

1920/201
COMPUTER MAINTENANCE AND SUPPORT
July 2018
Time: 3 hours



THE KENYA NATIONAL EXAMINATIONS COUNCIL
CRAFT CERTIFICATE IN INFORMATION TECHNOLOGY
MODULE II
COMPUTER MAINTENANCE AND SUPPORT

3 hours

INSTRUCTIONS TO CANDIDATES

This paper consists of TWO sections; A and B.

Answer ALL the questions in section A and any FOUR from section B in the answer booklet provided.

Candidates should answer the questions in English.

This paper consists of 4 printed pages.

Candidates should check the question paper to ascertain that all the pages are printed as indicated and that no questions are missing.

SECTION A (40 marks)

Answer **ALL** the questions in this section.

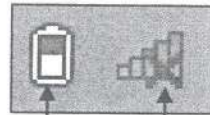
1. Outline **four** factors that should be considered when selecting a *power supply unit*, other than cost. (4 marks)
2. Explain **two** circumstances under which an organization may use *uninterruptible power supply unit (UPS)* for computer systems. (4 marks)
3. Paul was diagnosing a faulty motherboard and found out that it had bloated capacitors. Explain **two** possible causes of this problem. (4 marks)
4. Explain **two** goals of establishing an inventory of computers in an organization. (4 marks)
5. Differentiate between *volatile* and *non-volatile* memory as used in computer systems. (4 marks)
→ DRAM *→ ROM*
EXPENSIVE
6. Explain **two** types of *scanners* that could be used with computers. (4 marks)
7. (i) Explain the term *sector* as used in magnetic disks. (2 marks)
(ii) Describe the term *virtualization* as used in computers. (2 marks)
8. Distinguish between *spike* and *brown out* as used in computers power supply. (4 marks)
9. Explain each of the following disk storage technologies as used in computer systems:
(i) optical; (2 marks)
(ii) magnetic. (2 marks)
10. Mary was required to advise her boss on how old computers could be disposed. Explain **two** environmentally safe methods that she could recommend. (4 marks)

SECTION B (60 marks)

Answer any **FOUR** questions from this section.

11. (a) Outline **four** hard disk *utilities* that could be found in operating systems. (4 marks)
- (b) Outline **five** factors that could be considered when selecting a *Random Access Memory (RAM)* chip, other than cost. (5 marks)
- (c) With the aid of a diagram, describe the parts of a computer system. (6 marks)

12. (a) Figure 1 shows notification signs in a laptop computer. Use it to answer the question that follows.



(i) (ii)

Figure 1

- Outline the function of each of the signs labeled (i) and (ii). (4 marks)
- (b) Peter was troubleshooting a printer that was showing *offline status* in the printer properties dialog box. Explain **three** possible remedies for this problem. (6 marks)
- (c) List **two** types of computer monitors. (1 mark)
- (d) Distinguish between *serial* and *parallel* ports as used in computers. (4 marks)
13. (a) Salome was required to carry out computer literacy training for a group of employees at their respective work stations.
- (i) Explain the appropriate training method that she could use. (2 marks)
- (ii) Explain **two** challenges that she could experience while using the training method identified in (i). (4 marks)
- (b) Lucas stored several documents in his flash disk from a computer in a cybercafé. On getting home he found that the flash disk was empty.
- (i) Assuming that the flash disk was in a good condition, outline the possible cause for the loss of the stored documents. (1 mark)
- (ii) Outline **four** measures that he could use to mitigate the cause identified in (i). (4 marks)
- (c) John chose to use NTFS over FAT 32 file system while preparing his disk. Outline **four** features of NTFS that could have influenced his choice. (4 marks)
14. (a) A motherboard serves as a platform for several components in a computer system.
- (i) Outline **three** examples of *expansion slots* that could be found on it. (3 marks)
- (ii) Outline **four** examples of hard disk interfaces that could be found on it. (4 marks)

(b) Explain the function of each of the following combination keys that could be used during the power on self test (POST) process in a computer system:

(i) Control + F5; (2 marks)

(ii) Control + F10. (2 marks)

(c) Figure 2 is a diagram of a processor socket LGA 775 on a motherboard. Use it to answer the question that follows.

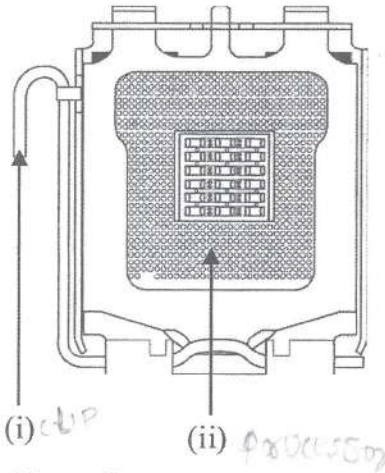


Figure 2

Outline the function of each of the parts labeled (i) and (ii). (4 marks)

15. (a) *Passive computer maintenance* is a continuous routine for computer technical officers. Outline **three** activities that could be carried out during the exercise. (3 marks)

(b) Ann was required to assemble a computer during a job interview. Outline **four** factors that she should consider while carrying out this task. (4 marks)

(c) XYZ Company Ltd. intends to use *unattended* software installation approach for its computer system. Explain **two** benefits that the company could realize. (4 marks)

(d) Differentiate between *parallel* and *pipelining* processor technologies. (4 marks)

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