

Name: ..... Index no .....

School: ..... Candidate's sign .....

Date: .....

451/1  
COMPUTER STUDIES  
PAPER 1 (THEORY)  
TIME 2 ½ HOURS.

## LANET JOINT EVALUATION(LANJET 2022)

451/1  
COMPUTER STUDIES  
PAPER 1

### 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(**compulsory**) and any other **THREE** questions from section **B**.
- All answers should be written in the spaces provided on the question paper
- This paper consists of 12 printed pages. Candidates should check the question paper to ensure that all pages are printed as indicated and no questions are missing

### FOR OFFICIAL USE ONLY

SECTION	QUESTIONS	CANDIDATES SCORE
A	1-15	
	16	
B	17	
	18	
	19	
	20	
	<b>TOTAL SCORE</b>	

**SECTION A**

1. Define the following terms as used in word processing. (3 marks)

a. Word wrap

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b. Justification

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c. Drop cap

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2. State three advantages of using computers in performing day to day's tasks. (3marks)

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3. Wanja operates a bookshop in a town. Lately he is finding the task of managing daily transactions manually overwhelming.

i. Identify the type of management information system that Wanja should acquire (2 marks)

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ii. State two benefits that Wanja will gain from using such a system (2 marks)

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4. State three hardware considerations that need made before installing an operating system (3marks)

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5. Before the end of every month an electricity service provider sends out field officers to take consumer meter readings. The data collected by the officers is then keyed into the computer. The system then generates utility bills which are printed and sent to the consumers.

a) State two transcription errors that are likely to occur during meter reading or input (2 marks)

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b) State two ways such errors can be avoided (1 mark)

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6. State three editing tools that are available in most standard word processing software (3 marks)

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7. Information security should be enforced both physically and logically.

a. Differentiate between the two security mechanisms (2 marks)

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b. State two physical security techniques (2 marks)

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8. Explain three types of system buses found on the computer system board (3 marks)

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9. State the four disk management tools found in most operating systems. (3 marks)

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10. Highlight the dangers associated with the following:

i. Exposing computers to high humidity (1marks)

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ii. Purchasing software before assessing requirements (1marks)

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iii. Using foreign flash disks on the computer. (1marks)

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11. Differentiate between a filter and a query in a database (1 marks)

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12. The payroll system is both a financial system and a human resources system. Explain this statement. (2marks)

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13. Explain the importance of the following spreadsheet operations.

a. Freezing columns (1mark)

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b. Data validation (1 mark)

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14. List two ways in which computer technology can be used in law enforcement (1 marks)

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15. In reference to aviation technology, state two advantages of using simulation in training pilots (2mks)

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**SECTION B (60 MARKS)**

Answer question 16(compulsory) and any other THREE questions from this section.

16. State the stage of program development in which: (4 marks)

a. A flowchart would be drawn

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b. The programmer would check whether the program does as required

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c. The user guide would be written

d. The requirements specifications would be written

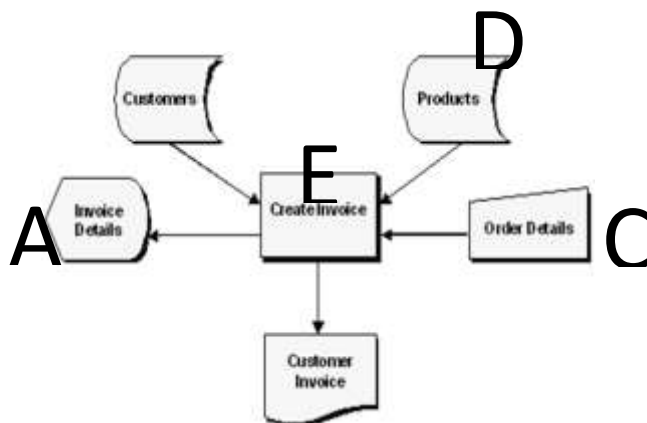
b). A programmer uses program design tools to design a program that can list the odd numbers between 0 and 100.

b). (i). Write a pseudo code for this problem. (5mks)

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ii). Draw a flow chart for the pseudo code in 16 b) (i) above. (6mks)

iii) Study the follow flowchart then answer the questions that flow. (4 marks)



**Figure 1 Flowchart2**

D) Name all the flowchart symbols used in this flowchart. **(4 marks)**

A: .....

B: .....

C: .....

D: .....

17. Define the term

a. Network topology. **(1 mark)**

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b. Clearly illustrate the following types of network topologies. **(5mks)**

i. Bus topology

ii. Mesh topology

iii. Star topology

c. Explain **two** factors you would consider before enrolling for an ICT course in a college. (2mks)

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d. Differentiate the function SUM and SUMIF as used in spreadsheet. 2mks

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e. State **two** advantages of using fiber optic cables. (2mks)

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f. In system development, testing is one of the critical stages. Give **three** reasons why the testing phase is critical to the systems developer. (3 marks)

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18. A systems analyst has been asked by a doctor to computerize the records she keeps about her patients. He must first of all collect information about the existing system.

a). Describe **four** methods he could use to collect this information. (4mks )

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(a) Once the whole system has been designed it will need to be implemented.

(i) Describe **two** methods of implementation that could be used. 2mks

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(ii) Write down **two** reasons why one of the methods you gave in (b) (i) is better than the other. ( 2 marks)

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(b) After a system is implemented, it is evaluated. Give **two** reasons why a system should be evaluated. ( 2mks)

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(c) State one difference between system flowchart and program flowchart. (2 marks)

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19. Describe each of the following data processing methods and give an example of where they are used. (6mks)

i. Online processing

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ii. Batch processing –

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iii. Real-time–

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(b) Differentiate between the following: (6mks)

(i) Logical file and physical file –

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ii). Master file and back-up file –

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(iii) Random and indexed sequential file organization methods.

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(c) An organization is facing threats to data integrity. Explain **three** ways how the threats can be minimized. (3mks)

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20. (a) Give **one** reason why data and information in a computer system needs to be converted to other number systems other than binary. (1mks)

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(b) Explain **one** reason for use of binary in digital technology. (1mks)

(c) ii). Using twos complement, workout :  $15_{10} - 8_{10}$  in binary form. (4mks)

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(d) Using BCD coding system convert 796 to binary. (3mks)

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(b). Convert each of the following to the number system indicated:

i).  $111.101_2$  to decimal; (3 marks)

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(ii).  $14.6875_{10}$  to binary [3 marks]

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