



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)

<p>नीचे दृशावेक निशानीवाणी विगतो उत्तरवही पर अवश्य कभवी. Fillup strictly the details of signs on your answer book.</p> <p>Name of the Examination : Third Year B. Sc. (Sem. VI)</p> <p>Name of the Subject : Microbiology : MB-18 (Principles of Industrial Microbiology)</p> <p>Subject Code No. : <table border="1" style="display: inline-table; border-collapse: collapse;"><tr><td style="width: 20px; text-align: center;">3</td><td style="width: 20px; text-align: center;">2</td><td style="width: 20px; text-align: center;">3</td><td style="width: 20px; text-align: center;">3</td></tr></table> Section No. (1, 2,.....) : <table border="1" style="display: inline-table; border-collapse: collapse;"><tr><td style="width: 40px; text-align: center;">NIL</td></tr></table></p>	3	2	3	3	NIL	<p>Seat No. :</p> <table border="1" style="width: 100%; border-collapse: collapse;"><tr><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;"></td></tr></table> <div style="border: 1px solid black; border-radius: 15px; width: 100%; height: 80px; margin-top: 10px; display: flex; align-items: center; justify-content: center; text-align: center;">Student's Signature</div>						
3	2	3	3									
NIL												

- (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. **16**
- (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 : **10**
- (a) Sterilization of air
 - (b) Auxanography
 - (c) Protoplast fusion
 - (d) Fed-batch fermentation process.
-