

**FELLOWSHIP IN INFECTION CONTROL & ANTIMICROBIAL STEWARDSHIP**  
**FELLOWSHIP IN INFECTION CONTROL & ANTIMICROBIAL STEWARDSHIP : SUMMER**  
**: 2022**  
**SUBJECT: PAPER-II**

**Day : Wednesday**  
**Date 27-Apr-2022**

**S-25084-2022**

**Time : 02:00 PM-05:00 PM**  
**Max. Marks: 100**

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**N. B.:**

- 1) Attempt all questions.
  - 2) All questions carry **10** marks each.
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- Q.1** Describe mechanism of action of antibiotics in bacteria. Discuss various methods of antimicrobial susceptibility testing in microbiology laboratory.
- Q.2** Discuss care bundle approach to prevent device associated infections in healthcare settings.
- Q.3** Describe the principles of Automated ID & AST systems.
- Q.4** Bacteriology of air and control of airborne infections.
- Q.5** Define quality assurance and quality control. What are the pre analytical and analytical factors that can affect quality of a bacteriology report?
- Q.6** Define Antimicrobial Stewardship Programme (ASP) and enumerate the components of ASP. Add a note on antibiogram.
- Q.7** Define "Hand hygiene" and enumerate methods used in performing hand hygiene? Name various methods that can be used to measure compliance to hand hygiene.
- Q.8** State the principle of real time PCR. Name the methods of detection of amplification products. Mention the applications in clinical microbiology.
- Q.9** Describe utility of Procalcitonin in infectious disease diagnosis and prognosis.
- Q.10** Name the different groups of  $\beta$ -lactam antibiotics. Give the molecular classification of  $\beta$ -lactamases and examples of  $\beta$ -lactamases commonly reported from India.

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