

University of Mumbai
Examination 2020 under cluster no 3(Lead College: FCRIT)

Program: **FE SEM-II Common for all branches**

Curriculum Scheme: **REV 2019**

Examination: **FE SEM-II (REV-2019)** Semester: **II**

Course Code: **FEC205** and Course Name: **C programming**

Time: **1 hour and 30 mins**

Max. Marks: **60**

Q1. (30 Marks)	Choose the correct option for the following questions. All the Questions are compulsory and carry equal marks
	2 marks each
1.	Which one of the following is NOT an identifier?
Option A:	_cprogram
Option B:	c_program
Option C:	20cprogram
Option D:	cprogram20
2.	What will be the output of the following program? <pre>int main() { int i=9; while(i++<10) printf("%d\n",i); return 0; }</pre>
Option A:	9
Option B:	10
Option C:	1
Option D:	11
3.	Which of the following is an exit-controlled loop?
Option A:	For
Option B:	While
Option C:	Do- while
Option D:	Switch
4.	What will be the output of the following program? <pre>int main() { int a,b,c,d,e,f,g,h,k; a=8, b=4, c=2, d=1, e=5, f=20; printf("%d\n",a+b-(c+d)*3%e+f/9);</pre>

	<pre> return 0; } </pre>
Option A:	10
Option B:	9
Option C:	8
Option D:	20
5.	<p>If a is a variable initialized to 1, how many times will the following loop be executed?</p> <pre> while((a>0)&&(a<25)) { loopbody a++; } </pre>
Option A:	25
Option B:	24
Option C:	20
Option D:	26
6.	C programs are converted into machine language with the help of -----.
Option A:	an editor
Option B:	an Assembler
Option C:	a compiler
Option D:	an operating system
7.	In an array a[2][2] = {10,20,30,40,50,60}, then a[0][1] is which element?
Option A:	10
Option B:	20
Option C:	30
Option D:	40
8.	What is the meaning of the format specifier %12.4?
Option A:	Right align a string in 12 columns.
Option B:	Left align an integer in 12 columns with 4 places beyond decimal point.
Option C:	Right align an integer in 12 columns.
Option D:	Right align an integer in 12 columns with 4 places beyond decimal point.
9.	Which one of the following permits access to same memory locations in multiple ways?
Option A:	Union
Option B:	Structure
Option C:	Variable
Option D:	Array
10.	<p>What will be the output of the following program?</p> <pre> int main() { int a = 500, b = 100, c; if(!a >= 400) b = 300; } </pre>

	<pre> else b=b+++b*a/b; c = 10; c=b<<1; c=c>>b+1; printf("b = %d c = %d\n", b, c); return 0; } </pre>
Option A:	B=600, c=3
Option B:	B=600, c=2
Option C:	B=600, c=1
Option D:	B=600, c=0
11.	C compiler doesn't perform bounds checking on which type of data item?
Option A:	Strings
Option B:	Character array
Option C:	Structure
Option D:	Union
12.	<p>What will be the output of the following program?</p> <pre> int main() { char *p; p="Hello"; printf("%c\n",*p); return 0; } </pre>
Option A:	Hello
Option B:	Some address will be printed
Option C:	Error in the output
Option D:	H
13.	Which bitwise operator is used for turning off a particular bit in a number?
Option A:	
Option B:	^
Option C:	&
Option D:	~
14.	<p>What will be the output of the following program?</p> <pre> int main() { float a=13.5; float *b,*c; b=&a; c=b; printf("%f%f%f%f%f\n",a,*(&a),*&a,*b,*c); return 0; } </pre>
Option A:	13.500000 13.500000 13.500000 13.500000 13.500000
Option B:	13.5 13.5 13.5 13.5 13.5
Option C:	2034156167842301617

Option D:	Error in the output
15.	<p>What will be the output of the following program?</p> <pre> int i; int goodday(); int main() { while(i) { main(); goodday(); i++; } printf("Exam\n"); return 0; } int goodday() { printf("Goodday"); } </pre>
Option A:	Goodday
Option B:	Exam Goodday
Option C:	Exam
Option D:	Goodday Exam

Q2. (15 Marks)	Solve any <i>THREE out of FIVE</i>	5 marks each
A	Explain any five bitwise operators used in C language with proper examples.	
B	Write a program to print the following pattern. (Note- Not only 4 lines, it should print N lines taken from the user.) <pre> A B B C C C D D D D </pre>	
C	Explain String function for the following operations with example. <ul style="list-style-type: none"> i) Copy n char from source to destination. ii) Merging of two strings. 	
D	Explain the term recursion. Write a program to find summation of n numbers using recursion.	
E	Write a C-program to create array of structures in order to store details of almost 100 books. The book details are book name, book price, book page number and book author name.	

Q3. (15 Marks)	Solve any <i>THREE out of FIVE</i>	5 marks each
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A	Given three variables x, y, z. Write a program to circularly shift their values to right. In other word if x=5, y=8, z=10, after circular shift y=5, z=8, x=10. Call the function and use pointers to circularly shift the values. (Note- No other operator should be used for circular right shift).
B	Write a program that will accept two-dimensional square matrix and find the sum of diagonal elements. (Note- sum of diagonal elements should be calculated for both sides).
C	<p>Explain the use of following in-built functions of C-language by giving suitable programming examples and also mention their respective header files in which they are defined.</p> <ul style="list-style-type: none"> i) getch() ii) pow() iii) ceil() iv) puts() v) getchar()
D	<p>Write a menu driven program which has the following options:</p> <ul style="list-style-type: none"> i) prime or not ii) odd or even iii) exit <p>Once a menu item is selected the appropriate action should be taken for execution. (Note-The user have to input an integer value).</p>
E	What are the different ways of parameter passing to a function? Explain with examples.

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Question Number	Correct Option
Q1.	C
Q2.	B
Q3.	C
Q4	A
Q5	B
Q6	C
Q7	B
Q8.	D
Q9.	A
Q10.	D
Q11.	B
Q12.	D
Q13.	C
Q14.	A
Q15.	C