

**Master in Pharmacy 1<sup>st</sup> Year 1<sup>st</sup> Semester Examination 2024**

**Subject: Microbial and Cellular Biology**

Time: 3Hrs.

Full Marks: 75

Answer any FIVE questions

1. What are Oncogenes? Give examples. How are Oncogenes related to Cancer? Explain in brief the process of Apoptosis. [2+3+5+5] = 15
  2. What are Stem Cells? Note down the types of Stem Cells. How are Stem Cells beneficial in the advancement of medical science? [2+8+5] = 15
  3. Define "Central Dogma" of molecular biology. Explain the different steps and enzymes involved in the process of DNA Replication. [3+12] = 15
  4. Write short note on the following  
(a) Quorum Sensing (b) Biofilm Formation (c) Pluripotent Stem Cells [5+5+5] = 15
  5. What is Depyrogenation? Briefly discuss the method of pyrogen detection. Mention the pyrogen limit in parenterals as per FDA. [4+8+3] = 15
  6. Define Multi Drug Resistance Tuberculosis. Write the significance of multi drug therapy with example. What is DOT Therapy? Define occupational hazards with example. [4+5+3+3] = 15
  7. What is peptic ulcer? How and why gastric ulcer is converted to stomach carcinoma? Write in brief the treatment protocol of *H.pylori* infestation. [3+6+6] = 15
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