



**AMREF INTERNATIONAL UNIVERSITY  
SCHOOL OF MEDICAL SCIENCES  
DEPARTMENT OF NURSING & MIDWIFERY SCIENCES  
End of Semester December 2025 Examinations**

**COURSE CODE AND TITLE: DOP 112; Fundamentals of oncology and palliative care**

**DATE:**

Duration: 2 HOURS

Start: 9:00 AM

Finish: 11:00 AM

**INSTRUCTIONS**

1. This exam is out of 70 marks
2. This Examination comprises THREE Sections. Section I: Multiple Choice Questions (20 marks) Section II: Short Answer Questions (30 marks) and Section III: Long Answer Questions (20 marks)
3. Answer ALL Questions.
4. Do Not write anything on the question paper -use the back of your booklet for rough work if need be.

**SECTION I: MULTIPLE CHOICE QUESTIONS**

**(20 MARKS)**

1. The term “neoplasia” refers specifically to:
  - A. Controlled proliferation in response to injury
  - B. Autonomous and abnormal growth of cells
  - C. Reactive cellular hyperplasia
  - D. Regenerative growth after trauma
2. Tumor suppressor genes differ from oncogenes because they:
  - A. Promote cell cycle progression
  - B. Require mutation of both alleles for loss of function
  - C. Are usually overexpressed in malignancy
  - D. Are activated by point mutations
3. A mutation that inactivates p53 results primarily in:
  - A. Accelerated DNA repair
  - B. Resistance to apoptosis and genomic instability
  - C. Inhibition of angiogenesis
  - D. Enhanced immune surveillance
4. The most definitive diagnostic test for confirming malignancy is:
  - A. Imaging with CT scan
  - B. Fine-needle aspiration cytology (FNAC)
  - C. Histopathological examination of tissue biopsy
  - D. Tumor marker assay
5. Carcinoembryonic antigen (CEA) is most commonly elevated in:
  - A. Breast carcinoma
  - B. Colorectal carcinoma
  - C. Ovarian carcinoma
  - D. Prostate carcinoma
6. The sensitivity of a diagnostic test refers to its ability to:
  - A. Detect disease when it is truly absent
  - B. Correctly identify those who have the disease
  - C. Produce consistent results over time
  - D. Distinguish one disease from another
7. A PET scan is most useful in oncology for:
  - A. Evaluating tumor metabolism and detecting occult metastases
  - B. Measuring tumor density
  - C. Assessing bone mineral content
  - D. Determining genetic mutations
8. According to the World Health Organization (WHO), palliative care should begin:
  - A. Only when curative treatment fails
  - B. At the time of diagnosis of a life-threatening illness
  - C. During the terminal stage only
  - D. After hospice admission
9. Cancer of B lymphocytes is called:
  - A. Sarcoma
  - B. Melanoma

- C. Carcinoma
  - D. Myeloma
10. Diethylstilboestrol (DEB) is a carcinogen. Which organ does it affect
- A. Kidney
  - B. Vagina
  - C. Lungs
  - D. Heart
11. Which of the following is true of carcinoma in situ
- A. The tumour cells have not invaded neighbouring tissue.
  - B. The tumour has metastasized.
  - C. The tumour cells not invaded other systems in the body
  - D. The tumour cells only have one mutated gene
12. A significant characteristic of the cancer cell is:
- A. Density dependent inhibition
  - B. Contact inhibition
  - C. Loss of anchorage dependence
  - D. Apoptosis
13. The following directly inhibits cell growth or promotes cell death.
- A. Gatekeeper genes
  - B. Caretaker genes
  - C. Checkpoints
  - D. Transcription factors
14. The highest cause of cancer death globally is:
- A. Lung cancer
  - B. Stomach cancer
  - C. Breast cancer
  - D. Liver cancer
15. The most effective immune cells in response to a tumour
- A. Antibodies
  - B. Cytotoxic T cells
  - C. Macrophages
  - D. Natural killer cells
16. Immunohistochemistry (IHC) aids in cancer diagnosis by:
- A. Staining for specific antigens to identify tissue of origin
  - B. Assessing mitotic index directly
  - C. Measuring circulating tumor DNA
  - D. Detecting lymph node involvement radiologically
17. Migration of cancer cells from the site of origin to other sites is called
- A. Diapedesis
  - B. Metastasis
  - C. Proliferation
  - D. Mutation

18. The most common solid tumours – breast, colon etc. arise in
- A. epithelial cells
  - B. mesothelial cells
  - C. nerve cells
  - D. connective tissue
19. Cytology differs from histology mainly in that cytology:
- A. Evaluates intact tissue architecture
  - B. Assesses isolated or exfoliated cells for atypia
  - C. Requires surgical excision
  - D. Cannot detect malignancy
20. In screening programs, false positives lead to:
- A. Delayed diagnosis
  - B. Unnecessary anxiety and procedures
  - C. Improved survival statistics
  - D. Reduced healthcare costs

**SECTION II: SHORT ANSWER QUESTIONS (30 MARKS)**

1. State five (5) responsibilities of an Oncology nurse (5 marks)
2. Identify 4 ethical and legal frameworks that guide Oncology practice (4 marks)
3. Outline 5 mechanisms by which malignant cells escape host immune-surveillance (5 marks)
4. Differentiate between benign and malignant tumors (6 marks)
5. Explain the TNM staging of cancers (6 marks)
6. State four (4) consequences of ineffective communication in palliative care (4 marks)

**SECTION III: LONG ANSWER QUESTION (20 MARKS)**

1. Carcinogenesis is an important process in the development of cancer.
  - a) Define the term Carcinogenesis (2 marks)
  - b) Explain 3 factors that influence carcinogenesis (6 marks)
  - c) Describe the 3 steps of carcinogenesis (12 marks)