TH241255MDC Reg. No.....

FYUG PROGRAMME EXAMINATIONS, NOVEMBER 2024

(2024 Admission Regular)

SEMESTER I – MDC (STATISTICS)

ST1MDC01B24 – BASICS OF STATISTICS

Time: 1 Hour **Maximum Marks: 35**

PART A

I. Answer any ten questions. Each question carries 2 marks

<table>
<tr><th>Q.No:</th><th>QUESTIONS</th><th>CO</th><th>LEVEL</th></tr>
<tr><td>1.</td><td>A survey was conducted to find the average number of hours worked per week by a group of employees. The hours worked were as follows (in hours):

38, 40, 42, 45, 50, 55, 58, 60, 65, 70.

Compute the median number of hours worked per week?</td><td>3</td><td>Ap</td></tr>
<tr><td>2.</td><td>Explain classification and tabulation.</td><td>1</td><td>U</td></tr>
<tr><td>3.</td><td>Distinguish between primary and secondary data.</td><td>2</td><td>U</td></tr>
<tr><td>4.</td><td>Compare list I and list II, and choose the correct option from the following.

<table><tr><th>LIST I
Scale of measurement</th><th>LIST II
Example of variable</th></tr><tr><td>(A) Nominal</td><td>(I) height of students</td></tr><tr><td>(B) Ordinal</td><td>(II) time of the day</td></tr><tr><td>(C) Interval</td><td>(III) caste</td></tr><tr><td>(D) Ratio</td><td>(IV) rank of students</td></tr></table>
a) (A)-(I), (B)-(II), (C)-(III), (D)-(IV) b) (A)-(II), (B)-(III), (C)-(IV), (D)-(I)

c) (A)-(III), (B)-(IV),(C)-(II),(D)-(I) d) (A)-(IV), (B)-(I), (C)-(II), (D)-(III)</td><td>1</td><td>U</td></tr>
<tr><td>5.</td><td>Given the following data set: 5, 10, 15, 20, 25, 30, 35, 40, 45, 50. Compute the 75th percentile.</td><td>4</td><td>Ap</td></tr>
</table>

<table>
<tr><td>6.</td><td>Compare list I and list II, and choose the correct option from the following.
<table><tr><th>List A
Classification</th><th>LIST B
Basis of classification</th></tr><tr><td>(A) geographical</td><td>(I) based on time</td></tr><tr><td>(B) chronological</td><td>(II) based on location</td></tr><tr><td>(C) qualitative</td><td>(III) based on numerical values</td></tr><tr><td>(D) quantitative</td><td>(IV) based on attributes or qualities</td></tr></table>a) (A)-(III), (B)-(IV),(C)-(I),(D)-(II) b) (A)-(I), (B)-(II),(C)-(IV),(D)-(III)
c) (A)-(II),(B)-(III),(C)-(IV),(D)-(I) d) (A)-(I),(B)-(II),(C)-(III),(D)-(IV)</td><td>1</td><td>U</td></tr>
<tr><td>7.</td><td>Calculate the range of first five even numbers.</td><td>4</td><td>Ap</td></tr>
<tr><td>8.</td><td>Distinguish between population and sample.</td><td>2</td><td>U</td></tr>
<tr><td>9.</td><td>Define pie chart and provide the equation for finding the angle of a sector in a pie chart.</td><td>1</td><td>R</td></tr>
<tr><td>10.</td><td>Compare list I and list II, and choose the correct option from the following.
<table><tr><th>LIST I</th><th>LIST II</th></tr><tr><td>(A) Histogram</td><td>(I) Represents data categories and frequencies with rectangular bars.</td></tr><tr><td>(B) Pie chart</td><td>(II) Represents parts of whole with sectors</td></tr><tr><td>(C) Ogive</td><td>(III) Used to show distribution of continuous data</td></tr><tr><td>(D) Bar chart</td><td>(IV) Displays cumulative frequencies</td></tr></table>a) (A)-(I), (B)-(II),(C)-(III),(D)-(IV) b) (A)-(II), (B)-(III),(C)-(IV),(D)-(I)
c) (A)-(III),(B)-(II),(C)-(IV),(D)-(I) d) (A)-(IV),(B)-(I),(C)-(II),(D)-(III)</td><td>1</td><td>U</td></tr>
<tr><td>11.</td><td>In a study, 50 participants reported the following number of hours worked per week: 40, 45, 50, 35, 55, and 60 hours. Calculate the mean number of hours worked per week?</td><td>3</td><td>Ap</td></tr>
<tr><td>12.</td><td>Explain the measures of central tendency.</td><td>3</td><td>U</td></tr>
</table>

(10x2=20)

PART B

II. Answer any three questions in one paragraph. Each question carries 5 marks.

<table>
<tr><th>Q.No:</th><th>QUESTIONS</th><th>CO</th><th>LEVEL</th></tr>
<tr><td>13.</td><td>Calculate the standard deviation for the following data
<table><tr><td>x</td><td>6</td><td>7</td><td>8</td><td>9</td><td>10</td><td>11</td><td>12</td></tr><tr><td>f</td><td>3</td><td>6</td><td>9</td><td>13</td><td>8</td><td>5</td><td>4</td></tr></table></td><td>4</td><td>Ap</td></tr>
<tr><td>14.</td><td>Construct a histogram and frequency polygon for the following data
<table><tr><td>Marks</td><td>10-20</td><td>20-30</td><td>30-40</td><td>40-50</td><td>50-60</td><td>60-70</td><td>70-80</td></tr><tr><td>Number of students</td><td>5</td><td>10</td><td>15</td><td>15</td><td>10</td><td>7</td><td>3</td></tr></table></td><td>1</td><td>Ap</td></tr>
<tr><td>15.</td><td>Compute the median and mode for the following data
<table><tr><td>class</td><td>0-9</td><td>10-19</td><td>20-29</td><td>30-39</td><td>40-49</td><td>50-59</td><td>60-69</td><td>70-79</td></tr><tr><td>frequency</td><td>2</td><td>12</td><td>24</td><td>12</td><td>5</td><td>7</td><td>5</td><td>9</td></tr></table></td><td>3</td><td>Ap</td></tr>
<tr><td>16.</td><td>Distinguish between simple random sampling and stratified random sampling.</td><td>2</td><td>U</td></tr>
</table>

(3x5=15)

CO : Course Outcomes Level : R – Remember, U – Understand, Ap- Apply, An- Analyze, E- Evaluate, C- Create