Modelling - AS 9626

1. Nov/2021/Paper_13/No.13

A developer is designing a user interface for one specific user. The developer has been provided with the user's mental model to help with the design.

Describe what a mental model is, and give the benefits to the user of this method of design.

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2. June/2021/Paper_12/No.10

Many nuclear reactions are simulated rather than being carried out in real life.

(a) Describe three advantages of using a computer-based model to run a simulation for these reactions.

(b)	Describe two disadvantages of using a computer-based model to run a simulation for these reactions.
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	[2]

Mar/2020/Paper_12/No.2 3.

For each of the two tables below, tick the most accurate statement referring to the use of simulation in pilot training.

(a)

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The running and maintenance costs of a flight simulator are far greater than those of an actual aircraft	
Dangerous situations can be simulated without putting the trainee pilot's life at risk	
It is more difficult to simulate adverse weather conditions in a flight simulator	
The level of noise in a flight simulator is far louder than in an aircraft	[

(b)

	1
The pilot has to be able to use spreadsheet software efficiently	
There is no limit to how many 'g' a simulator can subject a pilot to, and for how long	
The simulator response will always be exactly the same as an actual aeroplane, as there are so few variables	
Sometimes pilots become overconfident after training on the simulator	
Papa	[1]

4. June/2020/Paper_11/No.7

Designers of user interfaces tend to base their designs on what they interpret to be a user's mental model.

Evaluate, by weighing up the advantages and disadvantages, the use of a mental model to design a user interface.

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5. June/2020/Paper_12/No.11

Mary has been put in charge of the computerised school weather station. At the moment the system has a monitor to show the outputs. She wants to replace the monitor with a printer.

By weighing up the advantages and disadvantages, evaluate the system having a monitor rather than a printer.

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