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22BSB105N

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

BVoc DEGREE EXAMINATION MAY 2026
(First Semester)

Branch – **BANKING, STOCK & INSURANCE**

BUSINESS STATISTICS

Time: Three Hours

Maximum: 75 Marks

SECTION-A (10 Marks)
Answer **ALL** questions
ALL questions carry **EQUAL** marks (10 × 1 = 10)

Module No.	Question No.	Question	K Level	CO
1	1	Number of questions in a questionnaire should be _____. a) 5 b) 10 c) Maximum d) Minimum	K1	CO1
	2	Diagrams and graphs are tools of _____. a) Collection of data b) Analysis c) Presentation d) Interpretation	K2	CO1
2	3	The Mode for the following values 23, 26, 34, 38,23, 21, 23,25 a) 23 b) 25 c) 26 d) 21	K1	CO2
	4	If co-efficient of variation is 40 and standard deviation is 4 then the arithmetic mean is _____. a) 20 b) 10 c) 40 d) 30	K2	CO2
3	5	The range of simple correlation co-efficient is _____. a) 0 to 1 b) -1 to +1 c) -1 to 0 d) 0 to ∞	K1	CO3
	6	If one of the regression co-efficient is positive the other must be _____. a) Negative b) Zero c) Positive d) Equal to one	K2	CO3
4	7	Trend in Time series means _____. a) Short term effect b) Long term effect c) Both i) and ii) d) Either i) or ii)	K1	CO4
	8	Fishers Ideal index number does not satisfy the _____. a) Circular test b) Unit test c) Time reversal test d) Factor reversal test	K2	CO4
5	9	Which Excel function calculates the arithmetic mean _____. a) SUM b) AVERAGE c) MODE d) MEAN	K1	CO5
	10	Which function is used to find correlation between two datasets? a) CORREL b) TREND c) FORECAST d) SLOPE	K2	CO5

SECTION - B (35 Marks)
Answer **ALL** questions
ALL questions carry **EQUAL** Marks (5 × 7 = 35)

Module No.	Question No.	Question	K Level	CO
1	11.a.	Explain the various types of classification with an example.	K2	CO1
		(OR)		
	11.b.	Weekly wages of the workers are given below: Draw histogram and frequency curves. Weekly wages: 0-10 | 10-20 | 20-30 | 30-40 | 40-50 | 50-60 | 60-70 No of workers: 5 | 8 | 10 | 14 | 11 | 6 | 3		
2	12.a.	Write the merits and demerits of mean and mode.	K3	CO2
		(OR)		
	12.b.	Calculate the standard deviation and co-efficient of variation for the following data: Size of items: 10 | 20 | 30 | 40 | 50 | 60 Frequency: 8 | 12 | 20 | 10 | 7 | 3		

Cont...

<table>
<tr><td rowspan="3">3</td><td>13.a.</td><td colspan="2">Explain the various types of correlation with an example.</td><td rowspan="3">K4</td><td rowspan="3">CO3</td></tr>
<tr><td colspan="2">(OR)</td></tr>
<tr><td>13.b.</td><td colspan="2">Height of father (X) and Son(Y) are given below, calculate the Karl pearson's co-efficient of correlation:
<table>
<tr><td>X</td><td>64</td><td>65</td><td>66</td><td>67</td><td>68</td><td>69</td><td>70</td></tr>
<tr><td>Y</td><td>66</td><td>67</td><td>65</td><td>68</td><td>70</td><td>68</td><td>72</td></tr>
</table></td></tr>
<tr><td rowspan="3">4</td><td>14.a.</td><td colspan="2">Using 3-yearly moving averages determine the trend and short - term fluctuations:
<table>
<tr><td>year</td><td>2016</td><td>2017</td><td>2018</td><td>2019</td><td>2020</td><td>2021</td><td>2022</td><td>2023</td><td>2024</td><td>2025</td></tr>
<tr><td>Production in Tonnes</td><td>21</td><td>22</td><td>23</td><td>25</td><td>24</td><td>22</td><td>25</td><td>26</td><td>27</td><td>26</td></tr>
</table></td><td rowspan="3">K3</td><td rowspan="3">CO4</td></tr>
<tr><td colspan="2">(OR)</td></tr>
<tr><td>14.b.</td><td colspan="2">From the following data construct an index for 2025 taking 2024 as base:
<table>
<tr><td>Commodities</td><td>A</td><td>B</td><td>C</td><td>D</td><td>E</td></tr>
<tr><td>Price in 2024 (Rs.)</td><td>50</td><td>40</td><td>80</td><td>110</td><td>20</td></tr>
<tr><td>Price in 2025 (Rs.)</td><td>70</td><td>60</td><td>90</td><td>120</td><td>20</td></tr>
</table></td></tr>
<tr><td rowspan="3">5</td><td>15.a.</td><td colspan="2">Given a dataset of student marks in Excel, explain how you calculate Measures of central tendency.</td><td rowspan="3">K4</td><td rowspan="3">CO5</td></tr>
<tr><td colspan="2">(OR)</td></tr>
<tr><td>15.b.</td><td colspan="2">Explain how to compute variance and standard deviation (VAR, VARP, STDEV, STDEVP) in Excel.</td></tr>
</table>

SECTION -C (30 Marks)

Answer **ANY THREE** questions
ALL questions carry **EQUAL** Marks (3 × 10 = 30)

<table>
<tr><th>Module No.</th><th>Question No.</th><th>Question</th><th>K Level</th><th>CO</th></tr>
<tr><td>1</td><td>16</td><td>Explain the methods of collecting primary data.</td><td>K4</td><td>CO1</td></tr>
<tr><td>2</td><td>17</td><td>Analyze mean, median and mode for the following data.
<table>
<tr><td>Wages in Rs,'00</td><td>0-20</td><td>20-40</td><td>40-60</td><td>60-80</td><td>80-100</td></tr>
<tr><td>No of workers</td><td>5</td><td>11</td><td>18</td><td>10</td><td>6</td></tr>
</table></td><td>K4</td><td>CO2</td></tr>
<tr><td>3</td><td>18</td><td>Obtain the two regression equations and also Analyze the price when amount demanded is 42.
<table>
<tr><td>Price in Rs,</td><td>10</td><td>12</td><td>13</td><td>12</td><td>16</td><td>15</td></tr>
<tr><td>Amount demanded</td><td>40</td><td>38</td><td>43</td><td>45</td><td>37</td><td>43</td></tr>
</table></td><td>K4</td><td>CO3</td></tr>
<tr><td>4</td><td>19</td><td>Construct an index number from the following data using (i) Laspeyre's Method and (ii) Paasche's Method (iii) Fisher's ideal index numbers.
<table>
<tr><td>Commodity</td><td>Price</td><td>Quantity</td><td>Price</td><td>Quantity</td></tr>
<tr><td>A</td><td>10</td><td>100</td><td>12</td><td>144</td></tr>
<tr><td>B</td><td>12</td><td>144</td><td>14</td><td>196</td></tr>
<tr><td>C</td><td>14</td><td>196</td><td>16</td><td>156</td></tr>
<tr><td>D</td><td>16</td><td>256</td><td>18</td><td>324</td></tr>
<tr><td>E</td><td>18</td><td>324</td><td>20</td><td>400</td></tr>
</table></td><td>K4</td><td>CO4</td></tr>
<tr><td>5</td><td>20</td><td>Using Data Analysis ToolPak output, analyze how descriptive statistics help in understanding dataset characteristics.</td><td>K4</td><td>CO5</td></tr>
</table>

Z-Z-Z END