4.9 COMPUTER STUDIES (451)

4.9.1 Computer Studies Paper 1 (451/1)

SECTION A

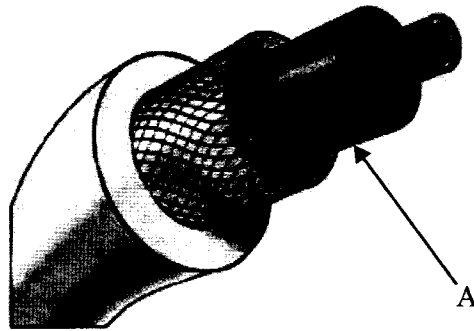*Answer all the questions in this section in the spaces provided.*

1. State the hardware technological differences between the second generation and the third generation computers. (2 marks)

2. State **two** ways of ensuring proper ventilation in a computer room. (2 marks)

3. Convert the decimal number 20.373 to its binary number system equivalent. (3 marks)

8. State the function of each of the following features of an email software:

    (a) Inbox (1 mark)

    (b) Draft (1 mark)

9. (a) Explain the term *toggle key* as used in computer keyboard. (2 marks)

    (b) List examples of toggle keys on a computer keyboard. (2 marks)

10. State the type of error that would occur in data processing for each of the following cases:

    (a) Entering the number 315 instead of 351. (1 mark)

    (b) Entering the text "Kwys" instead of "Keys". (1 mark)

14. State **three** factors to consider when selecting an operating system to instal in a computer. (3 marks)

15. Differentiate between *analogue data* and *digital data* as used in computers. (2 marks)

SECTION B

*Answer question 16 and any other **three** questions from this section.*

16. (a) Explain the term *dry running* as used in program development. (2 marks)

    (b) Explain **three** properties of an algorithm. (6 marks)

    (c) To qualify to get a driving license, an applicant must be 18 years or over. Ten candidates applied for the driving license test. Draw a flow chart that would read the name and age of an applicant and display the names of those who qualify. (7 marks)

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17. (a) State **four** outcomes that may result from using incorrect requirement specifications during systems development. (4 marks)

(b) A school opted to use direct change over approach when installing a new system. Explain **three** challenges that the school may face as a result of this approach. (6 marks)

(c) State **three** reasons that may lead an organisation to instal an intranet. (3 marks)

(d) The figure below shows a coaxial cable. State the function of the part labelled A. (2 marks)

18. (a) State **three** hardware devices that may be required to connect a computer to an existing local area network. (3 marks)

(b) A publisher intends to use a desktop publishing programme to create a publication which is to have many graphics. State **three** ways in which the graphics may be acquired for this purpose. (3 marks)

(c) Interpret each of the following spreadsheet formula:

(i) = countif(D2:D9, ">"&B4) (2 marks)

(ii) =sumif(B3:B11, "4M", D3:D11) (2 marks)

(d) (i) The following are the fields of products table in a database created to store records of products manufactured in a factory:
- product number
- product name
- price
- product description

I. State the appropriate data type for each field. (2 marks)

II. State **three** properties to be put in place during table design to ensure integrity of the data entered. (3 marks)

19. (a) Explain **three** features of a graphical user interface as used in computers. (6 marks)

(b) State the function of each of the following computer keyboard keys:

(i) Caps Lock (1 mark)

(ii) Shift (1 mark)

(iii) Home (1 mark)

(c) Using *two's complement* notation, determine the value of the operation $25_{10} - 29_{10}$.
(6 marks)

20. (a) Distinguish between *Computer Aided Instruction* (CAI) and *Computer Aided Learning* (CAL). (4 marks)

(b) (i) State **four** activities that may be carried out when disposing off an old system in an organisation. (4 marks)

(ii) State **four** ways of getting user specifications during systems design. (4 marks)

(c) State **three** benefits gained from the advancement in technology in the music industry.
(3 marks)