

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 FIVE QUESTIONS. ALL QUESTIONS CARRY EQUAL MARKS.
 QUESTION No. (1) IS COMPULSORY.**

Q.1	i. ii. iii. iv. v. vi. vii. viii. ix. x. xi. xii. xiii. xiv. xv. xvi. xvii. xviii. xix. xx.	State whether the following statements are True or False. For long distance shipping r.o.g. terms are available. Original retail price = cost + markup. X-axis and Y-axis must have the same scale. A quadratic equation has always two roots. By a "fixed variable" we mean a constant. Cumulative frequency graph of a discrete variable is a step diagram. A mean always occupies the central position in the data. The standard deviation of -2, -7, -5, -1 is negative. An event is a part of sample space. A random variable has always-finite number of values. The total area under the probability graph is unity. A Bernoulli random variable can take only two values. The sample mean is an unbiased estimator of the population mean. For 4x2 contingency table, number of degrees of freedom is 3. A simple random sample is always representative of the population. A base year should always be in the distant past. Straight time wage system demands strict supervision. The book value of an NIT unit is lower than the face value. A fixed asset is not a tangible asset. The critical points of $f(x)$ are given by $f'(x) = 0$.	T/F T/F T/F T/F T/F T/F T/F T/F T/F T/F T/F T/F T/F T/F T/F T/F T/F T/F T/F T/F	20																										
Q.2	i.	Define the following. <ul style="list-style-type: none"> • Trade Discount • Cash Discount • Mark Up • Mark Down 		10																										
	ii.	A swift pen has a daily fixed cost of Rs. 300 as a result of salaries and building operations. Each ballpoint produced costs Re. 1 and is sold for Rs. 2. What is the break-even point? That is how many pieces of ballpoints must be sold each day to guarantee no loss no profit?		10																										
Q.3	i.	What do you mean by Statistics? Write down its application. Give example where required.		10																										
	ii.	Draw the multiple bar chart of the following table: <table style="margin-left: auto; margin-right: auto; border-collapse: collapse;"> <thead> <tr> <th rowspan="2">Year</th> <th colspan="3" style="text-align: center;">Production</th> </tr> <tr> <th style="text-align: center;">Pedestal fans</th> <th style="text-align: center;">Ceiling fans</th> <th style="text-align: center;">Table fans</th> </tr> </thead> <tbody> <tr> <td>1974-75</td> <td style="text-align: center;">37,560</td> <td style="text-align: center;">140,711</td> <td style="text-align: center;">14 867</td> </tr> <tr> <td>1975-76</td> <td style="text-align: center;">30,864</td> <td style="text-align: center;">107,157</td> <td style="text-align: center;">10 080</td> </tr> <tr> <td>1976-77</td> <td style="text-align: center;">30,721</td> <td style="text-align: center;">127,812</td> <td style="text-align: center;">8,059</td> </tr> <tr> <td>1977-78</td> <td style="text-align: center;">37,999</td> <td style="text-align: center;">147,033</td> <td style="text-align: center;">11,244</td> </tr> <tr> <td>1978-79</td> <td style="text-align: center;">38,560</td> <td style="text-align: center;">150,883</td> <td style="text-align: center;">6,977</td> </tr> </tbody> </table>	Year	Production			Pedestal fans	Ceiling fans	Table fans	1974-75	37,560	140,711	14 867	1975-76	30,864	107,157	10 080	1976-77	30,721	127,812	8,059	1977-78	37,999	147,033	11,244	1978-79	38,560	150,883	6,977	
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Q.4	i.	What do you know about the Measures of Central Tendency for Nominal and Ordinal Scales? Explain. Also write down the comparison of Measures of Central Tendency.		10																										

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