

ALLAMA IQBAL OPEN UNIVERSITY

Level: Bachelor
 Paper: **Business Math & Stat (421)**
 Time Allowed: 3 hrs

Semester: Spring 2009
 Maximum Marks: 100
 Pass Marks: 40

Note: - **Attempt any five questions. All questions carry equal marks.**

Question No. 1 is compulsory.

Q.1		State whether the following statements are True or False.	20																
	i.	A cash discount is the same as a trade discount. T/F																	
	ii.	Net profit = Gross profit – operating expenses T/F																	
	iii.	We can start X-axis from any value but Y-axis must start from zero. T/F																	
	iv.	At breakeven point there is no loss no gain. T/F																	
	v.	Age of an individual is always an “observable variable”. T/F																	
	vi.	A statistical table is an arrangement of data in rows and columns. T/F																	
	vii.	Classification provides a measure of dispersion. T/F																	
	viii.	The sum of deviations from the mean is always zero. T/F																	
	ix.	The mean is more stable than both the median and the mode. T/F																	
	x.	Probability of an event can never be zero. T/F																	
	xi.	Subjective probability helps in decision-making. T/F																	
	xii.	The mean of a random variable is the same as its expected value. T/F																	
	xiii.	Statistical inference does not depend on probability theory. T/F																	
	xiv.	An estimator is a specific value of an estimate. T/F																	
	xv.	The reliability of an estimate can be determined by its sampling error. T/F																	
	xvi.	The c-chart applies to the number of defects in subgroups of constant size. T/F																	
	xvii.	In the fixed base all comparisons are made with the base. T/F																	
	xviii.	Reference base and weight base should always be the same. T/F																	
	xix.	The larger the company the higher is the price-earning ratio. T/F																	
	xx.	The prices of bonds fluctuate within a smaller range than that of stocks. T/F																	
Q.2	i.	Define the following: <ul style="list-style-type: none"> • Mark Up • Mark Down • Gross Profit • Net Profit 	10																
	ii.	Find the 8 th term and the sum to 8 terms of the series $2 + 11/5 + 12/5 + 13/5 + \dots$	10																
Q.3	i.	Differentiate between theory of Statistics and Applied Statistics. Also write down the functions of Statistics.	10																
	ii.	Draw pie chart for the following data: <table style="margin-left: 20px; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left; border-bottom: 1px solid black;">Department</th> <th style="text-align: left; border-bottom: 1px solid black;">Expenditure</th> </tr> </thead> <tbody> <tr> <td>Education</td> <td>312.10</td> </tr> <tr> <td>Health Service</td> <td>131.10</td> </tr> <tr> <td>Agriculture</td> <td>51.80</td> </tr> <tr> <td>Veterinary</td> <td>12.30</td> </tr> <tr> <td>Industries</td> <td>10.15</td> </tr> <tr> <td>Public Works</td> <td>85.75</td> </tr> <tr> <td>Other Heads</td> <td>96.80</td> </tr> </tbody> </table>	Department	Expenditure	Education	312.10	Health Service	131.10	Agriculture	51.80	Veterinary	12.30	Industries	10.15	Public Works	85.75	Other Heads	96.80	10
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Q.4	i.	What do you know about Descriptive Measures? Explain. Also write down the characteristics of a good measure.	10																

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