

KASNEB

CICT PART I SECTION 1

INTRODUCTION TO COMPUTING

MONDAY: 22 May 2017.

Time Allowed: 3 hours.

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

QUESTION ONE

(a) A company XYZ Ltd. wanted to develop a warning lamp to light if any of the following occur:

- All systems are down.
- Systems A, B down but C is okay.
- Systems A, C down but B is okay.
- System A down but B, C are okay.

Required:

- (i) Define the problem arising from the above scenario and formulate its truth table. (5 marks)
- (ii) Write its simplified logic equation and draw its logic table. (5 marks)
- (b) (i) Convert 11011.011 base 2 to base 10. (2 marks)
- (ii) Convert 5DEA base 16 to base 8. (2 marks)
- (iii) Compute 4DA1 base 16 – 45B base 16. (2 marks)
- (c) Recommend the metrics used to determine the following hardware evaluation criterion:
- (i) Reliability. (2 marks)
- (ii) User friendliness. (2 marks)

(Total: 20 marks)

QUESTION TWO

(a) Discuss the five components of an information system. (10 marks)

(b) When installing a computer software, the user has the option of choosing between “express setup” and “custom setup”.

Required:

Distinguish between “express setup” and “custom setup”. (4 marks)

(c) You have been employed as a computer technician.

Required:

Highlight six maintenance activities you would be carrying out on a daily basis. (6 marks)

(Total: 20 marks)

QUESTION THREE

(a) Describe the three additional steps of expanded data processing cycle. (6 marks)

(b) Explain the following types of computer keyboard keys:

- (i) Alphanumeric keys. (2 marks)
- (ii) Punctuation keys. (2 marks)
- (iii) Special keys. (2 marks)

(c) Discuss four main steps in bootstrapping process of a computer system. (8 marks)

(Total: 20 marks)

CT11 Page 1

Out of 2

QUESTION FOUR

- (a) The main objectives of an office information system is to facilitate communication between members of an organisation and between the organisation and its environment.

Required:

Suggest five uses of an office information system. (5 marks)

- (b) Outline five computer mouse standard semantic gestures. (5 marks)

- (c) Examine the differences between “cache memory” and “virtual memory”. (10 marks)

(Total: 20 marks)

QUESTION FIVE

- (a) Information communication technology (ICT) programs help to open the doors to a rewarding profession that emphasises multiple skill sets, and allows students to pursue various options in traditional ICT, traditional communications or new combined careers.

Required:

Suggest four reasons why a career in ICT could be rewarding to an ICT student. (4 marks)

- (b) The main types of computer network topologies are ring, bus and star.

Required:

Explain a situation where each of the above topologies would be most appropriate to install. (6 marks)

- (c) Identify two situations that would necessitate one to clear complementary metal-oxide-semiconductor (CMOS). (2 marks)

- (d) The performance of a computer system is important as users want the best possible performance of the computer they wish to buy.

Required:

Summarise eight factors that would contribute to the overall performance of a desktop computer. (8 marks)

(Total: 20 marks)

.....