

**2016****M.Sc.****3rd Semester Examination****MICROBIOLOGY****PAPER—MCB-302***Full Marks : 40**Time : 2 Hours*

*The figures in the right-hand margin indicate full marks.*

*Candidates are required to give their answers in their own words as far as practicable.*

*Illustrate the answers wherever necessary.*

***Separate answer scripts to be used for each groups.***

**Group — A****[Marks : 20]**

Answer any *two* questions.

1. (a) With suitable diagram clearly describe the mode of action of Cholera toxin ? 5
- (b) What are the functions of intestinal flora over the host function ? How different factors control their establishment ? 3+2

*(Turn Over)*

2. (a) How misuse and abuse of antibiotics are related to the development of Antibiotic resistance ?
- (b) Name the first  $\beta$ -lactamase enzyme.
- (c) Write down the mode of action of Daptomycin .
- (d) Illustrate the exogenous and endogenous phase of malaria ? Mention the control of malaria ?

2+1+2+5

3. (a) Name the media which is selective for *Vibrio cholerae*.
- (b) How will you differentiate Vibrios from Aeromonas ?
- (c) With the help of diagramme enlight the two AB Exotoxin transport mechanism ?
- (d) The tox gene is regulated by a mechanism of -Ve or +Ve Control ? Justify with proper explanation.
- (e) What is the role of albumin in Middlebrook 7H10 medium ?

1+2+3+2+2

**Group — B**

[Marks : 20]

Answer any *two* questions.

1. (a) Write the differences between primary and secondary immune responses.
- (b) How attenuated vaccines are prepared? Write the advantages and disadvantages of attenuated vaccine.
- (c) What is toxoids? Give an example.

 $2+(3+3)+1+1$ 

2. (a) What are the difference between agglutination and precipitation.
- (b) Describe in details about the production and application of monoclonal antibodies.

3. Write short notes on (any four) :

 $4 \times 2 \frac{1}{2}$ 

- (a) National Immunization Schedule ;
- (b) Blood group antigens ;
- (c) Hazards of blood transfusion ;
- (d) Characteristics of enzyme used for immunoassay ;
- (e) Sandwich ELISA ;
- (f) Edible vaccines.