

MEDICAL ONCOLOGY

PAPER – I

Time : 3 hours
Max. Marks : 100

MED.ONCO./D/17/17/I

Important instructions:

- Attempt all questions in order.
- Each question carries 10 marks.
- Read the question carefully and answer to the point neatly and legibly.
- Do not leave any blank pages between two answers.
- Indicate the question number correctly for the answer in the margin space.
- Answer all the parts of a single question together.
- Start the answer to a question on a fresh page or leave adequate space between two answers.
- Draw table/diagrams/flowcharts wherever appropriate.

Write short notes on:

- Enumerate breakthrough hallmarks of cancer
 - List of tumours and indications where anti-angiogenic approach has shown positive results
 - List three anti-angiogenic agents in clinical practice and their side effects.3+3+4
- What is minimal residual disease (MRD) with respect to acute lymphoblastic leukemia?
 - Enumerate methods of MRD detection and their advantages and disadvantages.
 - How is MRD detection different in B- ALL Vs T-ALL?3+5+2
- Enumerate the steps in performing Polymerase Chain Reaction (PCR).
 - Name two methods of performing real time PCR.
 - Mention three applications of PCR in oncology.5+2+3
- Mechanism of action of cisplatin.
 - Mechanism and markers of platinum resistance in various cancers.
 - Pharmacogenomics of cisplatin induced ototoxicity.2+4+4
- Principles of extra corporeal radiotherapy (ECRT)
 - Mention specific condition where ECRT may be used.
 - What are the problems associated with ECRT?4+3+3
- What are chimeric Antigen Receptor (CAR)-T cells?
 - How are CAR-T cells different from Blinatumomab with respect to use in acute lymphoblastic leukemia (ALL)?
 - Beside ALL, name two other conditions where CAR-T cells are being used.4+4+2

P.T.O.

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| 7. | a. What is Hedgehog pathway? | 4+2+4 |
| | b. Name the cancers where this pathway is relevant. | |
| | c. Utility of Hedgehog pathway inhibitors. | |
| 8. | a. Mechanism of action and method of administration of trabectedin. | 4+3+3 |
| | b. Side effects of trabectedin | |
| | c. Therapeutic uses of trabectedin | |
| 9. | a. What are end points for a Trial pertaining to newer therapies in palliative care setting and why? | 5+5 |
| | b. What is Basket Trial? Explain with example. | |
| 10. | a. Explain next generation and whole genome sequencing. | 5+5 |
| | b. Explain with an example how the above may be useful in oncologic therapeutics. | |
