



**TERTIARY AND VOCATIONAL EDUCATION COMMISSION
COMMON WRITTEN EXAMINATION**

Nurse

NVQ Level 6 Examination

Microbiology & Pharmacology Part 1 - N85T002M11 & N85T002M21



- **Answer all questions** in the answers sheets given separately.

Time Allocation: 03 Hours

Total Marks: 100

Question - 01

- 1.1) Draw the structure of a bacterial cell and label the important structures of the cell. (5 Marks)
- 1.2) What is meant by bacterial generation time? (3 Marks)
- 1.3) List two factors which affect bacterial growth. (3 Marks)
- 1.4) Explain the differences between Gram-negative and Gram-positive bacteria. (6 Marks)
- 1.5) Draw the various shapes of bacteria, label them, and give one example of bacteria to each form. (8 Marks)

Question - 02

“Our immune system protects us from various disease-causing organisms by acting against them in many ways”.

- 2.1) What are the two major types of immune responses that our bodies have? (3 Marks)
- 2.2) List 5 different nonspecific responses our body can produce against a pathogen. (5 Marks)
- 2.3) Briefly mention “what is an antigen?” (3 Marks)
- 2.4) What are the main antibodies produced by the human immune system? (4 Marks)
- 2.5) Some vaccines are used in several steps (as boosters) to ensure the best immune response. Explain the scientific reason behind this. (5 Marks)
- 2.6) Name the three main ways an antibody can act on a pathogen to neutralize it. (5 Marks)

Question - 03

Pharmacology is defined as the study of medicine. Nurses are responsible for administration of medicine to the patients.

- 3.1) Indicate five methods/ routes of drug administration. (5 Marks)
- 3.2) Indicate the meanings of the following abbreviations used in pharmacology. (6 Marks)
- a) MANE –
 - b) NOCTE -
 - c) STAT -
 - d) AQUA -
 - e) IM -
 - f) SOS -
 - g) AC -
 - h) BD -
 - i) PRN -
 - j) IV -
 - k) Omit -
 - l) SC -
- 3.3) Outline five forms of drugs. (5 Marks)
- 3.4) Describe four (4) effects of drugs after administration in brief (4 Marks)
- 3.5) State essential details those must be included on a prescription of medicine (5 Marks)

Question – 04

- 4.1) Doctor prescribe **Erythromycin 250 mg of per oral 6/h** for a pediatric patient. Pharmacy delivered **0.5 g/ ml** solution. How many milliliters you have to give that patient for one dose? (5 Marks)
- 4.2) The doctor ordered **Lactulose 5 grams** by mouth twice a day for a patient. The pharmacy dispenses you with **40 grams/30 ml**. How many milliliters will you administer per dose? (5 Marks)
- 4.3) The doctor prescribes for a patient, **Noxafil oral suspension 25,000 mcg** by mouth daily. The pharmacy dispenses you with **100 mg/ml**. How many milliliters will you administer per dose? (5 Marks)
- 4.4) The doctor prescribes **Ibuprofen 6mg/kg** by mouth every 4 hours as needed for pain for a child. The child weighs 64 lbs. Pharmacy dispenses you with **50 mg/2 ml**. How many milliliters will you administer per dose? (5 Marks)
- 4.5) The doctor prescribes **codeine 45 mg IM** for a patient with a vertebral compression fracture. You have on hand **codeine 60 mg/2 ml**. How many milliliters should you give? (5 Marks)

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