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**Computer Studies (451/1) Theory – PAPER ONE**

**Form 4 End of Term 2**

**TIME: 2HOURS**

**Section A (40marks) Answer All the questions in this Section.**

1. a) Define the term computer virus. [2mks]

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 b) Give **four symptoms** of a computer infected by virus. [2mks]

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2. Give **three factors** to consider when selecting an **Operating System** to install in your computer. [3mks]

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3. Give **two advantages** of DTP over a word processor. [2mks]

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4. State **three characteristics** of a user friendly program. [3mks]

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5. Give four ways of minimizing the effects of radiation from the display screen. [2mks]

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6. Differentiate between **soft return** and **hard return**. [2mks]

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7. State three possible causes of fire outbreak in a computer laboratory. [3mks]

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8. State four ways in which a programmer can make program code easy to follow. [4mks]

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9. State three reasons why it is important to define data types of field in a database correctly. [3mks]

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10. State three causes of resistance to the introduction of Information and Communication Technology to the place of work by employees. [3mks]

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11. List three factors to consider before choosing a storage device for backup. [3mks]

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12. Explain the purpose of a Video RAM as used in computing. [2mks]

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13. Explain the concept behind Environmental Protection Agency (EPA) energy star. [2mks]

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14. Some devices have a combination of input and output functionality. State four such devices. [2mks]

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15. Convert 37410 in to BCD notation [2mks]

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16. a) Distinguish between interpreters and compilers [2mks]

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b) State any **two** activities that occur in a program compilation process. [2mks]

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 c) Define the term structured programming [1mk]

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d) Use the flowchart below to answer questions that follow. Write a pseudo-code for the flowchart below. [10mks]

N =1,sum=0, C = 1

Sum=Sum + N, N=N+2, C=C+1

Is C>50?

Avg=sum/C

Sum , Avg

Y

N

17. (a) What is Virtual reality? [2mks]

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 (b) Explain the following interactive sensory equipment used in virtual reality: [2mks]

 (i) Head gear.

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 (ii) Body suit

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 (c) (i) What is Artificial Intelligence? [2mks]

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 (ii) State and explain three components of an experts system. [6mks]

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 (d) State three physical features of human beings that can be considered in Biometric analysis. [3mks]

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18. a) State and explain any four operating system disk management utilities. [8mks]

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b) i) What is system maintenance? [2mks]

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 ii) **Define** the following terms in relation to computer software. [3mks]

 a) Free ware.

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 b) Propriety

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 c) Open source

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iii) List any four likely causes of data and program loss in a computer system? [2mks]

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19. a) Distinguish between transcription and transposition types errors and give an example of each. [6mks]

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b) List four activities carried out by data processing system. [2mks]

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c) State two application areas of real time systems. [2mks]

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d) i) What is a computer network topology? [2mks]

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 ii) Briefly explain three reasons why organizations need to network their computers. [3mks]

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20. a) An individual has a right to demand guarantee to privacy of personal information stored on a computer. Give three such types of information. [3mks]

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b) Describe two ways in which a computer can represent a positive and negative. [2mks]

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c) A particular computer stores numbers in a single 8-bit word. How would it represent 0.312510. [3mks]

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d) Using 8-bits binary, perform the following subtraction 710 – 410 in binary form. Leave your answer in decimal notation. [7mks]

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