

**The West Bengal University of Health Sciences
M.D. (Microbiology) May - June, 2022 Examination**

Paper: II

**Full Marks: 100
Time: 3 Hours**

Attempt all questions

1. Discuss the various mechanisms by which *Escherichia coli* produce diarrhoea with laboratory tests to determine them. 10
2. How will you proceed to investigate an outbreak of acute gastroenteritis following a community feast and pinpoint the microbial agent responsible for it. 10
3. Give an idea of opportunistic fungal infections. Mention common causes of such infections and briefly outline the steps to be taken for establishment of a diagnosis. 10
4. Discuss epidemiology and laboratory diagnosis of leptospirosis in Indian context. 10
5. Write about the different methods of horizontal gene transfer in bacteria. 10
6. Discuss about types of pneumococcal vaccine, its indication and schedule of use. 10
7. Discuss the principle, procedure and interpretation of widal test. 10
8. Write an essay on Surgical site infection. 10
9. Discuss the virulence factors of *Candida* species. 10
10. Describe the epidemiology and clinical manifestation of Histoplasmosis. How will you perform laboratory diagnosis of a case of Histoplasmosis. 10