Cambridge International AS & A Level

COMPUTER SCIENCE **9618/12**

Paper 1 Theory Fundamentals **May/June 2021**

Excel in Your O & A Level Studies!

Get expert **Online Tuition** and comprehensive **Past Paper Solutions** for **Cambridge O & A Levels**.

- Experienced guidance
- Solved past papers with detailed explanations
- Interactive online classes
- Focused exam preparation for top grades

Contact us on WhatsApp: +92 345 4231525

https://babacambridgesolutions.com/

2 Aisha manages a team of software developers.

(a) Explain the reasons why it is important that Aisha acts ethically in relation to her team members.

.....

(b) The team are developing a computer game where the user plays a board game (such as chess) against the computer.

Describe how the computer would use Artificial Intelligence (AI) to play the board game.

.....

(c) The final game will be released under a licence.

Tick (✓) **one or more** boxes in each row to identify the licence(s) each statement describes.

Statement	Free Software Foundation	Open Source Initiative	Shareware	Commercial Software
The user can edit the source code				
The user **must** always pay before being able to use the software				
The user can redistribute the software				
The user always gets a trial period				

Solution:

(a)

1. Creates a positive working environment
2. Improves productivity

(b)

Computer will use the AI to stores the current state of the board and generates all legal moves. It evaluates each possible move by considering factors such as the value of pieces, board position, and the opponent's likely responses. The AI searches several moves ahead, compares the possible outcomes, and selects the move with the highest evaluation score. After each turn, it updates the board and repeats the process. In more advanced games, the AI may also learn from previous games to improve its strategy over time.

(c)

Statement	Free Software Foundation (FSF)	Open Source Initiative (OSI)	Shareware	Commercial Software
The user can edit the source code.	✓	✓	✗	✗
The user must always pay before being able to use the software.	✗	✗	✗	✓
The user can redistribute the software.	✓	✓	✓	✗
The user always gets a trial period.	✗	✗	✓	✗