Spreadsheets – 2022 IT AS 9626

1. Nov/2022/Paper_11/No.7

Spreadsheet models can be used to forecast the population growth of humans.

Analyse the effectiveness of using a spreadsheet model for this purpose.

· · · · · · · · · · · · · · · · · · ·
\sim
C °
*

2. Nov/2022/Paper_12/No.4(a)

Here is a spreadsheet created by the organisers of a concert. They have assumed that 400 people will attend the concert. They have also assumed that each member of the audience will purchase 2 snacks and 2 drinks during the concert. If these assumptions are correct, their profit will be \$710.

1	A	В	С	D	
1		Estimat	ed audience size	400	
2					
			Quantity per		
3		Price		Income	
4	Tickets	\$40	1	\$16,000	
5	Drinks	\$2	2	\$1,600	
6	Snacks	\$3	2	\$2,400	
7	Souvenirs	\$20	1	\$8,000	
8	Programmes	\$15	1	\$6,000	
9			Total income	\$34,000	
10					
11				Paid out	
12	Electricity			\$650	
13	Performers			\$22,000	
14	Drink supplies			\$860	
15	Snack supplies			\$880	
16	Venue hire			\$5,000	
17	Souvenir supplies			\$2,400	
18	Programme supplies			\$1,500	
19			Total outgoings	\$33,290	
20					
21			Profit/Loss	\$710	
22					
77	1				

A number of factors could affect the amount of profit.

- The audience size might be higher than the organisers estimated.
- Members of the audience might not buy 2 snacks and 2 drinks.
- The cost of souvenir supplies might change.
- (a) Explain how the organisers could use what-if analysis to see the effects of these three factors on their profit. You should refer to specific cells from the spreadsheet in your answer.

**	
	. [3]

3. June/2022/Paper_11/No.7

Automatic re-calculation is one of the characteristics of spreadsheet models. This means it is not necessary to evaluate a formula every time you change it.

Describe other characteristics of spreadsheets that make them suitable for creating models.

.0,
~?
re1
[6]

4. June/2022/Paper_13/No.9

Insurance consultants have to make decisions about whether or not to accept a customer's application for an insurance policy. They often use expert systems to help them assess the risk involved.

(a) Such a system would have a knowledge base, which consists of a database of facts and a rules base.

Describe the other components of this expert system.

	~~~
	[4]
(b)	Explain how this insurance expert system would be used by the consultant and how it would
	assess the risk.