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G.R. No.	
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Paper Code - U119-109 CB (T1)

OCTOBER 2019 / IN-SEM (T1)

F. Y. B.TECH. (COMMON) (SEMESTER - I)

COURSE NAME: Computer Fundamentals (CB)

COURSE CODE: CS10182B-CB

(PATTERN2018)

Solution & Marking Scheme

Time: [1 Hour]

[Max. Marks: 20]

(*) **Instructions to candidates:**

- 1) All questions are compulsory.
- 2) Figures to the right indicate full marks.
- 3) Use of scientific calculator is allowed.
- 4) Use suitable data where ever required.

Q 1)	Attempt any two.	Marks	Blooms level	C O	Solution & Marking Scheme
a)	Draw a block diagram of a computer system. Explain the function of each of the blocks.	[4]	1	1	Block diagram[1 Marks] Explain each block[3 Marks]
b)	Differentiate between Assembly level, high level, middle level and low level language.	[4]	2	1	Each language[1 Mark] Minimum 2 points required.
c)	Write an pseudo code and flowchart to find first smallest in a given numbers. (1,27,45,65,74,3,2)	[4]	3	1	Pseudo code[2 Marks] Flowchart[2 Marks]
Q 2)	Attempt any two				
a)	List different operators. Explain bitwise operator with example.	[4]	2	2	List operator[1 Mark] Bitwise operator: &, , ^, <<, >>, ~ With example[3 Marks]
b)	Write a program to print all prime factors of a given number. Number is 36	[4]	3	2	#include <stdio.h> int main() { int i, j, num, isPrime; printf("Enter any number to print Prime factors: "); scanf("%d", &num); printf("All Prime Factors of %d are: \\n", num); for(i=2; i<=num; i++) { if(num%i==0)

					<pre> { isPrime = 1; for(j=2; j<=i/2; j++) { if(i%j==0) { isPrime = 0; break; } } if(isPrime==1) { printf("%d, ", i); } } return 0; } </pre>
c)	Write the rules associated the syntax of switch case statement. Explain the concept with example.	[4]	1	2	<p>Rules[2 Marks]</p> <p>Rules for Switch statement:</p> <p>The switch expression must be an integral type.</p> <p>Case labels must be constants or constant expression.</p> <p>Case labels must be unique.</p> <p>No two labels can have the same value.</p> <p>Case labels must end with colon (:)</p> <p>The break statement transfers the control out of the switch statement.</p> <p>The break statement is optional. That is, two or more case labels may belong to the same statement.</p> <p>The default label is optional.</p> <p>If present, it will be executed when the expression does not find a matching case label.</p> <p>There can be at most one default label.</p> <p>The default may be placed anywhere but usually placed at the end.</p> <p>Example[2 Marks]</p>
Q 3)	Attempt any one .				
a)	Define terms: Constant time, Linear time, Logarithmic time, Quadratic time	[4]	1	3	Define each term[1 Marks]
b)	Find the selection sort algorithm results for each pass for the following initial array of elements :[21,6,3,57,13,9]	[4]	2	3	Pass1:3,6,21,57,13,9 Pass2:3,6,21,57,13,9 Pass3:3,6,9,57,13,21 Pass4:3,6,9,13,57,21 Pass5:3,6,9,13,21,57