

**The West Bengal University of Health Sciences**  
**M.D. (Microbiology) March- April, 2020 Examination**

Paper: I

Full Marks: 100

Time: 3 Hours

*Attempt all questions*

1. What are the basic components of an Antibiotic Stewardship programme that contribute to control of development & transfer of multi drug resistance? 10
2. Discuss Bio safety risk levels of micro- organisms with examples & reasons for this classification. Discuss Bio safety levels & class with respect to Bio safety Cabinets. 5+5
3. Discuss the role of Acute Phase reactants in diagnosis of sepsis. 10
4. Discuss briefly about the effects of complement activation. Mention the diseases associated with complement deficiency. 5+5
5. Write an essay on the role of MHC molecules in immune response. 10
6. What are the different methods adopted by parasites to avoid elimination by host. 10
7. Discuss 'Toll like receptor'. 10
8. Discuss the vectors used in genetic engineering with special reference to vaccine production. 10
9. Write a short essay on CSSD. 10
10. Write briefly on fluorescent microscopy & its role in diagnostic microbiology. 10