explanation: The goal of lumbar puncture positioning is to maximize the flexion of the spine to open the intervertebral spaces (C-shape). If not in the fetal lateral decubitus position, the patient should be seated with their back arched backward (flexed/bent) toward the edge of the bed/physician.

7. After a lumbar puncture procedure is completed, the nurse should instruct the patient to

(a) flex the knees up to the chest.

(b) keep the head raised.

(c) remain on bed rest with the head of bed flat. ✓

(d) reduce oral intake of fluids.

Explanation: Post-lumbar puncture patients are kept strictly flat (supine or prone) on bed rest for several hours to prevent the leakage of cerebrospinal fluid (CSF) from the dural puncture site, which causes severe, debilitating spinal headaches.

8. Which of the following nursing diagnoses is appropriate for a patient who has undergone colostomy?

(a) Hyperthermia related to infected wound.

(b) Ineffective breathing pattern related to congestion in the stomach.

(c) Imbalanced nutrition less than body requirements.

(d) Disturbed body image related to new ostomy. ✓

Explanation: A permanent or temporary stoma radically alters the patient's physical appearance and normal bodily functions. *Disturbed body image* is a highly predictable, standard psychosocial nursing diagnosis for any patient dealing with the psychological trauma of an ostomy bag.

9. Which of the following should NOT be included in the nurse's teaching for a patient with eye inflammation?

(a) Good eye hygiene.

(b) How to prevent spread of infection.

(c) How to wear contact lenses. ✓

(d) Administration of ointments or drops.

Explanation: Patients with acute eye inflammation (like conjunctivitis or keratitis) must strictly avoid wearing contact lenses, as they trap bacteria/viruses against the cornea and exacerbate severe corneal ulcers. Therefore, teaching them *how* to wear them is inappropriate during an infection.

10. After applying ointment or drops in the patient's eye, the nurse asks the patient to close the eye and places a disposable gauze over the eye socket in a procedure referred to as eye

(a) dressing.

(b) patching. ✓

(c) covering.

(d) protection.

Explanation: The specific clinical term for securing a gauze pad over a closed eye (to rest the eye, protect it from light, or absorb drainage after medication application) is *eye patching*.

11. Insertion of a tracheostomy tube is indicated to

(a) administer drugs.

(b) soften the trachea.

(c) reduce dead air space and foreign body in airway. ✓

(d) promote hyperventilation.

Explanation: A primary physiological benefit of a tracheostomy is that it bypasses the upper airway (mouth, pharynx, larynx), thereby significantly reducing the anatomical "dead space" by up to 50%. This makes ventilation much easier for patients with weak respiratory efforts. It is also used to bypass upper airway obstructions.

12. During abdominal paracentesis, the nurse should

(a) hold the drainage tube and inflate it.

(b) place the patient in a sitting up position. ✓

(c) keep the patient on Nil by mouth.

(d) support the abdomen with gauze.

Explanation: Placing the patient in a High Fowler's or sitting upright position allows gravity to pool the ascitic fluid in the dependent, lower part of the abdominal cavity. This makes it significantly easier and safer for the physician to puncture the cavity and drain the fluid without striking vital organs.

13. Which of the following instructions should nurses give to a patient prior to an abdominal paracentesis?

(a) strict bed rest after the procedure.

(b) empty the bowel before the procedure.

(c) empty the bladder before the procedure. ✓

(d) maintain nil by mouth.

Explanation: It is an absolute critical safety prerequisite that the patient voids (empties their bladder) immediately prior to paracentesis. A full, distended bladder rises into the abdominal cavity and is at a severe risk of being accidentally punctured by the trocar during insertion.

14. Which of the following solutions should the nurse use to clean the tracheostomy tube?

(a) Normal saline. ✓

(b) Hibicet.

(c) Alcohol.

(d) Sodium Bicarbonate.

Explanation: Sterile normal saline (often mixed with half-strength hydrogen peroxide depending on protocol, but saline is the base) is the standard, safe, non-irritating solution used to clean the inner cannula and the stoma site of a tracheostomy. Alcohol and strong antiseptics are extremely irritating to the tracheal mucosa.

15. A feeding tube is recommended when a patient is

(a) having difficulty with eating food.

(b) having sores in the mouth.

(c) loosing weight.

(d) not meeting nutritional needs orally. ✓

Explanation: While dysphagia or oral sores are causes, the ultimate overarching clinical indication for initiating enteral tube feeding (NG tube or PEG) is when the patient is physically *unable to meet their basal metabolic nutritional and hydration needs* through oral intake alone.

16. The hydration status of a patient on a feeding tube is monitored by

(a) input and output. ✓

(b) daily weight.

(c) electrolyte balance.

(d) amount of urine passed.

Explanation: Strict monitoring of fluid Input (enteral feeds + water flushes + IV fluids) and Output (urine, stool, vomit, aspirate) provides the most direct, continuous, and accurate assessment of whether the tube-fed patient is becoming dehydrated or fluid overloaded.

17. Which of the following should the nurse observe on a patient who is on Gallow's traction?

(a) Cords and pulleys that are free and smoothly running.

(b) Bandages that are secure, unwrinkled and exerting even pressure. ✓

(c) Secure and freely hanging weight.

(d) Stirrup not pressing on the patient's skin.

Explanation: Gallows traction is used for infants with femur fractures. The legs are suspended vertically by skin traction. Because the skin traction involves bandaging the fragile legs, it is critical to ensure the bandages are perfectly unwrinkled and apply even pressure to prevent severe neurovascular damage or skin necrosis in the suspended limbs.

18. For which of the following reasons should a wound be dressed?

(a) Keep the wound sterile.

(b) Keep the wound intact.

(c) Absorption of excess fluid and infection control. ✓

(d) Immobilise the wound.

Explanation: The primary physiological purposes of applying a surgical dressing are to absorb excess inflammatory exudate (drainage) from the wound bed and to act as a physical barrier to prevent external microbes from causing secondary infections.

19. When bandaging a limb, the nurse stands

(a) behind the patient.

(b) infront of the patient. ✓

(c) infront of the part to be bandaged.

(d) opposite the part to be bandaged.

Explanation: A cardinal rule of bandaging is that the nurse should face the patient (stand in front of them). This allows the nurse to continuously monitor the patient's facial expressions for signs of severe pain or discomfort while the bandage is being applied.

20. A pull applied to the skin and transmitted through the soft tissues to the bone is Called ..... tracton.

(a) Spinal.

(b) Skeletal.

(c) Gallow's.

(d) Skin. ✓

Explanation: As the definition implies, *Skin traction* utilizes adhesive or non-adhesive tapes wrapped around the skin. The pulling force (traction) is transmitted indirectly through the skin, fascia, and muscles down to the bone. Skeletal traction applies force directly to the bone via pins.

SECTION A: FILL IN THE BLANK SPACES — 10 MARKS

21. Feeding the patient by means of an opening directly into the stomach through the abdominal wall is termed a...

GASTROSTOMY

22. Leakage of Cerebral Spinal fluid through the dural defect following needle withdrawal is a complication of...

LUMBAR PUNCTURE (CAUSING SPINAL HEADACHE)

23. Burns of the neck, bulbar paralysis, severe asthmatic attack and reduction of the dead air space within the lungs are indications fora procedure known as

TRACHEOSTOMY

24. The nurse should prepare a drainage bottle, local anaesthesia, iodine solution, tape measure, dressing tray, trocher and cannula rubber tubing and clip as requirements for performing...

THORACOCENTESIS (OR CLOSED CHEST TUBE DRAINAGE)

25. A pull exerted on the part of the limb against a pull of compared strength in the opposite direction is...

COUNTER-TRACTION

26. While carrying out traction, the nurse applies strapping smoothly to avoid wrinkles because they can cause...

PRESSURE SORES (SKIN EXCORIATION/BLISTERS)

27. The type of bandage used to support an injured shoulder is...

TRIANGULAR BANDAGE (ARM SLING) / SPICA

28. Materials used for wound drainage include rubber or plastic drainage tubes and...

PENROSE DRAINS (OR CORRUGATED RUBBER DRAINS)

29. In which position should a nurse put a patient on underwater seal drainage?

SEMI-FOWLER'S (OR HIGH FOWLER'S) POSITION

30. Removal of potentially harmful substances from the stomach is known as...

GASTRIC LAVAGE (STOMACH WASHOUT)

SECTION B: SHORT ESSAY QUESTIONS — 10 MARKS

Question 31: Gastrostomy Feeding Tray (5 Marks)

State five (5) specific requirements a nurse should include on a gastrostomy feeding tray:

- **Prescribed Enteral Feed:** The correct, commercially prepared liquid nutrition formula at room temperature.
- **Large Irrigation Syringe:** A 50ml or 60ml catheter-tip or Toomey syringe used for administering the feed and flushing the tube.
- **Sterile/Clean Water:** A receptacle containing water specifically used to flush the gastrostomy tube before and after feeding to prevent blockages.
- **Clean Gloves and Gauze/Wipes:** To maintain standard hygiene while handling the tube and to wipe any spills around the stoma site.
- **pH Indicator Paper / Litmus Paper:** To test any aspirated stomach contents to verify the tube is securely positioned in the stomach before initiating the feed.

Question 32: Colostomy Care Nursing Interventions (5 Marks)

Outline five (5) nursing interventions a nurse should implement while carrying out colostomy care:

- **Assess the Stoma Viability:** Continuously monitor the stoma color; it must be a healthy beefy red or pink. Report any dark red, purple, or black discoloration immediately as it indicates ischemia.
- **Protect Peristomal Skin:** Clean the skin around the stoma gently with warm water (avoiding harsh soaps), dry thoroughly by patting, and apply a skin barrier paste or powder to prevent excoriation from acidic feces.
- **Empty the Pouch Properly:** Empty the colostomy appliance when it is one-third to one-half full to prevent the weight of the bag from pulling it off the skin and causing leaks.
- **Size the Appliance Correctly:** Use a stoma measuring guide to cut the wafer exactly 1/8 to 1/16 inch larger than the stoma itself; this prevents stricture if it's too tight, and prevents skin breakdown if it's too loose.
- **Provide Psychological Support:** Provide a private, odor-free environment during care, actively involve the patient in the process to build independence, and encourage them to express feelings regarding their altered body image.

SECTION C: LONG ESSAY QUESTIONS 60 MARKS

Question 33: Tracheostomy & Abdominal Paracentesis Care (20 Marks)

(a) Outline ten (10) important points a nurse should remember while caring for a patient with tracheostomy (10 marks):

- Keep a spare tracheostomy tube (same size) at the bedside for emergencies.
- Always maintain a patent airway by suctioning *only* when clinically indicated.
- Ensure inspired oxygen is appropriately humidified to prevent mucus crusting.
- Hyperoxygenate the patient strictly before and after each suctioning pass.
- Never apply negative pressure (suction) while inserting the catheter.
- Limit each suctioning attempt to a maximum of 10-15 seconds to prevent severe hypoxia.
- Clean the inner cannula routinely using normal saline to prevent blockages.
- Provide alternative communication methods (whiteboards/pen) as the patient cannot speak.
- Perform rigorous oral hygiene every 2-4 hours to prevent ventilator-associated pneumonia.
- Monitor the stoma site daily for signs of bleeding, purulent drainage, or subcutaneous emphysema.

(b) Describe ten (10) nursing responsibilities to a patient undergoing abdominal paracentesis (10 marks):

- **Obtain Informed Consent:** Ensure the physician has fully explained the risks and the patient has signed the consent form before proceeding.
- **Empty the Bladder:** Strictly instruct or assist the patient to void immediately before the procedure to prevent catastrophic trocar puncture of a distended bladder.
- **Record Baseline Vitals:** Take a complete set of vital signs and measure the patient's abdominal girth and weight to establish a baseline for post-procedure comparison.
- **Optimal Positioning:** Position the patient sitting upright (High Fowler's) on the edge of the bed or in a chair, supporting their back and feet, to allow ascites fluid to pool in the lower abdomen.
- **Provide Psychological Support:** Stay with the patient throughout, explaining what is happening to reduce severe anxiety and ensure they remain perfectly still during trocar insertion.
- **Monitor During Drainage:** Observe the patient constantly for signs of vascular collapse, pallor, or hypovolemic shock if large volumes of fluid are drained rapidly.
- **Assist the Physician:** Maintain the sterile field, hand over sterile syringes, local anesthetics, and precisely handle the specimen collection tubes for laboratory analysis.
- **Apply Sterile Dressing:** Once the trocar is removed, apply firm pressure to the puncture site and secure a sterile, absorbent dressing to prevent fluid leakage and infection.
- **Post-Procedure Vitals:** Re-assess vital signs every 15 minutes for the first hour, checking for severe hypotension or tachycardia indicating internal bleeding.
- **Document:** Accurately record the total volume, color, and consistency of the drained fluid, the patient's tolerance of the procedure, and post-procedure abdominal girth.

Question 34: General Principles of Bandaging & Gastric Lavage (20 Marks)

(a) Outline the ten (10) general principles for bandaging (10 marks):

1. Use a tightly rolled bandage of suitable width and maintain one.
2. Face the patient when bandaging an arm or leg except when bandaging the head.
3. Hold the head of the bandage uppermost.
4. Hold the bandage in the right hand when bandaging the left limb and vice versa.
5. Bandage the limb from inside outwards and from below upwards, keeping the pressure even throughout.
6. Begin the bandage with a secure turn and allow each turn to cover 2/3 of the preceding one.
7. Ensure that the bandage is neither too tight nor too loose.
8. Finish off the bandage with a straight turn, fold in the end and secure avoiding joints and the site of injury.
9. Fasten with safety pins or with the fasteners provided with some bandages.
10. A tape is always used in mentally handicapped or pediatric patients instead of pins or other sharp appliances.

(b) Explain the procedure for carrying out gastric lavage (10 marks):

Requirements (Trolley Setup):

Top Shelf	Bottom Shelf	At the Bed Side
– Rubber tubing, stomach tube, funnel	– Mackintosh cape and towel	– Suction machine if the patient is unconscious
– Connection and clip	– Receiver	– Hand washing facilities
– 2 Gallipots	– Jar for stomach contents	– Screens
– Bowl of swabs	– Lubricant	
– Vomitus bowl	– Adhesive strapping	
– 20 ml syringe	– Bucket for collecting stomach contents	
– Litmus paper	– 3 receivers	
– Jar of water		

Procedure for Gastric Lavage:

Steps	Action	Rationale
1.	Follow the general rules. • Collect the equipment needed and prepare the trolley • Explain the procedure to the patient. • Screen the bed and close the adjacent windows • Bring the trolley to the bedside	To enable cooperativeness. To ensure privacy. To prevent unnecessary movement.
2.	Place a bucket on the floor at the bedside.	To collect wastes.
3.	Request the patient to sit up if conscious. If unconscious, put the patient in a prone position and place a mackintosh cape and towel around the patient's neck and bed clothes.	To protect the bed and patient.
4.	Connect up the funnel to the tubing using a connector but keep the stomach tube separate until it has been passed.	To prevent aspiration of the fluid by the patient.
5.	Lubricate the tube and pass it over the tongue into the pharynx and esophagus.	To ease passage of the tube.

6.	Keep on asking and encouraging the patient to swallow.	To gain patient's cooperation.
7.	Connect the syringe on the tube and withdraw some stomach content.	To ensure that the tube is in the stomach.
8.	Test the stomach content with a litmus paper to confirm that you are in the stomach.	Acidic stomach content will turn blue litmus paper red.
9.	Clip the stomach tube with an artery forceps and place it in the receiver.	To prevent backflow of stomach contents.
10.	Apply a clip to the funnel and tubing then attach it to the stomach tube.	To prevent the flow of fluids before starting the procedure.
11.	Open the clip and allow approximately 300 mls of fluid to run into the lower funnel until level begins to rise; invert the funnel into the bucket to siphon out the stomach contents. Repeat the procedure until the fluid which is returning is clear. Note the nature of the stomach contents.	To empty the stomach of unwanted or harmful contents.
12.	Clip the stomach tube, withdraw it from the stomach evenly and quickly, disconnect the tube from the funnel and tubing and place it in the receiver.	To prevent trauma to the patient.
13.	Give the patient a mouthwash, thank him and clear away the requirements.	To encourage patient's comfort.
14.	Wash your hands and document the findings. (a). Type and amount of lavage solution used. (b). Appearance, odor, color, and amount of gastric return. (c). Patient's tolerance to procedure. (d). Disposition of specimens. Clear away all the requirements.	For continuity of care and legal records.

Question 35: Skeletal Traction & Bladder Irrigation (20 Marks)

(a) Outline five (5) specific nursing observations that should be made for a patient on skeletal traction (5 marks):

- **Pin Site Assessment:** Observe the insertion sites where the metal pins enter the bone for extreme redness, swelling, purulent drainage, or foul odor indicating osteomyelitis.
- **Neurovascular Checks (CMS):** Continuously assess the color, motion, and sensation of the toes distal to the fracture to detect life-threatening compartment syndrome early.
- **Traction Alignment:** Ensure the ropes remain exactly within the pulley grooves and that the traction pull is in a completely straight, uninterrupted line with the fractured bone.
- **Weight Status:** Observe that the prescribed weights are hanging completely free and are not resting on the floor or the bed frame, which would negate the pulling force.
- **Skin Integrity:** Frequently inspect the skin over high-pressure bony prominences (sacrum, heels, elbows) for signs of redness or skin breakdown due to forced immobility.

(b) State five (5) nursing concerns for a patient on skeletal traction (5 marks):

- **High Risk for Severe Infection:** The metal pins penetrating the skin directly to the bone create a direct pathway for bacteria, risking fatal osteomyelitis.
- **Deep Vein Thrombosis (DVT) / Embolism:** Severe, prolonged immobility leads to blood pooling in the legs, massively increasing the risk of fatal pulmonary embolisms.
- **Impaired Skin Integrity:** Inability to turn freely places the patient at immense risk for developing deep, necrotic decubitus (pressure) ulcers.
- **Respiratory Complications:** Immobility prevents full lung expansion, leading to atelectasis or hypostatic pneumonia due to retained respiratory secretions.
- **Psychosocial Distress:** The prolonged confinement to a hospital bed, combined with severe pain and loss of independence, frequently causes acute anxiety and depression.

(c) Describe the procedure for bladder irrigation (10 marks):

(c) Describe the procedure for bladder irrigation (10 marks):

Requirements:
Requirements for bladder irrigation are the same as for catheterization.

In addition: Trolley

Top Shelf	Bottom Shelf	Bed Side
• Sterile jar • Sterile "Y" shaped irrigation set • Prescribed warm solution (sodium chloride 0.9% at room temperature) • Non-toothed dissecting forceps	• Large drainage Bag • Lotion thermometer	• Hand washing equipment

Procedure:

Steps	Action	Rationale
1.	Follow the general rules.	
2.	Open the irrigation fluid bag and hang it on the infusion stand.	To save time.
3.	Attach the irrigation set. Expel the air and close the flow control clamp of the irrigation set.	To allow free drainage.
4.	Clamp the catheter using a non-toothed artery forceps.	To prevent urine from dripping in the bed.

5.	Place the sterile towel underneath the irrigation catheter.	To prevent contamination of the catheter.
6.	Remove and discard the spigot from the irrigation catheter.	To allow free drainage of fluid.
7.	Clean around the irrigation catheter thoroughly with an antiseptic lotion.	To promote infection prevention and control.
8.	Attach the irrigation set to the 3 way irrigation catheter but do not open the flow-control clamp yet.	The 3 way catheter allows drainage of the fluid in and out.
9.	Release the clamp on the catheter and allow the accumulated urine to drain out. Empty the contents of the drainage bag into the sterile jar.	To prevent contamination of control clamp.
10.	Remove and discard the gloves.	To prevent the spread of infection.
11.	Open the flow control clamp and irrigation set at the prescribed rate and close the clamp to the drainage bag temporarily.	To allow proper irrigation of bladder and prevent complications that may arise from a rapid flow of fluids.
12.	Assist the patient to lie in a comfortable position when the procedure is over.	To promote rest and sleep.
13.	Advise the patient to report any bladder distension, pain, discomfort or any complication that may occur.	To offer timely intervention.
14.	Record the time of commencement of the procedure and the volume of fluids used for irrigation on the fluid balance chart.	To judge the success of procedure.
15.	Check the volume in the drainage bag at least hourly for the first 24 hours. Empty the bag as required and record on the fluid balance chart.	To ensure proper drainage of the fluids and follow up of the patient.

Point to remember:

• Frequency, duration and solutions to use depend on the indication for the bladder irrigation.

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LEGALS

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