KASNEB

DICT LEVEL II

COMPUTER SUPPORT AND MAINTENANCE

PILOT PAPER

September 2015.   Time Allowed: 3 hours.

Answer ALL questions. Marks allocated to each question are shown at the end of the question.

QUESTION ONE

(a) (i)   Describe the function of a "logic pulser".   (2 marks)

     (ii)   Highlight six personal computer (PC) problems related to the power supply.   (6 marks)

(b) Outline six factors to consider when selecting a motherboard.   (6 marks)

(c) Tabulate three key differences between DRAM and SRAM.   (6 marks)
                                                                                          (Total: 20 marks)

QUESTION TWO

(a) Differentiate between "incremental backups" and "differential backups".   (4 marks)

(b) Cosmic rays and other radiation events are the major cause of soft errors.

     Required:
     List five other causes of soft errors.   (5 marks)

(c) Explain the function of transient response as used in power supply.   (2 marks)

(d) (i)   Describe a protected mode processor.   (3 marks)

     (ii)   Write six key features of a PCI express bus.   (6 marks)
                                                                                          (Total: 20 marks)

QUESTION THREE

(a) (i)   Describe a memory mapped file.   (2 marks)

     (ii)   Differentiate between persistent memory mapped file and a non-persistent memory mapped file.   (4 marks)

(b) Highlight five events that could be diagnosed as resource conflicts.   (5 marks)

(c) Outline four main local buses found in a computer.   (4 marks)

(d) List five PC maintenance tools.   (5 marks)
                                                                                          (Total: 20 marks)

QUESTION FOUR

(a) (i)   Define a "refurbished computer".   (1 mark)

     (ii)   Highlight two advantages and three disadvantages of refurbished computers.   (5 marks)

(b) Differentiate between an "implied warranty" and an "express warranty".   (4 marks)

(c) Describe the following types of flat panel display technology:

     (i)   Liquid crystal panels.   (5 marks)

     (ii)   Plasma panels.   (5 marks)
                                                                                          (Total: 20 marks)

QUESTION FIVE

(a) Explain functions of the following software programs:

    (i)   Scandisk.   (2 marks)

    (ii)   Chkdsk.   (2 marks)

(b) Explain three challenges of electronic waste management in developing countries.   (6 marks)

(c)   (i)   Identify two motherboard form factors.   (2 marks)

    (ii)   Outline the steps involved when installing a motherboard on a computer.   (8 marks)

(Total: 20 marks)

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