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ATD LEVEL I

DCM LEVEL I

INFORMATION COMMUNICATION TECHNOLOGY

TUESDAY: 24 November 2020.   **Time Allowed: 3 hours.**

Answer any FIVE questions.   **ALL questions carry equal marks.**

QUESTION ONE

(a)   Describe four trends that have characterised the development of Information Communication Technology (ICT) infrastructure.   (4 marks)

(b)   Explain the meaning of the following concepts of a computer file:

   (i)   Hit rate.   (2 marks)

   (ii)   Sort.   (2 marks)

   (iii)   Append.   (2 marks)

   (iv)   Seek.   (2 marks)

(c)   (i)   State two functions of primary memory in a computer system.   (2 marks)

   (ii)   Recommend with a reason the major memory design constraint that must be given due consideration by the computer designer.   (2 marks)

(d)   Examine two performance metrics that could be applied by an organisation in assessing the investment in information technology (IT) infrastructure.   (2 marks)

(e)   Recommend the suitable media for the following file access methods:

   (i)   Random.   (1 mark)

   (ii)   Direct.   (1 mark)
                                                                                              (Total: 20 marks)

QUESTION TWO

(a)   (i)   Explain the term point-and-draw devices.   (2 marks)

   (ii)   List four commonly used point-and-draw devices.   (4 marks)

(b)   State four components of an operating system.   (4 marks)

(c)   Outline four classifications of optical media.   (4 marks)

(d)   Highlight six strategic uses of internet by a software industry.   (6 marks)
                                                                                              (Total: 20 marks)

QUESTION THREE

(a) Propose four relevant information systems that supports the different levels of an organisation giving examples in each case. (8 marks)

(b) State the electronic component used in the following computer generations:

  (i) First. (1 mark)

  (ii) Second. (1 mark)

  (iii) Third. (1 mark)

  (iv) Fourth. (1 mark)

  (v) Fifth. (1 mark)

(c) Examine three measures that could be adopted by both software developers and client organisations to protect software from piracy. (3 marks)

(d) Highlight four reasons for changing from manual to computerised systems. (4 marks)

(Total: 20 marks)

QUESTION FOUR

(a) State four business applications supported by a Desktop Publishing (DTP) package. (4 marks)

(b) Citing two examples in each case, differentiate between "guided" and "unguided" data transmission media. (8 marks)

(c) Describe three types of charts available in a spreadsheet program. (6 marks)

(d) State two commonly used web browser in a web environment. (2 marks)

(Total: 20 marks)

QUESTION FIVE

(a) State four basic evaluation criteria for a flat panel monitor. (4 marks)

(b) (i) Explain the term control as a component of a system. (2 marks)

  (ii) State two components in a computer system which influence its behaviour. (2 marks)

(c) Examine three advantages and three disadvantages of electronic government. (6 marks)

(d) Describe three hardware devices found in a local area network (LAN). (6 marks)

(Total: 20 marks)

QUESTION SIX

(a) Explain the term "clock speed" stating its unit of measure. (2 marks)

(b) Besides operating system, explain giving an example in each, two other components of a system software. (4 marks)

(c) (i) Outline five features of an accounting package. (5 marks)

  (ii) Explain three benefits of an accounting package. (3 marks)

  (iii) List three examples of accounting packages. (3 marks)

(d) Examine three operations done on a file by an operating system. (3 marks)

(Total: 20 marks)

QUESTION SEVEN

(a)   Identify three types of a computer mouse.   (3 marks)

(b)   Categorise the following peripheral devices in terms of input, output and storage devices:
        Hard disk, sensor, speaker, flash memory, digital camera, bar code reader.   (6 marks)

(c)   Assess two positive and two negative impacts that information communication technology (ICT) has had on people.
                                                                                               (4 marks)

(d)   One of the biggest negative impacts of the internet is the "internet addiction disorder (IAD)".

        Required:
        (i)   Explain the meaning of IAD.   (2 marks)

        (ii)   Identify three symptoms of IAD.   (3 marks)

(e)   List two limitations of computer files.   (2 marks)
                                                                                     (Total: 20 marks)

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