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|  | **Entrance Examination**  **March 2022** |
| **INFORMATION TECHNOLOGY**  Time allowed: 1.5 hours (90 minutes)  **Answer TWO of the three questions**  Each question answered will be worth 50 marks | |

**Question 1**

a) What is FTP and what does it do? How and why might a company use FTP instead of email?

[12 marks]

b) Explain the terms Internet and Intranet and the differences between them. Discuss how a company might use them

[16 marks]

c) The Covid pandemic has transformed the way in which many businesses work.

Extensively consider the likely effects that of these changes on IT provision, the effectiveness of team working, and the environmental credentials of companies. Your answer should consider a range of different types of companies, and should cover whichever IT areas that you consider to be relevant.

[22 marks]

**Question 2**

a) The following are among types of software packages commonly used in businesses:

* Word processing
* Email clients
* Spreadsheets
* Videoconferencing software

For each of the above, name two programs that perform that task.

[8 marks]

b) Describe how a typical small business might use each kind of application. In your answer briefly describe the business itself, and then describe how that business might use each kind of application from part a, and one additional type of application of your choice. Your answer should be supported with multiple examples.

[22 marks]

c) The presentation of information in presentation documents is becoming increasingly dependent on layout, and sometimes on animation. Discuss the challenges that the creator of such a document face as they share it with others and consider what they can do to ensure that what they created is what others actually see. Your answer should mention visual impairments in addition to IT issues.

[20 marks]

**Question 3**

a) A computer fundamentally operates on the binary digits 0 and 1. Therefore, any character has to be encoded as a binary number. In ASCII the letter G has the decimal value 71. Give its value in:

i) Binary

ii) Hexadecimal

You must show your working.

[8 marks]

b) Convert the 16-bit binary number 01110101 11010010 to:

i) Hexadecimal

ii) Decimal

You must show your working.

[8 marks]

c) Clearly explain how the cell referencing system works in a spreadsheet. As part of your answer indicate what the effect of these formulas would be.

i) =K8-K$11

ii) =SUM(G6:H11)

[8 marks]

d) If I have numbers in cells F5, F6, F7 and F8, place the formula =AVERAGE(F5:F8) in cell F9, and I then increase the number in cell F7 by 8, what happens to the value in cell F9 and why?

[5 marks]

e) Explain with examples the purpose of a macro and a formula in a spreadsheet?

[12 marks]

f) Boolean operators are fundamental to many strands of IT. Explain the terms AND, NOT, and XOR. Provide the logic table for each and give examples their use.

[9 marks]

[10 marks]