DMM-1638
M. Sc. (Sem. IV) (Microbiology) Examination
April / May - 2016
MB - 401 : Research Methodology,
Biostatistics & IPR
(New Course)

Time : 3 Hours] [Total Marks : 70

Instructions :
(1)
(2) Figures to the right indicate full marks of the question.
(3) Draw neat and labelled diagrams whenever necessary.

1 Answer the following : (any two) 18
   (1) Discuss in detail types and characteristics of research.
   (2) Elaborate a note on design and formatting research problem.
   (3) Give detail account on identification of variables and construction of research hypothesis.

2 Answer the following : (any two) 18
   (1) Give detail on presentation methods of data.
   (2) Discuss effects of variations in sampling and sources.
   (3) Give application and role of biostatistics in biological sciences.

3 Answer the following : (any two) 18
   (1) Discuss appropriate measure of central tendency for statistical study.
   (2) Give application of t-distribution.

DMM-1638] 1 [Contd...
(3) Calculate mean of below data:

<table>
<thead>
<tr>
<th>Fishes</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weights (gm)</td>
<td>225</td>
<td>214</td>
<td>253</td>
<td>325</td>
<td>242</td>
<td>240</td>
<td>285</td>
<td>230</td>
<td>280</td>
<td>350</td>
</tr>
</tbody>
</table>

4 Write short notes: (any two)
   (1) Benefits and problems of IPR.
   (2) WIPO
   (3) Indian response to the IPR upheaval.