



**AC-1405**  
**M. Sc. Microbiology (Sem. II) Examination**  
**April / May - 2015**  
**MB 204 : Microbial Ecology &**  
**Environmental Microbiology**

Time : Hours]

[Total Marks : 70

**Instructions :**

(1)

<p>नीचे दशांशके निशानीवाणी विगतो उत्तरवही पर अवश्य लखवी. Fillup strictly the details of signs on your answer book.</p> <p>Name of the Examination : <b>M. Sc. Microbiology (Sem. II)</b></p> <p>Name of the Subject : <b>MB-204:Microbial Ecology &amp; Environmental Microbiology</b></p> <p>Subject Code No. : <b>1 4 0 5</b> Section No. (1, 2,.....): <b>Nil</b></p>	<p>Seat No. : <input type="text"/><input type="text"/><input type="text"/><input type="text"/><input type="text"/><input type="text"/></p> <div style="border: 1px solid black; border-radius: 15px; padding: 10px; text-align: center; width: 100%;">Student's Signature</div>
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(2) Figures to the right indicate full marks of the question.

(3) Draw neat and labelled diagrams whenever necessary.

- Q.1. Explain any two of the followings. 18**
- Justify: Biodiversity at molecular level play important role in domains, kingdom and phyla establishment.
  - Basic principle and development for nucleic acid probes.
  - Explain: microbial ecology is the core that links all branches of microbiology.
- Q.2 Explain any two of the followings. 18**
- Define & differentiate: Biodegradation and biosorption. Give detail on biodegradation and biosorption of textile effluents.
  - Discuss on biotreatment of hospital waste.
  - Discuss in detail on physical characteristics of wastewater.
- Q3. Discuss detail on any two of the following. 18**
- Discuss bioavailability in relation to sequestration and ageing.
  - What are bioremediation technologies? Write details on *In situ* groundwater bioremediation.
  - Justify: Many factors are responsible for failure of inoculations.
- Q.4 Write short notes on any two of the following. 16**
- Genes responsible for heavy metal resistance in *Cyanobacteria*.
  - Recent research techniques in Biodeterioration.
  - Biobleaching process for Metals.