

D.M. – ONCOPATHOLOGY

**PAPER IV – RECENT ADVANCES IN ONCOPATHOLOGY,
MISCELLANEOUS TOPICS
(EPIDEMIOLOGY, CANCER REGISTRY CREATION,
RESEARCH METHODOLOGY, BIOETHICS, QUALITY CONTROL,
ARTIFICIAL INTELLIGENCE IN ONCOPATHOLOGY
AND PATHOLOGY INFORMATICS)**

Q.P. Code: 161523

Time: Three Hours

Maximum: 100 Marks

I. Elaborate on: (2 x 15 = 30)

1. Role of next generation sequencing in central nervous systems tumours.
2. Precision oncology revolutionized by oncopathology - discuss

II. Write notes on: (5 x 7 = 35)

1. Antibody-drug conjugate (ADC) used in targeted cancer therapy with example.
2. Spatial transcriptomics in cancer therapy and research.
3. Cancer incidence and mortality in India – geographic trends.
4. Digital pathology in gene expression profiling of breast cancers.
5. Artificial intelligence in the early diagnosis of cervical cancer.

III. Give reasons for (Clinical case scenarios and lab scenarios): (5 x 7 = 35)

1. A new monoclonal antibody is to be introduced for immunohistochemistry in your laboratory. Describe the steps you would implement before using it routinely in the diagnostic panel.
2. Participation for molecular pathology external quality assessment scheme has resulted in a major deviation. How will you address the issue?
3. Repeated biopsies from a patient diagnosed with renal cancer yielded no viable tissue. However, pleural fluid showed metastatic carcinoma. What can you offer the oncologist who wants to start cancer directed targeted treatment?

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4. When a 32-year-old lady comes to the OPD enquiring about HPV vaccination, how will you further guide her?
5. Oncopathologist is the guardian of patient tissue – explain the statement and your role in the same.

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