

|  |  |
| --- | --- |
| **Examination question paper:** | **January 2025** |

|  |  |
| --- | --- |
| **Module code:**  **Component number:** | **BM7047**  **002** |
| **Module title:** | **Molecular Oncology** |
| **Module leader:** | **Prof Jameel Inal** |

|  |  |
| --- | --- |
| **Date:** | **January 2025** |
| **Duration:** | **1 Hour 30 Minutes** |

|  |  |
| --- | --- |
| **Exam type:** | **Seen, Closed** |
| **Materials supplied:** | **None** |
| **Materials permitted:** | **None** |
| **Warning:** | **Candidates are warned that possession of unauthorised materials in an examination is a serious assessment offence.** |

|  |  |
| --- | --- |
| **Instructions to candidates:** | **This paper consists of ONE section.** |
|  | **Candidates will be required to answer TWO out of a possible FIVE questions from the paper.** |
|  |  |
|  | **Do not turn page over until instructed** |

© London Metropolitan University

**BM7047: Molecular Oncology**

**Seen exam (January 2025)**

Maximum marks possible: 100

Answer **two** questions out of the five questions in this paper.

1. Evaluate how the ErbB receptor family can contribute to oncogenic signalling. Include a description of the key intracellular signalling proteins that couple with ErbB receptors to induce pro-oncogenic processes.

**50 marks**

1. Discuss the molecular signalling processes associated with apoptosis and discuss how mutations in proteins involved in maintaining these processes can lead to oncogenesis.

**50 marks**

1. Discuss how aberrant signalling of vascular endothelial growth factor (VEGF) receptor signalling can contribute to the process of tumour progression.

**50 marks**

1. Evaluate the molecular mechanisms by which tumour cells can acquire an invasive phenotype and discuss the relevance of the acquisition of this phenotype in relation to metastasis.

**50 marks**

1. Discuss oncogenic effects associated with DNA repair and DNA damage as below:
2. How is DNA damage normally compensated for in normal cells?

**25 marks**

1. Describe how alterations in the DNA repair processes can contribute to oncogenesis.

**25 marks**

**END OF PAPER**