

**APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY****Scheme for Valuation/Answer Key***Scheme of evaluation (marks in brackets) and answers of problems/key***APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY**

SECOND SEMESTER B.TECH DEGREE EXAMINATION(R&S), MAY 2019

Course Code: CS100**Course Name: COMPUTER PROGRAMMING (CS, IT)**

Max. Marks: 100

Duration: 3 Hours

PART A*Answer all questions, each carries 2 or 3 marks.*

		Marks
1	Explanation on data type qualifiers <i>long, short, signed, unsigned</i> -2 marks Syntax of each/example -1 mark	(3)
2	Explanation on pointer to pointer and its syntax – 2 marks Example – 1 mark	(3)
3	Definition– 1 mark, explanation on accessing members using dot operator– 1 mark Example– 1 mark	(3)
4	Correct program with no syntax errors(3 marks): Reading matrices- 1 mark, subtraction- 1 mark, displaying final Matrix – 1 mark	(3)
5	Explanation on command line arguments along with arguments argv, argc– 2 marks ,example- 1 mark	(3)
6	Unformatted file- 1 mark, syntax and usage of two library functions- 1 mark each	(3)
7	Final answer – 2 marks, Justification(1 mark) [Hint : 1,2]	(3)
8	Illustration with steps(3)	(3)
9	Definition of keywords(1) Restriction in use of keywords-any one point(1)	(2)
10	Explanation with example(2)	(2)
11	Correct final answer -1 mark each [Hint: 10,5]	(2)
12	Correct final answer (1 mark) [Hint : w, x] Justification (1 mark) [Since * and ++ have the same precedence and associate from right to left, *p++ is equivalent to *(p++).] <i>So for the value of p++, pointer p will be dereferenced. After that the pointer p is incremented by 1 and dereferenced.</i>	(2)

- 13 Any two advantages- 1 mark each (2)
- 14 Explanation on scope of a variable (concept of local/global variables) with an example – 2 marks (2)
- 15 Explanation of stream pointer (file pointer)- 1 mark
Relationship (buffer area established by the statement FILE * fptr and fptr points to the beginning of buffer area) -1 mark (2)
[Give marks accordingly if the question is attempted by the student to write about file opening]
- 16 Explanation – 1 mark each (2)

PART B

Answer any fourfull questions, each carries 8 marks.

- 17 a) Correct program with no syntax errors(5)
Declaration of variables and Reading value of x , no of terms – 1 mark , finding factorial – 2 marks, finding each term – 1 mark, display final answer – 1 mark (5)
- b) Explanation of each operator with example – 1.5marks (3)
- 18 a) Error free program with:
reading 2-D matrix – 1 mark, Finding row sum, column sum, diagonal sum-3 marks, displaying – 1 mark (5)
- b) Error free program with:
Reading string, characters- 1.5 marks, replace string – 1 mark, display new string – ½ mark (3)
- 19 a) Correct program with no syntax errors - Main function Invocation (3 marks), Function definition (5 marks)- function declaration with proper argument types- 1 mark, delete character- 3 marks, display final string- 1 mark (8)
However an error free program without using pointers may be given proportionate marks(2+ 3 = 5 marks)
- 20 a) An Error free program with:
reading a number- ½ mark, finding factors – 1.5 mark, checking perfect and display suitable message- 1 mark (3)
- b) enum data type and its syntax- 2 marks, example – 1 mark (3)
- c) typedef-syntax and its usage with example –2marks (2)



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- 21 Explanation of call by value- 2 marks, example – 2marks (8)
Explanation of call by address/reference- 2 marks, example – 2marks

PART C

Answer any two full questions, each carries 14 marks.

- 22 a) Error free program with:
Reading two arrays-2 marks, display the two arrays – 1 mark, logic for merging the two arrays-4 marks, displaying final array- 1 mark (8)
- b) Error free program with:
Reading the array and search element-2 marks, logic for binary search-3 marks, displaying *element found/or not found*- 1 mark (6)
- 23 a) Error free program with:
Open file in read mode using command line argument- 1 mark, Reading the file contents-2 marks, opening file in write mode using command line argument- 1 mark, writing contents to file-3 marks, displaying *file contents*- 1 mark (8)
- b) Explanation on extern storage class (scope, lifetime, default value, location of storage etc.) – 2 marks, (3)
- c) Unformatted file- 1.5 mark ,applications- 1.5 marks (3)
- 24 a) Error free program with:
Opening file in write mode -1 mark, Writing file contents -1 marks, displaying file contents- 1 mark, open two files in write mode and original file in read mode- 2 marks,Separating odd and even numbers and writing to corresponding files- 2 marks, displaying odd and even file- 1 mark (8)
- b) Explanation with syntax of static variable – 3 marks (6)
Explanation with syntax of static variable – 3 marks
