



SCHOOL OF BIOSCIENCES AND TECHNOLOGY
CONTINUOUS ASSESSMENT TEST - I
WINTER SEMESTER 2025-2026

Programme Name & Branch : Integrated M.Sc. (Biotech)

Course Code and Course Name : TBIT303L Fundamentals of Biostatistics

Slot(s) : C2

Faculty Name(s) : Faraz Ahmad

Class Number(s) : VL2025260503483

Date of Examination : 29 Jan, 2026 02:00 PM - 03:30 PM

Exam Duration : 90 minutes

Maximum Marks: 50

General instruction(s): Answer All Questions

Q. No	Question	M																					
1.	The blood glucose levels (in mM) of a sample of 10 gym-goers are given: 5.5, 6.4, 5.8, 6.2, 8.7, 6.2, 6.5, 5.9, 6.5, 5.6 Calculate (A) standard deviation (sample OR population), (B) harmonic mean, (C) geometric mean, (D) median, and (E) mode.	2X5 (10)																					
2.	A frequency table for suicidal patients vs. age group in a mental healthcare facility is given below. <table><tr><th>Si. No.</th><th>Age (years)</th><th>Frequency</th></tr><tr><td>1</td><td>20-30</td><td>5</td></tr><tr><td>2</td><td>30-40</td><td>9</td></tr><tr><td>3</td><td>40-50</td><td>14</td></tr><tr><td>4</td><td>50-60</td><td>11</td></tr><tr><td>5</td><td>60-70</td><td>18</td></tr><tr><td>6</td><td>70-80</td><td>24</td></tr></table> Calculate: (i) (arithmetic) mean, (ii) median, and (iii) mode age of the patients.	Si. No.	Age (years)	Frequency	1	20-30	5	2	30-40	9	3	40-50	14	4	50-60	11	5	60-70	18	6	70-80	24	3+4+3 (10)
Si. No.	Age (years)	Frequency																					
1	20-30	5																					
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4	50-60	11																					
5	60-70	18																					
6	70-80	24																					
3.	(A) For the data in Q2., calculate the population and sample standard deviation. (B) For the data in Q2., calculate the mean deviation (across median).	5 5																					
4.	For the following frequency distribution of wages: <table><tr><th>Class interval (Age group)</th><th>Frequency (Wages)</th></tr><tr><td>14 – 16</td><td>40</td></tr><tr><td>17 – 19</td><td>90</td></tr><tr><td>20 – 22</td><td>150</td></tr><tr><td>23 – 26</td><td>130</td></tr><tr><td>27 – 30</td><td>120</td></tr><tr><td>31 – 33</td><td>110</td></tr><tr><td>34 – 37</td><td>80</td></tr></table> Calculate: (i) true class widths, (ii) mid-values, (iii) relative frequencies, and (iv) cumulative frequencies for each class.	Class interval (Age group)	Frequency (Wages)	14 – 16	40	17 – 19	90	20 – 22	150	23 – 26	130	27 – 30	120	31 – 33	110	34 – 37	80	4x2.5 (10)					
Class interval (Age group)	Frequency (Wages)																						
14 – 16	40																						
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27 – 30	120																						
31 – 33	110																						
34 – 37	80																						
5.	The marks of students in an English exam are as follows: 22, 15, 38, 21, 30, 44, 34, 45, 55, 23, 24, 76, 32, 43, 65, 23, 12, 10, 8, 46, 76, 43, 55, 22, 20, 40, 87, 99, 67, 49, 37, 20, 68, 98, 78, 66, 34, 54, 65, 27, 34, 35, 36, 37, 38, 39, 50, 41, 45, 43, 42, 32, 48, 49, 60, 67, 68, 42, 22, 12, 21, 23, 34, 64, 69, 70. Using the entire given data, construct a frequency table and plot less than and more than ogive curves. Label the axes and mark the coordinates.	10																					
