

ROYAL CIVIL SERVICE COMMISSION
BHUTAN CIVIL SERVICE EXAMINATION (BCSE) 2023
EXAMINATION CATEGORY: TECHNICAL

PAPER III: SUBJECT SPECIALISATION PAPER FOR NURSING

Date	: October 7, 2023
Total Marks	: 100
Writing Time	: 150 minutes (2.5 hours)
Reading Time	: 15 Minutes (prior to writing time)

GENERAL INSTRUCTIONS:

1. Write your Registration Number clearly and correctly on the Answer Booklet.
2. The first 15 minutes is being provided to check the number of pages of Question Paper, printing errors, clarify doubts and to read the instructions. You are NOT permitted to write during this time.
3. This paper consists of **TWO SECTIONS**, namely SECTION A & SECTION B:
 - **SECTION A** has two parts: Part I - 30 Multiple Choice Questions
Part II - 4 Short Answer Questions
All questions under SECTION A are **COMPULSORY**.
 - **SECTION B** consists of two Case Studies. Choose only **ONE** case study and answer the questions of your choice.
4. All answers should be written on the Answer Booklet provided to you. Candidates are not allowed to write anything on the question paper. If required, ask for additional Answer Booklet.
5. All answers should be written with correct numbering of Section, Part and Question Number in the Answer Booklet provided to you. Note that any answer written without indicating the Section, Part and Question Number will NOT be evaluated and no marks will be awarded.
6. Begin each Section and Part in a fresh page of the Answer Booklet.
7. You are not permitted to tear off any sheet(s) of the Answer Booklet as well as the Question Paper.
8. Use of any other paper including paper for rough work is not permitted.
9. **You must hand over the Answer Booklet to the Invigilator before leaving the examination hall.**
10. This paper has **9 printed pages**, including this instruction page.

GOOD LUCK

SECTION A

PART I: Multiple Choice Questions [30 marks]

Choose the correct answer and write down the letter of your chosen answer in the Answer Booklet against the question number e.g. 31 (d). Each question carries ONE mark. Any double writing, smudgy answers or writing more than one choice shall not be evaluated.

1. Mr. Leki has been prescribed 1 litre of Normal Saline Solution. The rate has been set to 150ml/hr. How long will the infusion take?
 - a) 5 hours 20 minutes
 - b) 4 hours 40 minutes
 - c) 6 hours 10 minutes
 - d) 6 hours 36 minutes
2. Mrs. Lhamo has been admitted in the hospital due to edema of her thighs. One of her medications was Furosemide 40 mg tablets to be administered once daily. What should be done prior to administering Furosemide?
 - a) Check patient's blood pressure and withhold Furosemide if it is low.
 - b) Check patients 'pupils and withhold Furosemide if it is contracted.
 - c) Swab patients wound and sent the sample to laboratory.
 - d) Assess each of the patient's thigh by measuring it's girth.
3. Mr. Dorji, a COPD patient is to be discharged from the hospital. As a nurse, which of the following interventions will you encourage him to prevent the progression of disease?
 - a) Cessation of smoking
 - b) Coughing exercise
 - c) Oxygen therapy
 - d) Breathing exercises
4. Mr. Yonten, the son of Dema went to the station to see the nurse as she was complaining of severe pain in her pressure ulcer. What will be your initial action?
 - a) Check analgesia on the chart
 - b) Go immediately to see the patient
 - c) Inform him that you will come as soon as you can
 - d) Find the nurse in charge
5. Dema has also been prescribed some medications for her gout. Which of the following health teaching will you advise her to do?
 - a) Have enough sunshine
 - b) Avoid Paracetamol
 - c) Increase fluid intake 2-3 litres per day
 - d) Avoid dairy products
6. The nurse assists a patient with advance emphysema to the bathroom. The patient becomes extremely short of breath while returning to bed. The nurse should
 - a) increase his nasal oxygen to 6L/min.
 - b) place him in lateral Sim's position.
 - c) encourage pursed-lip breathing.
 - d) have him breathe into a paper bag.

7. When administering Phenytoin to a child, the nurse should be aware that a toxic effect of phenytoin therapy is
 - a) Stephen Johnson Syndrome
 - b) Folate deficiency
 - c) Leukopenia aplastic anemia
 - d) Granulocytosis and nephrosis

8. A 54-year-old patient is admitted in the hospital with a possible gastric ulcer. He is a heavy smoker. When discussing his smoking habits with him, the nurse should advise him to
 - a) smoke only once a day.
 - b) smoke only after meals.
 - c) chew gum instead.
 - d) smoke only during the day.

9. A patient who is diagnosed with COPD and was sent home with an oxygen prescription at 2 litres per minute. Upon the visit of the nurse, she has observed that patient is dyspneic, anxious and panicking. What would the nurse's most immediate nursing action to relieve dyspnea?
 - a) Calmly instruct the patient to do deep breathing
 - b) Increase oxygen rate
 - c) Call emergency department for the ambulance
 - d) Tell the patient to calm down in a loud voice.

10. A wheeze is commonly heard on auscultation in which of the following conditions?
 - a) Acute Asthma
 - b) Pulmonary edema
 - c) Pneumothorax
 - d) Pleural effusion'

11. A patient is prescribed Levothyroxine medication. Which of the following teaching should the nurse provide?
 - a) Take medication one hour before meal
 - b) Take medication with food
 - c) Take medication after meal
 - d) Can take medication either before or after meal

12. A confused patient's relative is requesting the nurse for fitting bed rail similar to what they have it in their house. What will the nurse do?
 - a) Ensure a bed rail is fixed
 - b) Let a competent person assess the risk and consider other factors before fixing a bed rail
 - c) Ignore the relative
 - d) Put patient's bed on the floor

13. Misoprostol can be used through
 - a) Sublingual
 - b) Vaginal
 - c) Both (a) and (b)
 - d) None of the above

14. The overproduction of which hormone causes chloasma (melasma) in pregnancy?
- Thyroid Stimulating Hormone
 - Melanocyte Stimulating Hormone
 - Gonadotrophin Stimulating Hormone
 - Corticotrophin Hormone
15. An older adult patient diagnosed with sepsis becomes angry at the nurse and refuses oral care during the evening shift. The nurse reports this incident to the senior nurse. Which response by the senior nurse is appropriate?
- We will talk to the patient about the issue together.
 - We do not have to provide oral care as the morning shift nurses have already provided oral care.
 - Please approach the patient for oral care later.
 - Do you want to go and approach the patient later or do you want me to approach the patient for oral care?
16. Compression-ventilation ratio during CPR on adult victim is
- 15:2
 - 30:2
 - 30:1
 - 15:1
17. Absence of bowel sounds and abdominal distention after abdominal surgery indicates
- Hemorrhage
 - Intussusception
 - Paralytic ileus
 - Flatulence
18. Unwanted but unavoidable pharmacodynamics effects of a drug at the therapeutic dose is
- Hypersensitivity
 - Toxic effects
 - Idiosyncrasy
 - Side effects
19. Cauliflower-like warts on the external genitals are signs of
- Human papilloma virus
 - Syphilis
 - Gonorrhea
 - Genital herpes
20. Which of the following antitubercular drugs causes red-orange discoloration of urine?
- Isoniazid
 - Rifampicin
 - Streptomycin
 - Ethambutol
21. Cushings triad is a sign indicative of
- Glucocorticoid over activity
 - Severe burns
 - Stress and trauma
 - Increased ICP

22. Which finding would make the nurse suspect endometritis in a postpartum client?
- Lochia rubra on postpartum day 2
 - Fever over 38°C, beginning postpartum day 3
 - Raised WBC count
 - Breast engorgement
23. Which complication is most likely to be associated with twin pregnancy?
- Maternal anemia
 - Post-term labor
 - Hemorrhoids
 - Gestational diabetes
24. Which of the following is a hallmark sign characteristic of pemphigus?
- Homan's sign
 - Chvostek's sign
 - Tousseau's sign
 - Nikolsky's sign
25. A client's nasogastric tube stops draining. Which appropriate action should the nurse take?
- Clamp the tube
 - Pull the tube out approximately 2 inches
 - Irrigate the tube
 - Replace the tube
26. While assisting the physician with the removal of a chest tube, the nurse instructs the client to
- breathe out forcefully.
 - breathe in deeply.
 - exhale and bear down.
 - breathe normally.
27. Which of the following is isotonic solution?
- 0.45% normal saline
 - 5% dextrose in water
 - 10% dextrose in water
 - 5% dextrose in 0.9% normal saline
28. The effectiveness of tracheostomy suctioning is determined by
- Respiratory rate
 - SPO₂ level
 - Breath sounds
 - Capillary refill
29. Which of the following neurological signs is the sensitive indicator of neurological status in an acute head injury?
- Level of consciousness
 - Vital signs
 - Sensory function
 - Motor function

30. A nurse is caring for a client with carbon monoxide poisoning from a suicide attempt. The nurse ensures which most-needed service is put in place for the client?
- Pulmonary rehabilitation
 - Occupational therapy
 - Psychiatric consult
 - Neurological consult

PART II – Short Answer Questions [20 marks]

This part has 4 Short Answer Questions. Answer ALL the questions. Each question carries 5 marks. Mark for each sub-question is indicated in the brackets.

- Write short answers for the following questions on Healthcare Associated Infections (HCAIs)
 - Define Healthcare Associated Infections (HCAIs) and list down two of the HCAIs? (2 marks)
 - List down the risks factors for acquiring HCAIs? (3 marks)
- Answer questions on Visual Acuity
 - Define visual acuity and name the tool used for assessing Visual Acuity? (3 marks)
 - What does a Visual Acuity of 6/60 mean? (2 marks)
- Answer the following questions on Nursing Process.
 - List the five phases of nursing process? (1 mark)
 - Differentiate between objective and subjective data with examples. (2 marks)
 - Describe the methods of data collection in nursing assessment. (2 marks)
- Write short answers for the questions on medications.
 - Define the following terms? (3 marks)
 - Pharmacodynamics
 - Drug half-life
 - Biotransformation
 - Identify the sites of intradermal and intramuscular injections? (2 marks)

SECTION B: CASE STUDY [50 marks]

Choose either CASE I OR CASE II from this section. Each case study carries 50 marks. Mark for each sub-question is indicated in the brackets.

CASE I

Mr. Pempa is a 71-year-old male with a history of type 2 diabetes for the past 15 years. He has a sedentary lifestyle and a BMI of 32. Mr. Pempa has a history of poor glycemic control with frequent episodes of hyperglycemia and occasional non-adherence to his diabetic medications due to forgetfulness. He presents to the clinic with a complaint of a non-healing ulcer on his left foot for the past 2 weeks. Upon assessment, Mr. Pempa's vital signs are:

BP: 136/84 mmHg,

HR: 74 beats per minute (BPM),

RR: 22 breaths per minute, and

Temperature: 98.2°F.

He appears anxious and in mild distress due to the pain from the foot ulcer. His left foot is swollen, erythematous, and warm to the touch, with a deep, irregularly-shaped ulcer measuring approximately 2.5 cm x 4 cm on the plantar surface.

There is purulent drainage with a foul odor, and the surrounding skin is macerated. Mr. Pempa has diminished sensation in his left foot and a weak dorsalis pedis pulse. His laboratory results show an elevated fasting blood glucose level of 220 mg/dL and a hemoglobin A1C level of 8.5%.

1. What are the risk factors for the development of diabetic foot ulcer in Mr. Pempa? What are the signs and symptoms of the diabetic foot ulcer in Mr. Pempa? **(10 marks)**
2. What other assessments should the nurse prioritize for Mr. Pempa's diabetic foot ulcer management? Describe how they will be assessed. **(10 marks)**
3. List five nursing diagnoses for Mr. Pempa's diabetic foot ulcer management. **(5 marks)**
4. What nursing interventions would be appropriate for Mr. Pempa's diabetic foot ulcer management? **(5 marks)**
5. What patient education should the nurse provide to Mr. Pempa regarding diabetic foot ulcer management? **(10 marks)**
6. What interdisciplinary team members may be involved in Mr. Pempa's diabetic foot ulcer management? Describe their role in management of Mr. Pempa's diabetic foot ulcer. **(10 marks)**

CASE II

Mr. Leki, a 62-year-old male, presents to the Emergency Department (ED) on the evening of 8th August 2023 with urinary hesitancy, burning sensation and a fever at home of 101.6°F. His wife states “he just doesn’t seem like himself”. Upon further assessment, Mr. Leki is weak, his face is flushed, his skin is warm and dry. He is oriented to person and place, but stated that the year is 1990. His vitals were as follows:

BP 99/60mmHg

HR 92bpm and regular

RR 28bpm

SpO2 93% (room air)

Temp 38.9-degree Celsius

The treating doctor orders the blood tests, urine tests and prescribes 1liter of Normal Saline bolus (stat) and injection Vancomycin 1500mg (stat).

All blood and urine tests are completed and the nurse initiate the fluid bolus for the patient. She is still waiting for the Vancomycin to arrive from the pharmacy. She notices that the patient is drowsier. He is now only oriented to self and feels warmer. The nurse takes another set of vital signs to find the following:

BP: 86/50mmHg MAP 62mmHg

HR: 108bpm

RR: 36bpm

SpO2: 88% (room air)

Temp: 39.3-degree Celsius

The urine sample collected in the vial is cloudy with sediment and is sent to laboratory for investigation.

The patient’s lab results are as follows:

WBC	22,000/mcl.
Lactic Acid	3.6mmol/L
pH	7.22
pCO2	30mmHg
HCO3	16mEq/L
pO2	64mmHg

Mr. Leki responds well to the first liter of fluids, and antibiotics are initiated within an hour of arrival. The treating physician places an arterial line and central line to initiate vasopressors. They order Norepinephrine infusion to be titrated in order to keep MAP>65mmHg. The doctor and the nurse transfer the patient to ICU.

After 2 days in the ICU, following a norepinephrine infusion and a total of two liters of Normal Saline infusion, Mr. Leki’s blood pressure is stable, his MAP is 67mmHg. He is becoming alert and is now oriented to person, place and time. His blood and urine culture were positive for bacterial growth. He

has received multiple doses of Vancomycin as well as antibiotics targeted to his specific bacterial infection. He is being weaned off the vasopressors and is transferred out of the ICU.

1. What is, physiologically, going on with Mr Leki? **(10 marks)**
2. What does it mean to titrate an infusion to keep MAP>65? **(3 marks)**
3. How is MAP calculated? **(2 marks)**
4. What is a central line/central venous catheter and where is it placed? **(5 marks)**
5. List down the uses of central venous catheter? **(5 marks)**
6. What are the indications of arterial cannulation? **(5 marks)**
7. What explanation or education topics would you want to provide to the patient and his attendants/caregiver prior to discharge? **(5 marks)**
8. List down four nursing diagnosis for this patient? List down the goals and nursing interventions for one of the mentioned nursing diagnoses? Provide rationale against each nursing interventions. **(15 marks)**

TASHI DELEK