

**MANIPAL ACADEMY OF HIGHER EDUCATION****MD (PALLIATIVE MEDICINE) DEGREE EXAMINATION – JANUARY 2025  
(REGULAR)  
PAPER I**

Tuesday, January 14, 2025

Time: 14:00 – 17:00 Hrs.

Max. Marks: 100

**✍ Answer ALL questions.**

- 1A. Briefly describe the pathways involved in pain perception.  
1B. Explain the difference between nociception and pain.  
1C. Discuss the mechanism involved in the analgesic effect of opioids. (4+2+4 = 10 marks)
- 2A. Describe the anatomical structure of the spinal cord.  
2B. Explain pathophysiology and clinical features of malignant spinal cord compression (MSCC).  
2C. Discuss the role of corticosteroids in managing the symptoms of MSCC. (3+4+3 = 10 marks)
- 3A. Describe the process of angiogenesis and its role in tumor growth.  
3B. Explain pathogenesis of a malignant fungating wound.  
3C. Discuss the different strategies used to manage malignant fungating wounds in palliative care. (3+4+3 = 10 marks)
- 4A. Describe the different classes of opioid receptors and their distribution in the central nervous system.  
4B. Explain how opioids exert their analgesic effect through interaction with these receptors.  
4C. Discuss side effects associated with opioid use and the physiological mechanisms underlying them. (3+4+3 = 10 marks)
- 5A. Describe the concept of spiritual distress and its potential manifestations in patients with advanced illness.  
5B. Discuss assessment of spiritual needs and interventions for managing spiritual distress.  
5C. Write a note on existential distress in a palliative care setting. (3+4+3 = 10 marks)
- 6A. Discuss the importance of using prognostic tools in palliative care.  
6B. Describe two commonly used prognostic tools and their limitations.  
6C. Discuss the ethical considerations involved in using prognostic tools and the importance of clear communication with patients and families. (2+4+4 = 10 marks)

- 7A. Describe the physiological changes in fluid and electrolyte balance that occur at the end of life.
- 7B. Explain the concept of artificial hydration and nutrition (AHN) and the ethical considerations involved in its use in the palliative care setting.
- 7C. Discuss strategies for maintaining comfort and addressing patient needs related to hydration and nutrition at the end of life.

(4+4+2 = 10 marks)

- 8A. Describe the mechanism of action of benzodiazepines and their effects on the CNS.
- 8B. Explain how benzodiazepines can be used for symptom management in palliative care patients.
- 8C. Discuss the potential risks associated with benzodiazepine use in a palliative care setting.

(3+4+3 = 10 marks)

- 9A. Explain the importance of continuity of care in palliative medicine.
- 9B. Describe strategies to improve continuity of care for palliative patients.

(5+5 = 10 marks)

- 10A. With a neat diagram, describe the neurological control of urinary bladder.
- 10B. Discuss clinical features of UMN, LMN bladder lesions.
- 10C. Write a note on the management of the above two types of bladder lesions.

(3+3+4 = 10 marks)





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**PAPER II**

Wednesday, January 15, 2025

Time: 14:00 – 17:00 Hrs.

Max. Marks: 100

 **Answer ALL questions.**

1. Discuss the pathophysiology of malignant pleural effusion. Add a note on Lent prognostic score. Discuss evidence-based guidelines for the management of malignant pleural effusion in a palliative care setting.  
(3+2+5 = 10 marks)
2. Discuss the pathophysiology of malignancy associated superior vena cava obstruction. Discuss the role of radiation therapy for its management.  
(5+5 = 10 marks)
3. Enumerate the acute pain syndromes associated with antineoplastic treatments. Briefly describe strategies for its prevention and management.  
(5+5 = 10 marks)
4. Discuss about cytotoxic drugs, its classification, indications for use and side effects.  
(10 marks)
5. Discuss the role of methadone in cancer pain. Enumerate the mechanism, indications, side effects and drug interactions of methadone.  
(10 marks)
6. What are the ASCO recommendations for the management of immune-related adverse events in patients receiving immune checkpoint inhibitors?  
(10 marks)
7. Discuss the palliative and supportive care needs in adolescents and young adults with advanced cancer.  
(10 marks)
8. Write a note on paraneoplastic polyneuropathy.  
(10 marks)
9. Discuss the role of meaning centred therapy in palliative care.  
(10 marks)
10. Write a note on the syndrome of inappropriate anti-diuretic hormone secretion (SIADH)  
(10 marks)



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**PAPER III**

Thursday, January 16, 2025

Time: 14:00 – 17:00 Hrs.

Max. Marks: 100

**✍ Answer ALL the questions.**

- 1A. Discuss on reporting of pain and descriptors of pain in children
- 1B. Enumerate and brief note on various age-appropriate tools used in assessment of pain in children.  
(4+6 = 10 marks)
- 2A. Define Advance Care Planning and Advanced Directives in healthcare setting.
- 2B. Discuss on assessment of medical decision making capacity and stepwise approach in Advance Care planning.  
(3+(2+5) = 10 marks)
- 3A. Draw a neat, labelled diagram of Circle of Willis and describe the Cerebral blood supply territories.
- 3B. Discuss on Medical Complications in a patient with stroke and its management using palliative care principles.  
(4+6 = 10 marks)
- 4A. Integration of Palliative care in patients with End stage kidney disease, discuss the benefits and challenges in a developing country.
- 4B. Write a brief note on assessment and management of non-pain symptoms in end stage kidney disease.  
(5+5 = 10 marks)
- 5A. Describe the classification of Interstitial Lung disease as per the American Thoracic society and European Respiratory Society.
- 5B. Discuss on symptom management in ILD.
- 5C. You need to provide a breathlessness crisis management plan to your patient, how would proceed.  
(3+4+3 = 10 marks)
- 6A. Discuss on concept and therapeutic value of Hope in patients with serious illness".
- 6B. Describe the 'A Hope Assessment framework in patients with terminal illness'
- 6C. Elaborate on Hope-enhancing strategies using 'The seven C's Framework for Hope Intervention'  
(4+3+3 = 10 marks)

7A. Briefly describe the Itch pathway

7B. Describe the Pathophysiology of Cholestatic Pruritis

7C. Management of cholestatic Pruritis.

(2+4+4 = 10 marks)

8A. Discuss on Prevalence of suicide in serious advanced illness and assessment of suicidal ideation severity.

8B. Risk factors associated with suicidal ideation in advanced illness, strategies to assess and management a patient with suicidal tendency in advanced illness setting.

(2+(4+4) = 10 marks)

9. Discuss importance of cultural competence in Palliative care and describe various socio-cultural and religious factors that affect end-of-life care provision in palliative care setting.

(5+5 = 10 marks)

10A. Barriers to pain assessment and management in end stage kidney disease.

10B. Brief note on Pharmacokinetics of opioids in end stage kidney disease.

(5+5 = 10 marks)





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**PAPER IV**

Friday, January 17, 2025

Time: 14:00 – 17:00 Hrs.

Max. Marks: 100

**✍ Answer ALL questions.**

1. Discuss the current NCCN guidelines for the management of emotional distress
2. Discuss about opioid epidemic in the USA and its relevance in the Indian setting
3. Discuss how 2023 Supreme Court Judgement changed the landscape of end-of-life care provision in India
4. A 95-year-old woman diagnosed with mild cognitive impairment was admitted to the acute care hospital due to decreased mental status. She was diagnosed with pneumonia, and although her infection responded well to antibiotics, her mental status did not improve. The family reported that the patient was in pain, while the palliative care team consulted her she exhibited signs of discomfort such as restlessness and groaning. Discuss the tools that could be used to assess the patient's pain in this clinical context.
5. A 65-year-old gentleman with squamous cell carcinoma of the face, post resection and reconstructive surgery had received chemotherapy and radiation therapy. He had a large gaping wound in his mid-face. Upon presentation to the emergency room, it was discovered that his necrotic mid-face wound was infested with maggots. Some maggots were removed through bedside debridement in the emergency room, but many remained. Discuss the evidence-based management of myiasis in this context.
6. Discuss the role of Ketamine in management of depression in a palliative care setting
7. Discuss the evidence on the role of Dexmedetomidine for hyperactive delirium at the end of life
8. Discuss the development of specialist palliative care in India.

9. A 53-year-old man undergoes left ventricular assist device (LVAD) implantation as a bridge to a heart transplant due to chronic end-stage heart failure. Unfortunately, his recovery is complicated by a persistent chronic infection, multiple embolic strokes, and prolonged hospitalization, leaving him confined to bed for most of the day. Consequently, he is removed from the transplant list. He expresses his wish to have his LVAD deactivated and requests a palliative care consultation. Discuss the current recommendations for discontinuing LVADs in a palliative care setting.
10. A 60-year-old woman with a history of breast cancer underwent partial mastectomy and axillary dissection, followed by neoadjuvant systemic chemotherapy and whole breast radiation. Despite treatment with multiple antiemetics, she continues to experience persistent nausea, which has significantly impacted her daily life. Over the past two months, she has been grappling with feelings of depression and hopelessness, which she attributes to her ongoing nausea. Additionally, she has been experiencing heightened anxiety and insomnia. While she initially tried citalopram for her symptoms, she had to discontinue it due to increased nausea. Given her concurrent symptoms of depression, nausea, and insomnia, the palliative care team has initiated mirtazapine orally at bedtime. Please provide information on the current evidence for using mirtazapine in a palliative care setting.

(10 marks  $\times$  10 = 100 marks)

