

LCCI Level 2 Certificate in Business Statistics

Overview of content

- Management Information: The External and Internal Business Environment Data collection Data presentation Descriptive statistics
- 2. Forecasting for Business Decisions Correlation and regression Time-based data
- 3. Risk Management and Business Decision Making Probability

GROUP 1 – SELECT 20 QUESTIONS (x4 marks each)

Qu 1	MCQ Calculate the mean value of the following da number of client visits carried out by membe a sales force. 2, 6, 4, 3, 5, 6, 3, 4, 3 and 2	ily rs of
•	0.0	4
A	3.8	~
В	3.5	
С	4.0	
D	4.2	



Qu 2	MCQ		
	What is the median value of the following daily number of client visits carried out by members of a sales force.		
	2, 6, 4, 3, 5, 6, 3, 4, 3 and 2		
A	3.5	~	
В	3.8		
С	4.0		
D	4.2		

Qu 3	INSERT VALUE	Ξ	
	Calculate the m for the length of to a company's	ean value of the data obtained time in minutes spent by visitors website.	
	Length of visit	Number of visitors	
	(minutes)		
	5 – 7	7	
	8 – 10	7	
	11 – 13	9	
	14 – 16	5	
	17 – 22	2	
A	10.9		



Qu 4	INSERT VALUE			
	You have been given the following information about numbers of house buyers in an area of the local town.			
	House prices (£)	Number of buyers		
	Under 250,000	2		
	250,000 – 299,999	9		
	300,000 - 349,999	41		
	350,000 - 399,999	37		
	400,000 - 449,999	24		
	450,000 - 499,999	8		
	Calculate the percer £400,000 or more.	ntage of properties that cost		
A	26.4			

Qu 5	MCQ			
	The following figures show the number of customers visiting a shop each day.			
	4, 5, 8, 9, 15, 18, 20, 22, 24, 29, 32, 35, 37, 40, 44, 44, 48, 52, 58, 60			
	What is the interquartile range for this data?			
A	29	V		
В	54			
С	20			
D	44			



Qu 6	INSERT VALUE	
	What is the mean deviation of the following values?	
	5, 6, 13, 20, 26	
А	7.2	

Qu 7	INSERT VALUE	
	Calculate the standard deviation for the following values.	
	4, 5, 5, 7, 9	
A	1.79	

Qu 8	INSERT	INSERT VALUE		
	Calculate the standard deviation for the following grouped data.			
	Value	Frequency		
	4	4		
	5	6		
	6	9		
	7	8		
	8	3		
A	1.18			



Qu 9	MRQ Which of the following components are important for time series analysis?	
A	Trends observed	~
В	Seasonal fluctuations	~
С	Standard deviation values	
D	Interquartile range	

Qu 10	MCQ			
	The figures below show the sales figures for a business for a six-month period.			
	Month Sales (\$000)			
	January	180		
	February	189		
	March	205		
	April	190		
	Мау	184		
	June	193		
	What woul value for J	ld be a four-month moving average uly?		
A	193	~		
В	192			
С	190			
D	189			



Qu 11	MRQ Which of the following methods would be suitable data gathering for an online survey?	2
A	Virtual interviews	v
В	Questionnaires	~
С	Direct observations	
D	Social media apps	

Qu 12	MRQ			
	The following data shows the sales of ice creams and the average temperatures for four months of a year. Which of the following describes the relationship between the two variables?			
	Month	Sales (£)	Average temperature (°C)	
	April	1,600	11	
	Мау	1,800	13	
	June	3,000	18	
	July	4,500	21	
A	Positive	e correlatio	n	~
В	Negativ	e correlatio	on	
С	Correla	ition coeffic	cient of 0.89	~
D	Correla	ition coeffic	cient of -0.44	



Qu13	INSERT VALUE Using three similar standard coins, what is the percentage probability of throwing three tails together?	•
A	0.125	

Qu 14	MCQ A social club sells tickets for a raffle. If I buy tickets and am told that I have an overall probability of winning of 0.016, how many tic must have been sold altogether?	six kets
A	375	V
В	96	
С	425	
D	210	

Qu 15	MCQ Which of the following are considered primary sources of information for research?	
A	Survey responses	
В	Company reports	
С	Business publications	
D	Trade periodicals	



Qu 16	MCQ Which of the following is NOT considered a reliable sampling method for obtaining valid information?	
A	Social media platform sampling	v
В	Random sampling	
С	Stratified sampling	
D	Systematic sampling	

Qu 17	MRQ	
	Correlation can be identified in which of the following cases?	
A	Changes in variable X cause changes in variable Y	~
В	Changes in variable Y cause changes in variable X	~
С	The variables are independent of one another	
D	Only one variable is considered	



Qu 18	MCQ The correlation coefficient is a measure of th linear relationship between how many variables?	ie
A	Тwo	~
В	Three	
С	Any number of variables	
D	It only applies to one variable	

Qu 19	MRQ Which of the following could be obtained from scatter graph drawn to show a set of data fo two variables?	m a r
A	Line of best fit	~
В	Indication of positive or negative correlation	~
С	Breakeven cost	
D	Profit margin	



Qu 20	MRQ	
	Which of the following statements about correlation are true?	
A	A correlation coefficient of -1 indicates an	~
	inverse relationship between variables.	
В	The maximum value of correlation	V
	coefficient is +1.	
С	Values for the correlation coefficient lie	
	between 0 and +1.	
D	A positive correlation coefficient indicates	
	that as one variable increases, the other	

Qu 21	MCQ	
	Where no relationship is found between variables, the correlation coefficient will have what value?	
A	Zero	~
В	Less than +0.5	
С	Between -0.5 and +0.5	
D	-1	



Qu 22	MCQ Which characteristic of a set of data shown graph can be identified using the mean squa error?	on a ared
A	Noise	~
В	Gradient	
С	Intercept on y-axis	
D	Intercept on x-axis	

Qu 23	MCQ The general relationship between the two variables, sales of a product and cost of advertising, can be represented in a simple regression equation. Which of the following is the appropriate regression formula, Assuming the <i>a</i> and <i>b</i> are both constants?	
A	Sales = (a x Advertising) + b	
В	Sales = (a x Advertising) - b	
С	Sales = a x Advertising x b	
D	Sales = (b – a) x Advertising	



Qu 24	INSERT VALUE 18 people working in an office of 40 people a male. What is the probability of selecting a female employee if one employee is chosen random?	are at
A	0.55	

Qu 25	INSERT VALUE A company produces 28,000 microwave ove each year. Of these, 7,000 are for the home market, 8,000 are for the USA, 6,000 are for sale in Europe. The rest are exported to a ra of different countries. What is the probability of selecting an oven a random that is going to be exported?	nge at
A	0.75	

Qu 26	MCQ	
	The probability of traffic delays on my way to work is 0.3 but the probability of delays on the way home is 0.5.) Ie
	What is the probability that I will be able to tr to work and back without any delays on any chosen at random?	avel day
A	0.35	~
В	0.15	
С	0.80	
D	0.20	



Qu 27	MCQ	
	The probability of the revenue from a new product breaking even within six months is 0	0.35.
	If a company launches 60 new products ove five-year period, how many might be expect to breakeven within six months?	r a ed
A	21	V
В	39	
С	35	
D	60	

Qu 28	INSERT VALUE Four mutually exclusive events, A, B, C and D. have probabilities of occurring of 0.1, 0.2, 0.3, and 0.4 respectively. What is the probability of A or C occurring?	
A	0.4	



GROUP 2 – SELECT 10 QUESTIONS (2 marks each)

Qu 29	True or False
	a) Mutually exclusive events are events that cannot happen at the same time.
	 b) Independent events are events that do not affect the occurrence of the other events.
A	False
В	True

Qu 30	 True or False a) The probability of selecting the winning number from 20 equally likely options is 0.05. b) The probability of selecting the winning number from 20 equally likely options twice consecutively is 0.10.
A	True
В	False

Qu 31	DROP DOWN
	The formula for determining probability is given by
	Number of (suitable) outcomes / (Total) number of possible outcomes
A	desired
	possible, winning, losing
В	Total
	Maximum, Minimum, Average



01132	True or Folse	
	 a) Expected value is calculated by multiplying together the probability of an outcome by its value. b) Expected value does not consider factors such as range of the distribution or its dispersion, 	S
A	True	
В	True	

Qu 33	DROP DOWN	
	A (histogram) is a chart that shows a groupe frequency distribution. The area of each bar (proportional to) the frequency represented.	ed is
A	histogram	
	bar chart, pie chart, Venn diagram	
В	proportional to	
	equal to, larger than, smaller than	

Qu 34	DROP DOWN	
	Dispersion of data can be measured by usin the (standard deviation). The (symmetry) of distribution can me measured by its skewne	g a ss.
А	standard deviation	
	variance, mean, range	
В	symmetry	
	size, median, mode	



Qu 35	 True or False a) The design of a questionnaire needs to consider the type of respondent. b) The design of a questionnaire needs to consider the method used for data collection. 	5
A	True	
В	True	

Qu 36	 True or False a) Random sampling involves placing the sample population into suitable groups with common characteristics. b) Systematic sampling collects data from members of a population at regular intervals.
A	False
В	True
Qu 37	DROP DOWN Data that has been collected and is yet to be processed is known a (raw) data. It can be analysed to look for (patterns).
A	raw basic, useful, valuable
В	patterns differences, similarities, anomalies



Qu 38	 True or False a) For data to be valid, it should always a straight-line when plotted on a grap b) Venn diagrams show data in a circle, the size of angle of each arc indicatin the frequency. 	form h. with g
A	False	
В	False	

Qu 39	 True or False a) For data relating to time periods, trend refers to the long-term behaviour of the data. b) Seasonality relates to periodic fluctuations that repeat at fixed intervals of time.
A	True
В	True

Qu 40	DROP DOWN Time series, such as share prices, have a very high (random) component and forecasts for these series will be subject to a high degree of (error).	
A	random reliability, prediction, trend	
В	error cost, change, predictability	



Qu 41	 True or False a) The two variables in a scatter graph a referred to as independent variables. b) Where no correlation if observed, this known as non-linear correlation. 	are s is
A	False	
В	False	
Qu 42	DROP DOWN The line of best fit is obtained when the (sum) of the squares of the (errors) is minimised.	
A	sum number, average, magnitude	
В	errors values, data, variables	

Qu 43	 True or False a) Forecasting involves the use of personal insight and experience, as well as quantitative techniques. b) Moving averages are used to smooth out 	
	fluctuations in data for regular time periods.	
A	True	
В	True	



Qu 44	DROP DOWN (Moving) averages enable forecasts to be made based on a fixed number of observations and ignore all older values. Their sensitivity can be changed by altering the (number) of observations within each time period.	
A	Moving Different, All, Estimated	
В	number frequency, magnitude, type	

TOTAL AVAILABLE MARKS = 100