

**C 62102**

(Pages : 2)

Name.....

Reg. No

**FOURTH SEMESTER B.Sc. DEGREE EXAMINATION, MAY 2014**

(U.G.—CCSS)

**Complementary Course—Microbiology**

**MB 4C (16) P—BIostatistics (Practical)**

**Time : Two Hours**

**Maximum : 10 Weightage**

*Answer any five questions.  
Each Question carries a weightage of 2.*

1. Construct a Histogram and frequency polygon for the given data :

Class	:	<b>0-10</b>	<b>10-20</b>	<b>20-30</b>	<b>30-40</b>	<b>40-50</b>	<b>50-60</b>	<b>60-70</b>
Frequency	:	<b>5</b>	<b>10</b>	<b>18</b>	<b>26</b>	<b>22</b>	<b>15</b>	<b>4</b>

2. Calculate the median and mode for the given frequency distribution :

Monthly rent :	<b>20-40</b>	<b>40-60</b>	<b>60-80</b>	<b>80-100</b>	<b>100-120</b>	<b>120-140</b>	<b>140-160</b>	<b>160-180</b>	<b>180-200</b>
No of families :	<b>6</b>	<b>9</b>	<b>11</b>	<b>14</b>	<b>20</b>	<b>15</b>	<b>10</b>	<b>8</b>	<b>7</b>

- 3 The prices of an article over a period of time in two regions are given as follows. Which region is more consistent ?

Region A (In Rs.) :	<b>20</b>	<b>22</b>	<b>19</b>	<b>22</b>	<b>23</b>
Region B (In Rs.) :	<b>18</b>	<b>12</b>	<b>10</b>	<b>20</b>	<b>15</b>

4. Fit a Poisson distribution to the following data and calculate the theoretical frequencies :

<b>X:</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
<b>f :</b>	<b>125</b>	<b>59</b>	<b>14</b>	<b>3</b>	<b>1</b>

5. Fit a Binomial distribution to the given data and find the theoretical frequencies :

<b>X :</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
<b>f :</b>	<b>28</b>	<b>62</b>	<b>46</b>	<b>10</b>	<b>4</b>

**Turn over**

6. The following data relates to marital status and performance in examinations. Check whether the two are independent ?

	<i>Performance</i>	
	<i>Good</i>	<i>Bad</i>
Married	60	80
Unmarried	20	40

7. Three types of rations experimented on rats gave the following weight gains :

Rations	R1	4	16	10
	R2	14	18	19
	R3	3	14	7

Check whether the three rations differ significantly in their effect.

8. Fit a straight line of the form  $y = a + bx$  to the given data :

<b>X</b>	0	1	2	3	4
<b>Y</b>	0	1.8	3.3	4.5	6.3

9. The following figures gives the heights of fathers and sons :—

Ht of father :	65	66	67	67	68	69	71	73
Ht of son	67	68	64	68	72	70	69	70

Obtain the equations to the two regression lines.

10. The following data gives the ages of husbands and wives. Find the correlation coefficient :

Age of Husband :	23	27	28	29	30	31	33	35	36	39
Age of wife	18	22	23	24	25	26	28	29	30	32