

**M. D. (MICROBIOLOGY) : SUMMER - 2018**

**SUBJECT: PAPER – IV  
(RECENT ADVANCES)**

Day: **Friday**  
Date: **08/06/2018**

**S-2018-3414**

Time: **2.00 P.M. TO 5.00 P.M**  
Max Marks. 100

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**N.B.**

- 1) Q. No. 1 and Q. No. 2 are **COMPULSORY**. Write any **SEVEN** out of remaining eight questions.
  - 2) The number to the right indicates **FULL** marks
  - 3) Draw neat and labeled diagram **WHEREVER** necessary
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- Q.1** What are biofilms? Describe their role in antibiotic resistance. Add a note on their detection in the laboratory and significance. **(15)**
- Q.2** Discuss the concept of human microbiome and its implications in health and disease. **(15)**
- Q.3** Discuss Bundle care approach in prevention of nosocomial infections. **(10)**
- Q.4** Describe edible vaccines and their importance. **(10)**
- Q.5** Discuss the principle and steps of Polymerase chain reaction (PCR). Mention different types of PCR used in diagnostic microbiology. **(10)**
- Q.6** Elaborate on the surveillance of health care associated infections and its importance. **(10)**
- Q.7** Enumerate bacteria that can be used for bioterrorism. Discuss laboratory diagnosis for their detection. **(10)**
- Q.8** Describe beneficial microorganisms for treatment of Gastrointestinal infections **(10)**
- Q.9** Describe immunology of parasitic infections. **(10)**
- Q.10** Describe various components of antibiotic stewardship programme. Describe in brief the implementation of such a programme. **(10)**