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:

1. a) Define the process of angiogenesis and lymphangiogenesis. 3+5+2
   b) Discuss in brief role of angiogenesis in cancer.
   c) Enumerate immunohistochemical markers of lymphangiogenesis.

2. a) Chemical carcinogenesis 5+5
   b) Spontaneous tumour regression and tumour lysis syndrome

3. Enumerate the functions of lysosomes and describe their role in cell injury and disease. 2+3+5

4. a) HIV infection associated malignancies 5+5
   b) Immune status and pathology of leprosy

5. a) Epigenetic change in cancer 5+5
   b) Inherited cancer syndromes

6. Define autoimmunity. Enumerate various autoimmune disorders and write in brief on factors associated with development of autoimmune diseases. 2+(4+4)

7. a) Biomedical waste management in Pathology 5+5
   b) Audit in histopathology laboratory

8. Define vasculitis. Describe recent classification of vasculitis. Write morphological features of polyarteritis nodosa. 2+3+5

9. a) Cell proliferation markers and their methods of analysis 5+5
   b) Recent concepts in atherosclerosis

10. What are different types of study designs? How will you design a case control study? What statistical methods would you apply in a prospective case control study with clinical follow up of five years? 3+4+3

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