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جامعة أم القرى	مبادئ الاحصاء والاحتمالات	التاريخ ١٤٣٨/٧/١٩
قسم العلوم الرياضية	الاختبار الدورى الأول	مدة الامتحان ساعتان

Question 1: (10 Marks)

I) Complete the following frequency distribution, **(4 Marks)**

Class	Frequency	Cumulative Frequency	Relative Frequency	Mid-Point			
5.5 - 10.5	2						
10.5 - 15.5	3						
15.5 - 20.5	5						
20.5 - 25.5	2						
25.5 - 30.5	2						
30.5 - 35.5	1						
35.5 - 40.5	1						
Total							

II) find the following statistics: (4 Marks)

Mean	Variance
Mode	Median

II) Draw the Polygon.(2 Marks)

Question 2.Determine the CORRECT and False statements (5 Marks)

1. *Mode is affected by the extreme values*	
2. *Mean is the best central tendency measurement for skewed distribution*	
3. *Median is the best central tendency measurement for skewed distribution*	
4. *We can not find the frequency distribution for Nominal variables*	
5. *Relative frequency distribution is used to compare data of the same size*	
6. *stem and leaf plot is used to represent the data graphically*	
7. *bar chart and histogram give exactly the same information*	
8. *Hypothesis testing is part of inferential statistic*	
9. *The interval level of measurement has a meaningful zero*	
10. *In random phenomena we do not know all the outcome*	

Question 3. Fill the missing words (5 Marks)

(1) _____ is the average of the squared deviations from the mean.

Because it uses every score in a distribution and is easy to interpret, the (2) _____ is the most common measure of variability.

Statistical Measures based on samples referred to as (3) _____ while Statistical Measures based on populations referred to as (4) _____

For the data set 12,7,8,4,9,5,6,4,9,10 the median would be (5) _____

If the distribution is skewed, the best central tendency measure is (6) _____

If the distribution is symmetric, the best central tendency measure is (7) _____

If the mean for 1, 2, 4, 5, 6, 6, 7, 8, 9, 10, 12 and x. is 8.00, then the value of x is equal to (8) _____

Ogives is used to represent the (9) _____

Pie chart is best used to represent the(10) _____

Important Formulas: $\mathrm{MD} = \frac{n/2 - \mathrm{cf}}{f}(w) + L_m$ $\bar{X} = \frac{\sum f \cdot X_m}{n}$ $s^2 = \frac{n(\Sigma f \cdot X_m^2) - (\Sigma f \cdot X_m)^2}{n(n-1)}$ $s^2 = \frac{\Sigma(x_i - \bar{x})^2}{n-1}$ $CV = \frac{s}{\bar{x}} \times 100\%$ $\mathrm{SK} = \frac{\sum_{i=1}^{n}(x_i - \bar{x})^3}{ns^3}$ $\beta_2 = \frac{\mu_4}{\mu_2^2}$