

INFORMATION TECHNOLOGY

TEST

Multiple Choice Questions - THEORY

- Steps in problem solving involve the following **except**:
 - defining the problem
 - testing the algorithm
 - documenting the program
 - calculating the average
- Which one of the following constructs includes repeating parts of a program:
 - if-then-else
 - case
 - do-while
 - sequence
- The structure that allows a program to branch to one of two paths is called
 - Sequence
 - Iteration
 - Selection
 - Repetition
- English-like statements that represent program logic are also called _____
 - Flowcharts
 - Pseudocode
 - Machine language
 - Low-level languages.
- An if-then-else structure is an example of:
 - Sequence
 - Repetition
 - Selection
 - Ordering
- A /An _____ is a set of step-by-step instructions given to solve a problem. It can be described in many ways.
 - binary code
 - algorithm
 - high-level language
 - recipe
- An Input-Processing-Output (IPO) chart should be produced _____.
 - before the algorithm is written
 - after the flowchart is drawn
 - after the pseudocode is written
 - before the problem is identified
- Which one of the following is used to represent processing activities in a flowchart:
 - numbers
 - program statements
 - symbols
 - letters?

Short Answer Questions - THEORY

9. What are the two major phases in problem solving? (2 marks)
10. Explain the difference between a syntax error and a logic error. (4 marks)
11. What is the purpose of an IPO chart? (4 marks)
12. Consider three algorithms that read two numbers into variables num1 and num2 and:
Algorithm 1 — prints the bigger number
Algorithm 2— prints the smaller number
Algorithm 3 — prints the average of the two numbers.

For each of the above algorithms:

- a. Draw an IPO chart. (2 x 3 marks)

13. Copy and complete the trace table below for the following algorithm.

Trace Table		
X	K	SUM
5	10	
5		
5	20	
5		

```
X = 5
K = 10
Sum = 45
WHILE Sum < 75 DO
SUM = SUM + K
PRINT K, SUM
K = K + X
ENDWHILE
```

(5 marks)

14. Create a Trace Table for the following algorithm?

```
Count = 1
X = 2
WHILE Count < 26 DO
X = X * 2
PRINT Count, X
```

(10 marks)

15. Convert the following code to use a FOR loop.

```
num = 1;
WHILE num < 5 DO
BEGIN
PRINT num
num := num + 1
END
```

(10 marks)

16. Write a structure algorithm that will convert a temperature in Celsius to Fahrenheit. Use the formula

$F = \frac{(9 \times C)}{5} + 32$ where C is the temperature in degrees Celsius and F is the temperature in degrees Fahrenheit. (5 marks)

17. Write a structured algorithm to prompt the user to input the mark a student received in a test. If the mark is less than 60, output the word “Fail”, otherwise output the word “Pass”. (5 marks)
18. Write a structured algorithm to ask the user to input a series of numbers terminated by 0. If the number is greater than 100 print “Number is higher than 100”. If it is less than or equal to 100, print the number. (5 marks)
19. Write a structured algorithm to read a positive integer, which is stored in N, followed by N numbers. Print the total and the average. (5 marks)
20. Design a Flow Chart for the Algorithm in Ques 17. (6 marks)

Questions – PRACTICAL

MS Word

21. In H₂O the number 2 that appears lowered is an example of _____.
 a) superscript b) lowered c) subscript d) power
22. Text that automatically moves to the next line is called.
 a) text wrap b) page wrap c) word wrap d) line wrap
23. The Grammar checks All of the following except
 a) Punctuation b) Spelling c) Duplicate words d) Writing Style
24. What are the two things the “SHIFT KEY” is used for when typing? (5 marks)

MS Excel

25. The function that produces the position of a number or item in a sorted list is:
 a) Count b) Rank c) Sum d) Vlookup
26. The symbol to denote a range Of cells is:
 a) — b) to c) : d) ..
27. A group of cells that form a rectangle on the screen is known as a/an:
 a) address b) formula c) range d) function
28. Explain how you would format a cell containing numbers to Comma Style with one decimal place. (5 marks)

MS Access

29. The term that order data numerically or alphabetically is called:
 a) managing b) querying c) reporting d) sorting
30. The view that looks similar to an Excel spreadsheet is called:
 a) datasheet view b) design view c) query view d) report view
31. The feature used to add data from one table to another table in a database by using:
 a) append b) delete c) sort d) query
32. Give two examples of a paper database. (5 marks)

END OF TEST

Total marks 90