

2022

**COMPUTER FUNDAMENTALS, OPERATING SYSTEMS
AND UTILITIES**

**COMPUTER TECHNIQUE (Paper – I)
(Vocational Stream)**

(Theory)

Full Marks : 100

Time : 3 hours

The figures in the margin indicate full marks for the questions

General Instructions :

- (i) Write all the answers in the Answer Script
- (ii) Attempt Part — A Objective Questions serially
- (iii) Attempt all parts of a question together at one place

(PART : A — OBJECTIVE)

(Marks : 48)

SECTION– I

(Marks : 30)

- 1.** Fill in the blanks from the list of words/phrases given below: $10 \times 1 = 10$

(a) W.O.R.M stands for _____.

(8)

6. Write a short note on Impact and Non-Impact printers.
Give one example of each type. $5 + 1 = 6$
7. Explain multiprogramming and time sharing systems.
 $3 + 3 = 6$
8. Write the syntax and explain the usage of the following DOS commands: $3 + 3 = 6$
- i. Format
 - ii. Diskcopy
9. What is an operator? Describe the arithmetic operators in Excel. $1 + 5 = 6$
10. What is an Assembly language? How does it differ from a High Level Language? $3 + 3 = 6$
11. What is a radio button? Explain list boxes and text boxes. $2 + 2 + 2 = 6$
12. Briefly explain the UNIX file system. Explain Kernel and Shell. $2 + 2 + 2 = 6$

(3)

2. State whether the following statements are *True* or *False*: $10 \times 1 = 10$
- (a) Floppy disks are input as well as output devices.
 - (b) Machine language is user friendly.
 - (c) A Compiled program is a program written in High Level Language.
 - (d) MD command cannot be used to create a multilevel directory structure.
 - (e) DEL and ERASE are two commands with a different purpose.
 - (f) Cursor is a symbol that designates the position on the screen where text or codes will be inserted or deleted.
 - (g) The line at the bottom of the window that shows such information such as the path, page information or location of the insertion point is called the Status bar.
 - (h) Excel prints gridlines by default.
 - (i) Pie charts show the relationship of parts as applied to the total values.
 - (j) The default alignment settings for text and values are left and right respectively.

(5)

- (d) Which of the following is not an output device?
- i. Scanner
 - ii. Printer
 - iii. Touchscreen
 - iv. Flatscreen
- (e) Software designed for a specific purpose is called as
- i. system program
 - ii. application program
 - iii. specific program
 - iv. assembly program
- (f) A storage that supplements the primary internal storage of a computer
- i. secondary storage
 - ii. primary storage
 - iii. back-end storage
 - iv. background storage
- (g) Default extension of File Saved in EXCEL is
- i. .exl
 - ii. .doc

(6)

- iii. .xls
 - iv. .els
- (h) Mail merge is used in Microsoft _____:
- i. ACCESS
 - ii. EXCEL
 - iii. POWERPOINT
 - iv. WORD
- (i) Machine language _____
- i. is the language in which programs were first written
 - ii. is the only language understood by the computer
 - iii. differs from one type of computer to another
 - iv. All of these
- (j) A folder is
- i. an organizational tool used to store files
 - ii. synonymous with directory, but folder is the newer term
 - iii. both (i) and (ii) are correct
 - iv. none of the above

(4)

3. Choose and write the correct answer. $10 \times 1 = 10$

(a) Which of the following is not hardware

- i. Magnetic tape
- ii. VDU terminal
- iii. Printer
- iv. Assembler

(b) Which of the following is a non-impact printer?

- i. Daisy wheel printer
- ii. Drum printer
- iii. Laser printer
- iv. None of the above

(c) The term Active Window means

- i. The window that is currently open
- ii. The active window is designated by a different color toolbar than other open windows
- iii. Both a and b are correct
- iv. None of the above

(7)

SECTION – II

(Marks : 18)

4. Write short notes in not more than three sentences each (Any six). $6 \times 3 = 18$

- a. What are Hybrid computers?
- b. Explain the ASCII representation of data.
- c. Write a short note on RAM
- d. What is the usefulness of PowerPoint?
- e. Write the steps to open a new slide in PowerPoint.
- f. Explain the Word Wrap feature as used in Excel.
- g. What are Bullets and Numbering?
- h. Explain the terms Superscript and Subscript text.

(PART : B - DESCRIPTIVE)

(Marks : 52)

GROUP - I

(Marks : 36)

Answer ANY SIX questions:

5. Write a short note on the characteristics of computers. 6

(2)

- (b) The speed of a dot matrix printer is measured in _____.
- (c) A file name in DOS (including extension) can have a maximum of _____ characters.
- (d) CLS is used for _____.
- (e) A list of options displayed on screen from which one can select a particular function or command is called _____.
- (f) A picture, image or graphic element that one can place on a desktop is called an _____.
- (g) Keyboard shortcut for cut operation is _____.
- (h) Shortcut key combination to specify the character style to Italics is _____.
- (i) Text in _____ is printed above the rest of the text in a line.
- (j) The _____ function key is used for editing cell contents.

List of words/phrases:

F5	bps	8	F2
cps	Ctrl+X	Radio button	11
Write Once Read Many	Clear monitor	icon	Write Only Read Many
Ctrl+I	Clear screen	sorting	4
superscript	subscript	Ctrl+V	merging

(9)

GROUP – II

(Marks : 16)

Answer *any two* questions:

13. What is the difference between Replace and Replace All in Find and Replace operation of Word? How does one Find and Replace special characters in a document?
 $4 + 4 = 8$
14. What are the steps to add Columns and Rows to a table? Explain how cells in a table can be merged.
 $4 + 4 = 8$
15. What is a chart? Describe the steps for creating a chart. Explain the column chart and bar chart along with their main characteristics.
 $2 + 2 + 2 + 2 = 8$

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2022

COMPUTER PROGRAMMING IN C
COMPUTER TECHNIQUE (Paper - II)
(Vocational Stream : Theory)

Full Marks : 100

Time : 3 hours

The figures in the margin indicate full marks for the questions

General Instructions :

- (i) Write all the answers in the Answer Script
- (ii) Attempt Part — A Objective Questions serially
- (iii) Attempt all parts of a question together at one place

(PART : A — OBJECTIVE)

(Marks : 50)

SECTION – I

- 1.** Fill in the blanks from the list of words/phrases given at the end: 1×20 = 20
- (a) An _____ is a sequence of instructions that are used for solving a problem in a systematic way.
 - (b) The _____ units interprets the instructions and carries them out.

9. (a) What is the purpose of 'if.....else' statements ?
Explain with example. 3
- (b) What is the purpose of 'goto' statements ? Explain
with program. 3
10. Write the purpose of the following : $3 + 3 = 6$
- (a) Pre-test loop
- (b) Post-test loop

UNIT- III

11. (a) What is the 'Null terminator' ? Explain. 3
- (b) What is a function? What are the types of
function? Explain. 4
12. (a) What is a structure? Explain its syntax. 3
- (b) What is the declaration of structure? Explain with
example. 4
13. What is Union? What are the declaration of a Union?
Explain with example. $3 + 4 = 7$

- (m) The _____ statement is used to skip a part of
the statements in a loop.
- (n) In an exit-controlled loop, if the body is executed
n times, the test condition is evaluated _____
times.
- (o) A 'for' loop with no test condition is known as
_____ loop.
- (p) An array can be initialized either at compile time
or at _____.
- (q) The variable used as a subscript in an array is
popularly known as _____ variable.
- (r) We can use the conversion specification _____
in scanf to read a line of text.
- (s) The function _____ is used to determine the
length of a string.
- (t) The printf may be replaced by _____ function
for printing strings.

List of Phrases/words :

flowchart	puts	infinite	n+1	3
program	printf()	Run time	ctype.h	strlen
%s	string.h	semicolon	subscripted	while
conditional	pseudocode	processing	algorithm	CU
continue	4	scanf ()	%c	break
equality	switch	CPU	void	main()

3. Choose the correct option from the following questions:

$$1 \times 5 = 5$$

(a) Which of the following is the first step of writing a program

- (i) Pseudocode
- (ii) Flowchart
- (iii) Algorithm
- (iv) None of the above

(b) Which of the following is a/an input devices

- (i) OMR
- (ii) VDU
- (iii) Plotter
- (iv) Both (ii) and (iii)

(c) The 'break' statement is used to exit from–

- (i) An 'if' statement
- (ii) A 'for' loop
- (iii) The 'main' function
- (iv) A C program

(d) To write a small number of mixed string in data files and integer variable to a file, the appropriate function is –

- (i) fputs ()
- (ii) fwrite ()
- (iii) fprintf ()
- (iv) None of the above

(e) Which of the following operator takes only integer operands?

- (i) +
- (ii) *
- (iii) /
- (iv) %

4. Write the following in not more than 4 to 5 sentences each (*Any five*) :

$$3 \times 5 = 15$$

- (a) Flow chart
- (b) Compiler
- (c) Modulus Operator
- (d) System software
- (e) Assignment Operator
- (f) Recursion
- (g) Pseudocode

(4)

2. State whether the following statements are *True* or *False*:
 $1 \times 10 = 10$

- (a) Algorithm is the pictorial representation of the solves problem.
- (b) All arithmetic operator have the same level of precedence.
- (c) The main function of the output unit is to produce results.
- (d) The modulus operator % can be used only with integers.
- (e) The operator $< =$, $> =$ and $! =$ all enjoy the same level of priority.
- (f) The input list in a scanf statement can contain one or more variables.
- (g) The three loop expression used in a 'for' loop header must be separated by comma.
- (h) An exit-controlled loop executes atleast once regardless of condition.
- (i) The continue statement is used to take the execution control to sent iteration on sequence.
- (j) In C, by default, the static variable is zero.

(7)

SECTION – II

(PART : B – DESCRIPTIVE)

(Marks : 50)

Answer ANY TWO questions from *each* UNIT

UNIT– I

- 5. (a) Write the characteristics and purpose of escape sequence characters. 3
- (b) What is C character set. 3
- 6. (a) What is the relational operators? Explain in detail with suitable example. 3
- (b) What are the precedence of Arithmetic operator ? 3
- 7. Distinguish between the following pairs : $3 + 3 = 6$
 - (a) getchar and scanf functions
 - (b) '%c' and '%s' specifications for reading.

UNIT– II

- 8. Write the function and appropriate use of 'while' loop, using its syntax. Give example program. $4 + 2 = 6$

- (c) The pictorial representation of solving the problem is the _____.
- (d) Every program statement in a C program must end with a _____.
- (e) _____ is the combination of Control Unit and the Arithmetic Logic Unit in the Organization of Digital Computer System.
- (f) The _____ function is used to display the output on the screen.
- (g) The logical operator “ = = ” checks for _____ of two value.
- (h) Every program must have a _____ function.
- (i) The expression $15\%4$ evaluate _____.
- (j) When we need to choose one, among number of alternatives, a _____ statement is used.
- (k) Usually while using a string in a program _____ header file is used.
- (l) A set of instruction arrange in a sequential manner is known as _____.

UNIT – IV

- 14.** (a) Distinguish between the following function :-
 $2 + 2 = 4$
 (i) `getc ( )` and `getchar ( )`
 (ii) `feof ( )` and `ferror ( )`
 (b) What is the purpose of `putchar ( )` function. 2
- 15.** (a) What is a pointer? Explain with example. 3
 (b) How a pointer is initialized? Give example. 3
- 16.** Write the purpose or function of the following header file : (ANY TWO) $3 + 3 = 6$
 (a) `ctype.h`
 (b) `string.h`
 (c) `math.h`

★★★

Answer the following queries from the following : $4 \times 4 = 16$

- (a) List and printout of those books name whose price is more than Rupees 250.
- (b) Display those books name starts with the alphabet "S"
- (c) Lists those books whose Edition in 2019.
- (d) List those books which are with students.

10. What is the function and purpose of the SCATTER and GATHER command? 4

Or

Define the memory variable. Explain the ways to create memory variable in Foxpro. $2 + 2 = 4$

2022

DATABASE MANAGEMENT SYSTEM (Using Foxpro)

COMPUTER TECHNIQUE (Paper – III)

(Vocational Stream)

(Theory)

Full Marks : 100

Time : 3 hours

The figures in the margin indicate full marks for the questions

General Instructions :

- (i) Write all the answers in the Answer Script
- (ii) Attempt Part — A Objective Questions serially
- (iii) Attempt all parts of a question together at one place

(PART : A — OBJECTIVE)

(Marks : 30)

1. Fill in the blanks from the list of **words/phrases** given below : $1 \times 10 = 10$

- (a) The Field Name can see upto _____ character long and must begin with a letter.

(8)

DESCRIPTIVE

(Marks : 50)

PART – A

(Marks : 30)

Answer ANY THREE questions from the following

5. (a) Explain the difference between the following
Foxpro command : $2.5 + 2.5 = 5$
(i) SORT and INDEX
(ii) FIND and SEEK
(b) What is a Database file, Records and Field?
Explain. 5
6. (a) What is the purpose of the following Foxpro
command : $2.5 + 2.5 = 5$
(i) SET TALK OFF / ON
(ii) SET STATUS BAR
(b) Briefly explain the compound Index file in Foxpro. 5
7. (a) Explain with example the usage of ANY TWO of
the following : $3 + 3 = 6$
(i) AT ()
(ii) TRIM ()
(iii) IIF ()
(b) What are the advantages of Relational Database?
Explain 4

(3)

2. State whether the following statements are *True* or
False : $1 \times 10 = 10$
- (a) One can use Foxpro functions with SORT and
INDEX.
- (b) A database file can be sorted on a combination of
fields.
- (c) CLEAR command clears text only from the active
window.
- (d) By default, the menu bar is displayed in row 0.
- (e) When a popup is activated the highlight is always
placed on the first bar.
- (f) Nesting of popups is limited to two levels.
- (g) Foxpro commands can be abbreviated but
functions can not be abbreviated.
- (h) CLOSE ALL closes all files in all work areas.
- (i) LOCK () and FLOCK () are identical function.
- (j) INT () returns the integer portion of a numeric
expressions.

(5)

(d) Which of the following is the Primary key field in a ITEM database file –

- (i) IT_NAME
- (ii) IT_PRICE
- (iii) ITEM_NO
- (iv) None of the above

(e) What is the appropriate command to explore the data base file –

- (i) BROWSE
- (ii) APPEND
- (iii) EDIT
- (iv) MOD

(f) The _____ command clears all data from the screen

- (i) CLEAR
- (ii) RESTORE
- (iii) RELEASE
- (iv) None of the above

(6)

(g) Which of the following symbol returns true if a character expression is contained in another character expression –

- (i) #
- (ii)
- (iii) \$
- (iv) **

(h) What is the function which returns the nearest integer that is greater than or equal to the specific numeric expression –

- (i) INT ()
- (ii) CEILING ()
- (iii) ABS ()
- (iv) MIN ()

(i) What is the command to print a particular list of record –

- (i) TO PRN
- (ii) LIST TO PRINT
- (iii) PRINT RECORD TO PRN
- (iv) None of the above

3. Choose and write the correct option: $1 \times 10 = 10$

(a) Which of the following are consider as an attribute

- (i) School
- (ii) Roll No.
- (iii) Primary Key
- (iv) None of the above

(b) Which of the following is the database, where we can store any amount of data, pictures, digitized sound etc.

- (i) General
- (ii) Memo
- (iii) Numeric
- (iv) Float

(c) To open a database file, which will be the appropriate command–

- (i) USE <DATABASE FILE NAME>
- (ii) OPEN <DATABASE FILE NAME>
- (iii) Both (i) and (ii)
- (iv) None of the above

(j) Which of the following function return's a number corresponding to the first key pressed or mouse click in the typehead buffer –

- (i) INKEY ()
- (ii) INLIST ()
- (iii) ISDIGIT ()
- (iv) None of the above

4. Write short notes on the following in not more than three or four sentences each: (*Any Five*) $4 \times 5 = 20$

- (a) SET RELATION
- (b) DISPLAY command
- (c) IF () function
- (d) CREATE command
- (e) Purpose of 'OR' operator
- (f) DELETE command
- (g) The 'INDEX' file
- (h) SET CLOCK

(2)

- (b) The _____ command is used to add more record at the end of any database file.
- (c) While defining the statement file, we need to assign a unique _____ for each field.
- (d) The default date format in Visual Foxpro is _____.
- (e) The extension of a database table file is _____.
- (f) The _____ command is used to exit from Foxpro to DOS.
- (g) The command to modify a report format file is _____.
- (h) ROUND (189.89.0) RETURNS _____.
- (i) _____ function returns the expression with the lowest value.
- (j) _____ function returns the value of e raised to the power of $n^{\text{th}}(e^n)$.

Lists of Words/Phrases/Commands:

Add	American	.DBF	8 Letter	190
Field Name	Modify Report	QUIT	append	MIN ()
MAX ()	10 Letter	exp ()	British	expression

(9)

8. (a) Explain 'COPY TO ARRAY' and 'APPEND FROM ARRAY'. 5
- (b) Write a program in Foxpro to print n number of Fibonacci series. 5

PART – B

(Marks : 20)

Answer Question No. 9 and ANY ONE from the rest

9. Consider the following table LIBRARY.DBF with the structure details:

Field Name	Type (Size)	Remark	Example
ISBN	Numeric (4)	A unique number	LB001, LB002...
B_Name	Character (70)	Book Name	Programming in C
SUB	Character (25)	Subject	Computer Science
Author	Character (50)	Writer's Name	B. Balagurusamy
Price	Numeric (8)	Price of the Book	350.00
Edition	Numeric (4)	Year of Publication	2019
Copies	Numeric (3)	Total copy purchased	500
QWS	Numeric (3)	Quantity with students	301
QOH	Numeric (3)	Quantity On Hand	199