No. L I (1)/U.G. Courses/Statistics/MQP/2021

From: **THE REGISTRAR**

To
P. Gandhi,
Chairman, Board of Studies in Statistics (U.G.),
Mrs. A.V.N. College,
Visakhapatnam,

Sir,

Sub: Approval of Model Question Papers – Reg.

Ref: Email letter dated 25-05-2021 along with Model Question Papers.

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With reference to the above, I am by direction to inform that the Revised Choice Based Credit System, U.G. Courses (w.e.f. 2020-2021) First Semester Paper-1: Descriptive Statistics Model Question Papers has been approved.

Hence, I request to arrange to circulate the same among the Teaching Staff and Students concerned and placed in A.U. website.

Yours faithfully,

(M. HEMA NAIK)
DEPUTY REGISTRAR (ACADEMIC)

Copies to:
1. The Dean of Academic Affairs, A.U., Vsp.
2. The Director, computer Centre, A.U. Vsp.
3. All Principals, A.U. Affiliated Colleges Offered in U.G. courses.
4. The Superintendent S.I Section for taking necessary further action.
gandhi padi <gandhi.padi99@gmail.com>  

Tue, May 25, 11:55 AM (21 hours ago)

To me

Sir,

Please find the attachment containing the Statistics model question paper pertaining to B Sc First Year.

Thanks and Regards

P Gandhi
Lecturer in Statistics
Mrs AVN College
Chairman, Board of Studies
Andhra University

2 Attachments
From
P. GANDHI
Lect in Statistics
MBA AVN College,
Visakhapatnam.

To
The Registrar
Andhra University
Visakhapatnam.

Respected Sir,

Sub: Sending Model question paper for Statistics Reg.

I, P. GANDHI, Lecturer in Statistics
MBA AVN College, Visakhapatnam, and Board of Studies Chairman (U.G.) of Andhra University, Visakhapatnam. I am here with sending a model paper for Statistics for the revised syllabus under CBCS pattern.

Yours faithfully,
Phanindra
Chairman BOS
Statistics, AU.
Answer any five from the following eight questions

1. Distinguish between primary data and secondary data.
2. Explain various methods of measuring skewness.
3. Explain Sheppard's correction.
4. Explain multiple correlation coefficient. Mention its properties.
5. Derive the normal equations for fitting of the curve \( y = ab^x \).
6. Show that the correlation coefficient is independent of origin and scale.
7. Distinguish between correlation and regression coefficients.
8. Explain the criteria for independence of attributes.

(SECTION B- 5 x 10 = 50 MARKS)

Answer the following (one from each unit)

9. a) What is primary data? State the various methods of collecting primary data and discuss their relative merits

   (or)

b) Calculate the mean, median, mode of the following data

<table>
<thead>
<tr>
<th>Wages (in rs)</th>
<th>0-20</th>
<th>20-40</th>
<th>40-60</th>
<th>60-80</th>
<th>80-100</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of workers</td>
<td>10</td>
<td>15</td>
<td>40</td>
<td>25</td>
<td>10</td>
</tr>
</tbody>
</table>

10. a) Find the standard deviation for the following distribution

<table>
<thead>
<tr>
<th>Age</th>
<th>20-25</th>
<th>25-30</th>
<th>30-35</th>
<th>35-40</th>
<th>40-45</th>
<th>45-50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of persons</td>
<td>170</td>
<td>110</td>
<td>80</td>
<td>45</td>
<td>40</td>
<td>35</td>
</tr>
</tbody>
</table>

(or)
b) Define central and non-central moments. Derive the relationship between the moments about mean in terms of moments about any point.

11. a) Explain curve fitting. Fit a straight line of the form \( y = a + bx \) for the following data

<table>
<thead>
<tr>
<th>X</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>7</th>
<th>8</th>
<th>9</th>
</tr>
</thead>
<tbody>
<tr>
<td>Y</td>
<td>2</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>10</td>
<td>11</td>
<td>10</td>
<td>9</td>
</tr>
</tbody>
</table>

(or)

b) Define correlation coefficient. Calculate Spearman's rank correlation coefficient between X and Y for the following data

<table>
<thead>
<tr>
<th>X</th>
<th>80</th>
<th>78</th>
<th>75</th>
<th>75</th>
<th>68</th>
<th>67</th>
<th>60</th>
<th>59</th>
</tr>
</thead>
<tbody>
<tr>
<td>Y</td>
<td>12</td>
<td>13</td>
<td>14</td>
<td>14</td>
<td>16</td>
<td>14</td>
<td>15</td>
<td>13</td>
</tr>
</tbody>
</table>

12. a) Define regression coefficients. Explain the properties of regression coefficients.

(or)

b) Define regression. In a partially destroyed laboratory record of an analysis of correlation data, following information is available

Variance of X = 9
Regression equations: \( 8X - 10Y + 66 = 0 \)
\( 40X - 18Y = 214 \)
Calculate i) \( \bar{X} \) and \( \bar{Y} \)
ii) Standard deviation of y
iii) Correlation between X and Y

13. a) Define consistency. Explain the criteria of consistency.

(or)

b) Explain the coefficient of association and find the value of Q for the given data.
\( (AB) = 50, (A\beta) = 79, (\alpha B) = 89, (\alpha\beta) = 782. \)