INSTRUCTION TO CANDIDATES

- Write your name and index number in the spaces provided above
- This paper consists of Two sections A and B.
- Answer ALL questions in section A.
- Answer question 16 and any other THREE questions from section B.
- All answers should be written in the spaces provided on the question paper.

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This paper consists of 8 printed pages. Candidates should check the question paper to ensure that all pages are printed as indicated and no questions are missing.
SECTION A (44 MARKS)
Answer all the questions in this section.

1. Explain why a computer is described as an electronic device. (1 mk)

2. List three things that should be considered when categorizing computers. (½ mk)

3. List any three characteristics of first generation computers. (3 mks)

4. a) Dickson wanted to install computers into a room without windows. Give Dickson four ways of ensuring proper ventilation into this room.

b) State the effect of powder fire extinguisher to the computer in a laboratory.

5. a) i) Give the difference between a share ware and free ware used with software. (2 mks)

ii) Give the difference between a keypad and a keyboard (1 mk)

b) Differentiate between a computer and a computer system. (2 mks)

6. a) Explain the difference between type over and insert mode in word processing. (2 mks)

b) i) List any four menus on the menu bar of the MS — WORD. (1 mk)

ii) What does the word hard return mean in MS. word? (1 mk)
7. a) Differentiate between expert system and artificial intelligence. (2mks)

b) i) Explain briefly the role played by the environmental protection agency (EPA). (1mk)

ii) Explain how information and communication technology has contributed adversely to environmental pollution. (2mks)

8. a) State the uses of the following network devices. (2mks)

i) Hub

ii) Switch

b) i) Define the term protocol. (1mk)

ii) Distinguish between thinnet and thicknet coaxial cables. (2mks)

9. a) Draw a diagram showing the analog and digital signals respectively. (2mks)

Digital signals

Analog signals

b) Convert $(1.011)_2$ to a decimal number. (3mks)

10. What is the difference between batch processing and multi programming as used in data processing? (2mks)

11. What is the meaning of BIOS and what is its role in computer. (1mk)

12. Define the term “direct access” as used with read/write head. (1mk)
13. What is a brouter used in networking. (1mk)

14. What do you understand by the term “hard system” in a system development? (1mk)

15. State one reason that may lead to computer fraud.

SECTION B (60 MARKS)
Answer question 16 and any other three questions from this section in the spaces provided.

16. a) A technician charges fees based on the number of hours worked as follows:
   two hours or less, a fee of $90.00 per hour.
   up to six hour a fee $75.00 per hour.
   more than 6 hours, a fee of $60.00 per hour.
   Write a structured algorithm to input the hours worked. The algorithm should output the hour worked and the fee charged. (4mks)

b) Assume you want to write a program that computes your tax earnings for one week of work at a first — food restaurant. A payroll problem is a typical programming problem. Use the following data for week.
   Number of hours worked for a week = 20 hours.
   The hourly pay rate = $5.00 per hour.
   Your tax rate = 20% tax rate.

i) Write a pseudo code for the above problem. (5 mks)

ii) Draw a flowchart for the above problem. (5mks)
17. a) List **four** characteristics of a system (4mks)

b) Give any **three** circumstances that may make an organization to develop a new information system (3mks)

c) State any **two** factors that may be considered in order to design a good file (2mks)

d) List down **four** uses of a multimedia (4mks)

e) List any **two** functions of operating system (2mks)

18. a) Differentiate between margins and column guides (2mks)

b) Explain the uses of any four tools found on page maker toolbox (1mks)

c) What are the three main purposes of desktop publishing software (3mks)

d) Explain the following:
   i) Font type style (1mk)
   ii) Line stroke (1mk)

19. a) Explain the functions of each of the following in computer studies (4mks)
   i) File server
   ii) Network interface card
(iii) Network operating system

(iv) Cables in LAN

b) List three standards to which integrated software must conform to. (3mks)

c) What do the term header and footer mean? (2mks)

d) i) What do you understand by the terms scaling and cropping.

ii) Describe the WYSIWYG display as used in a publication. (2mks)

20. a) Define the following terms. (3mks)
i) Record

ii) File.

iii) Database

b) i) List any three ways of dealing with virus on a computer. (3mks)

ii) Explain the functions performed by:
   a) The control unit

   b) Arithmetic and logic unit (ALU)

   c) Main memory: