

School of Biological and Life sciences

**Master of Science in Microbiology
Semester End Examination - Jun 2024**

**Duration : 180 Minutes
Max Marks : 100**

Sem II - P1PT202B - Medical and Pharmaceutical Microbiology*General Instructions*

Answer to the specific question asked

Draw neat, labelled diagrams wherever necessary

Approved data hand books are allowed subject to verification by the Invigilator

- 1) How does the concept of infectious diseases correlate with the dissemination of pathogens? K1(2)
- 2) Examine the significance of government regulatory practices and policies within the pharmaceutical sector, focusing on their roles in public health protection, product quality assurance, and market accessibility facilitation. K2(4)
- 3) Outline the routes of transmission for microbial diseases and explain how each route contributes to the spread of infections. K2(6)
- 4) Identify the key steps involved in the pathogenesis of microbial diseases, from initial exposure to the manifestation of signs and symptoms. K3(9)
- 5) Explore how microbial enzymes can aid in identifying potential drug targets within pharmaceutical research. K3(9)
- 6) Determine the mechanisms of action of antifungal agents and evaluate their effectiveness in treating fungal infections, considering factors such as spectrum of activity and side effects. K5(10)
- 7) Investigate the principles and applications of serological tests in parasitology, focusing on their efficacy in diagnosing parasitic infections and monitoring treatment responses. K4(12)
- 8) Interpret the significance of memory cells in the immune response to microbial diseases and evaluate their role in providing long-term protection against reinfection. K5(15)
- 9) Interpret the impact of antibiotic resistance on the effectiveness of antimicrobial agents, evaluating the factors that contribute to the development and spread of resistance. K5(15)
- 10) Elaborate on the principles and applications of polymerase chain reaction (PCR) in microbial diagnosis, highlighting its advantages over traditional diagnostic methods. K6(18)