DRR-3233
Third Year B. Sc. (Sem. VI) Examination
March / April - 2016
Microbiology : MB-18
(Principles of Industrial Microbiology)

Time : 2 Hours] [Total Marks : 50

Instructions :

(1) Fill up strictly the details of signs on your answer book.
Name of the Examination : 
Third Year B. Sc. (Sem. VI)
Name of the Subject :
Microbiology : MB-18 (Principles of Industrial Microbiology)

Seat No. :
Student's Signature

(2) Figures to the right indicate full marks of the question.
(3) Draw neat and labelled diagram wherever necessary.

1  Give specific answers : 12
   
   (a) Enlist the new metabolites to be screened by screening.
   
   (b) State the necessary circumstances for scale up.
   
   (c) State the five different classes of genes to control production of secondary metabolite in strain improvement.
   
   (d) Name the four scientists associated with discovery of antibiotics.
   
   (e) Define sparger and state its functions with its types.
   
   (f) Enlist the different dryers used for drying process in product recovery.

2  Explain/Comment on any two of the following : 12

   (a) Various features are considered for a fermenter configuration.

   (b) Regulation of enzyme activity can help in strain development program.

   (c) Various characteristics are considered for formulation of fermentation medium.
3 Attempt any two of the following in detail.
   (a) Explain various stages of fermentation process.
   (b) Explain sterilization of production media.
   (c) Explain flocculation, flotation and filtration methods used for separation of cell biomass.

4 Write short notes on any two of the following:
   (a) Sterilization of air
   (b) Auxanography
   (c) Protoplast fusion
   (d) Fed-batch fermentation process.