



INSTITUTE OF AERONAUTICAL ENGINEERING

(Autonomous)
Dundigal, Hyderabad - 500 043

ELECTRICAL AND ELECTRONICS ENGINEERING

DEFINITIONS AND TERMINOLOGY QUESTION BANK

Course Name	:	PROGRAMMING FOR PROBLEM SOLVING
Course Code	:	ACSB01
Program	:	B.Tech
Semester	:	II
Branch	:	CSE IT ECE EEE
Section	:	A, B,C, D
Course Coordinator	:	Mr. P Ravinder, Assistant Professor
Course Faculty		Dr. J Sirisha Devi, Associate Professor, CSE Dept Dr. R ObulaKonda Reddy Associate Professor , CSE Dept Mrs. K Laxmi Narayanamma, Assistant Professor, IT Dept. Mrs. B Padmaja Assistant Professor, CSE Dept Dr. M Purushotham Reddy, IT Dept Mr. Ch Suresh Kumar Raju Assistant Professor, CSE Dept.

COURSE OBJECTIVES:

The course should enable the students to:	
I.	Learn adequate knowledge by problem solving techniques.
II.	Understand programming skills using the fundamentals and basics of C Language.
III.	Improve problem solving skills using arrays, strings, and functions.
IV.	Understand the dynamics of memory by pointers.
V.	Study files creation process with access permissions.

DEFINITIONS AND TERMINOLOGY QUESTION BANK

S. No	QUESTION	ANSWER	Blooms Level	CO	CLO	CLO Code
MODULE – I						
1	What will be the output of the C program? <code>#include<stdio.h></code> <code>int main()</code> <code>{</code> <code>int a = 1, b = 3, c; c = b << a;</code> <code>b = c * (b * (++a)--); a = a >> b;</code> <code>printf("%d",b);</code> <code>return 0;</code> <code>}</code>	36	Remember	CO 1	CLO3	ACSB01.03
2	What will be the output of the C program? <code>#include<stdio.h> int main()</code> <code>{</code> <code>int i = 5;</code> <code>int a = --i + --i + --i;</code> <code>printf("%d",a);</code> <code>return 0;</code> <code>}</code>	8	Remember	CO 1	CLO5	ACSB01.05
3	What will be the output of the C program? <code>#include<stdio.h> int main()</code> <code>{</code> <code>int i = 5;</code> <code>int a = --i - --i - --i - --i;</code> <code>printf("%d",a);</code> <code>return 0;</code> <code>}</code>	-3	Remember	CO 1	CLO5	ACSB01.05
4	What will be the output of the C program? <code>#include<stdio.h> int main()</code> <code>{</code> <code>int a = 2, b = 2, c = 0, d = 2, m;</code> <code>m = a++ && b++ && c++ </code> <code>d++;</code> <code>printf("%d %d %d %d %d",a, b,</code> <code>c, d, m);</code> <code>return 0;</code> <code>}</code>	3 3 1 3 1	Remember	CO 1	CLO6	ACSB01.06
5	What will be the output of the C program? <code>#include<stdio.h></code> <code>int main()</code> <code>{</code> <code>int i = 5;</code> <code>int a = --i + ++i - i-- + --i;</code> <code>printf("%d",a);</code> <code>return 0;</code> <code>}</code>	8	Remember	CO 1	CLO5	ACSB01.05

6	What will be the output of the C program? <pre>#include<stdio.h> int main() { int i = 5; int a = ++i + ++i + ++i; printf("%d",a); return 0; }</pre>	22	Remember	CO 1	CLO5	ACSB01.05
7	What will be the output of the C program? <pre>#include<stdio.h> int main() { int i = 5; int a = ++i + ++i + ++i + ++i; printf("%d",a); return 0; }</pre>	31	Understand	CO 1	CLO5	ACSB01.05
8	What will be the output of the C program? <pre>#include<stdio.h> int main() { int _ = 5; int=5; int ____ = _ +; printf("%d",____); return0; }</pre>	10	Remember	CO 1	CLO5	ACSB01.05
9	What will be the output of the C program? <pre>#include<stdio.h> int main() { int num1 = 10, num2 = 20; int result;result = num1 * 2 + num2 * 2 ; printf("\nResult is :%d", result); return (0); }</pre>	00	Understand	CO 1	CLO5	ACSB01.5
10	What will be the output of the C program? <pre>#include<stdio.h> #include<conio.h> int main() { int printf = 13; int c = 7 + printf; printf("the result is :"); printf("%d",c); return 0; }</pre>	Compilation error	Remember	CO 1	CLO4	ACSB01.04

11	What will be the output of the C program? <pre>#include<stdio.h> int main() { int a = 7, b = 4, c = 2; printf("a b&c = %d\n", a b&c); return 0; }</pre>	7	Remember	CO 1	CLO4	ACSB01.04
12	What will be the output of the C program? <pre>#include<stdio.h> int main() { int a = 1, b = 3, c; c = b <<a; b = c * (b * (++a)--); a = a >> b; printf(" %d",b); return 0; }</pre>	36	Remember	CO 1	CLO4	ACSB01.04
13	What will be the output of the C program? <pre>#include<stdio.h> int main() { printf("%d",printf("cp rogram")); return 0; }</pre>	C program	Remember	CO 1	CLO6	ACSB01.06
14	What will be the output of the program if value 25 given to scanf()? <pre>#include<stdio.h> int main() { inti; printf("%d\n", scanf("%d", &i)); return 0; }</pre>	1	Remember	CO 1	CLO6	ACSB01.06
15	What is the output of following program? <pre>#include <stdio.h> int main() { int a = 1; int b = 1; int c = a --b; int d = a-- && --b; printf("a = %d, b = %d, c=%d, d = %d", a, b, c, d); return 0; }</pre>	a = 0, b = 0, c = 1, d = 0	Remember	CO 1	CLO6	ACSB01.06

MODULE – II						
1	Predict the output of following C program. main() { int a = 300, b, c ; if (a >= 400) b = 300 ; c = 200 ; printf ("\n%d %d", b, c) ; }	0 200	Remember	CO 2	CLO7	ACSB01.07
2	Predict the output of following C program. main() { int a = 500, b, c ; if (a >= 400) b = 300 ; c = 200 ; printf ("\n%d %d", b, c) ; }	300 200	Remember	CO 2	CLO7	ACSB01.07
3	Predict the output of following C program. main() { int x = 10, y = 20 ; if (x == y) ; printf ("\n%d %d", x, y) ; }	10 20	Remember	CO 2	CLO7	ACSB01.07
4	Predict the output of following C program. main() { int x = 10, y = 20 ; if (x == y) printf ("\n%d %d", x, y) ; }	No output	Remember	CO 2	CLO7	ACSB01.07
5	Predict the output of following C program. main() { int x = 3, y = 5 ; if (x == 3) printf ("%d", x) ; else ; printf ("%d", y) ; }	3 5	Remember	CO 2	CLO7	ACSB01.07
6	Predict the output of following C program. main() { int x = 3, y = 5 ; if (x == 3) printf ("%d", x) ; else printf ("%d", y) ; }	3	Remember	CO 2	CLO7	ACSB01.07

7	Predict the output of following C program. <pre>main() { int x = 3, y = 5 ; if (x == 3); printf ("%d", x); else printf ("%d", y); }</pre>	Error	Remember	CO 2	CLO7	ACSB01.07
8	Predict the output of following C program. <pre>main() { int x = 3, y = 5 ; if (x == 5) printf ("%d", x); else printf ("%d", y); }</pre>	5	Remember	CO 2	CLO7	ACSB01.07
9	Predict the output of following C program. <pre>main() { int x = 3, y = 5 ; if (x == 5) printf ("%d", x); else ; printf ("%d", y); }</pre>	5	Remember	CO 2	CLO7	ACSB01.07
10	Predict the output of following C program. main() <pre>{ int x = 3 ; float y = 3.0 ; if (x == y) printf ("\nx and y are equal") ; else printf ("\nx and y are not equal") ; }</pre>	x and y are equal	Remember	CO 2	CLO7	ACSB01.07
11	Predict the output of following C program. <pre>#include<stdio.h> main() { int c; int x = 3 ; float y = 3.1 ; if (x == y) printf ("\nx and y are equal") ; else printf ("\nx and y are not equal") ; }</pre>	x and y are not equal	Remember	CO 2	CLO7	ACSB01.07

12	Predict the output of following C program. <pre>#include<stdio.h> int main() { float x = 0.1; if (x == 0.1) printf("IF"); else if (x == 0.1f) printf("ELSE IF"); else printf("ELSE"); }</pre>	ELSE IF	Remember	CO 2	CLO7	ACSB01.07
13	Predict the output of following C program. #include<stdio.h> <pre>int main() { double x = 0.1; if (x == 0.1) printf("IF"); else if (x == 0.1f) printf("ELSE IF"); else printf("ELSE"); }</pre>	IF	Remember	CO 2	CLO7	ACSB01.07
14	Predict the output of following C program. #include<stdio.h> <pre>int main()i { int x = 0.1; if (x == 0.1) printf("IF"); else if (x == 0.1f) printf("ELSE IF"); else printf("ELSE"); }</pre>	ELSE	Remember	CO 2	CLO7	ACSB01.07
15	Predict the output of following C program. int main() <pre>{ float x = 0.5; if (x == 0.5) printf("IF"); else if (x == 0.5f) printf("ELSE IF"); else printf("ELSE"); }</pre>	IF	Remember	CO 2	CLO7	ACSB01.07
16	Predict the output of following C program. <pre>#include<stdio.h> main() { int x = 10; int y = 20 ; if (x == y) printf ("\n%d %d", x, y) ; }</pre>	No ouput	Remember	CO 2	CLO7	ACSB01.07

MODULE – III

1	What will be the output of the program? <pre>#include<stdio.h> #include<conio.h> int main() { int a[5] = {5, 1, 15, 20, 25}; int i, j, m; i = ++a[1]; j = a[1]++; m = a[i++]; printf("%d, %d, %d", i, j, m); return 0; }</pre>	3, 2, 15	Remember	CO 3	CLO8	ACSB01.08
2	What will be the output of the program? <pre>int main() { static int a[2][2] = {1, 2, 3, 4 }; int i, j; static int *p[] = {(int*)a, (int*)a+1, (int*)a+2}; for(i=0; i<2; i++) { for(j=0; j<2; j++) { printf("%d, %d, %d, %d\n", *(p+i+j), *(j+p+i), *(i+p+j), *(p+j+i)); } } }</pre>	1, 1, 1,1 2, 2, 2,2 2, 2, 2,2 3, 3, 3,3	Remember	CO 3	CLO8	ACSB01.08
3	What will be the output of the program? <pre>#include<stdio.h> #include<conio.h> int main() { void fun(int, int[]); int arr[] = {1, 2, 3, 4}; int i; fun(4, arr); for(i=0; i<4; i++){ printf("%d,", arr[i]); return 0;} void fun(int n, int arr[]) { int *p=0; int i=0; while(i++ < n) p = &arr[i]; *p=0; }</pre>	1, 2, 3, 4	Remember	CO 3	CLO8	ACSB01.08

4	What will be the output of the program? <pre>#include<stdio.h> void fun(int**p); int main() { int a[3][4] = {1, 2, 3, 4, 4, 3, 2, 8, 7, 8, 9, 0}; int *ptr; ptr = &a[0][0]; fun(&ptr); return 0; } void fun(int **p) { printf("%d\n", **p); }</pre>	1	Remember	CO 3	CLO8	ACSB01.08
5	What will be the output of the program? <pre>int main() { static int arr[] = {0, 1, 2, 3, 4}; int *p[] = {arr, arr+1, arr+2, arr+3, arr+4}; int **ptr=p; ptr++; printf("%d, %d, %d\n", ptr-p, *ptr-arr, **ptr); *ptr++; printf("%d, %d, %d\n", ptr-p, *ptr-arr, **ptr); ***ptr; printf("%d, %d, %d\n", ptr-p, *ptr-arr, **ptr); ++*ptr; printf("%d, %d, %d\n", ptr-p, *ptr-arr, **ptr); return 0; }</pre>	1, 1,1 2, 2,2 3, 3,3 3, 4,4	Remember	CO 3	CLO9	ACSB01.09
6	What will be the output of the program if the array begins at 65472 and each integer occupies 2 bytes? <pre>#include<stdio.h> int main() { int a[3][4] = {1, 2, 3, 4, 4, 3, 2, 1, 7, 8, 9, 0}; printf("%u, %u\n", a+1, &a+1); return 0; }</pre>	65480, 65496	Remember	CO 3	CLO9	ACSB01.09
7	What will be the output of the program in Turb C (under DOS)? <pre>#include<stdio.h> int main() { int arr[5], i=0; while(i<5) arr[i]=++i; for(i=0; i<5; i++) printf("%d, ", arr[i]); return 0; }</pre>	Garbage value, 1, 2, 3, 4,	Remember	CO 3	CLO12	ACSB01.12

8	What will be the output of the program ? <pre>#include<stdio.h> int main() { int arr[1]={10}; printf("%d\n", 0[arr]); return 0; }</pre>	10	Remember	CO 3	CLO12	ACSB01.12
9	What will be the output of the program if the array begins at address 65486? <pre>#include<stdio.h> int main() { int arr[] = {12, 14, 15, 23, 45}; printf("%u, %u\n", arr, &arr); return 0; }</pre>	65486, 65486	Remember	CO 3	CLO12	ACSB01.12
10	What will be the output of the program? <pre>#include<stdio.h> int main() { float arr[] = {12.4, 2.3, 4.5, 6.7}; printf("%d\n", sizeof(arr)/sizeof(arr[0])); return 0; }</pre>	4	Remember	CO 3	CLO12	ACSB01.12
11	What will be the output of the program if the array begins 1200 in memory? <pre>#include<stdio.h> int main() { int arr[]={2, 3, 4, 1, 6}; printf("%u, %u, %u\n", arr, &arr[0], &arr); return 0; }</pre>	1200, 1200, 1200	Remember	CO 3	CLO10	ACSB01.10
12	What will be the output of the following program ? <pre>#include<stdio.h> #include<string.h> int main() { char str1[20] = "Hello", str2[20] = " World"; printf("%s\n", strcpy(str2, strcat(str1, str2))); return 0; }</pre>	Hello World	Remember	CO 3	CLO10	ACSB01.10
13	What will be the output of the following program ? <pre>#include<stdio.h> int main() { char p[] = "%d\n"; p[1] = 'c'; printf(p, 65); return 0; }</pre>	A	Remember	CO 3	CLO10	ACSB01.10

14	What will be the output of the following program ? #include<stdio.h> #include<string.h> int main() { printf("%d\n", strlen("123456")); return 0; }	6	Remember	CO 3	CLO10	ACSB01.10
15	What will be the output of the following program ? #include<stdio.h> int main() { printf(5+"Good Morning\n"); return 0; }	Morning	Remember	CO 3	CLO13	ACSB01.13
MODULE – IV						
1	#include<stdio.h> int main() { char *p; p="hello"; printf("%s\n", *&p); return 0; }	Hello	Remember	CO 4	CLO14	ACSB01.14
2	What is output of the following code? #include<stdio.h> int main() { int i=3, *j, k; j = &i; printf("%d\n", i**j*i+*j); return 0; }	30	Remember	CO 4	CLO14	ACSB01.14
3	What is output of the following code? #include <stdio.h> int main() { int* pc, c; c = 22; pc = &c; printf("%d", *pc); return 0; }	22	Remember	CO 4	CLO14	ACSB01.14
4	What is output of the following code? #include<stdio.h> int main() { int x=30, *y, *z; y=&x; z=y; *y++=*z++; x++; printf("x=%d, y=%d, z=%d\n", x, y, z); return 0; }	x=31, y=504, z=504	Remember	CO 4	CLO14	ACSB01.14

5	What is output of the following code? <pre>#include<stdio.h> intmain() { int **r, **q, *p, i=8; p =&i; q= &p; r = &q; printf("%d\n", **r); return 0; }</pre>	8	Remember	CO 4	CLO14	ACSB01.14
6	What is output of the following code? <pre>#include<stdio.h> int main() { intarr[2][2][2] = {10, 2, 3, 4, 5, 6, 7, 8}; int *p; p = &arr[1][1][1]; printf("%d\n", *p); return 0; }</pre>	8	Remember	CO 4	CLO14	ACSB01.14
7	What is output of the following code? <pre>#include<stdio.h> int main() { Int arr[3] = {2, 3, 4}; char *p; p = arr; p = (char*)((int*)(p)); printf("%d, ", *p); return 0; }</pre>	2	Remember	CO 4	CLO14	ACSB01.14
8	What is output of the following code? <pre>#include<stdio.h> #include<string.h> int main() { int i, n;*x = x[n]; char *x="Alice"; n = strlen(x); for(i=0; i<=n; i++) { printf("%s ", x); x++; } printf("\n", x); return 0; }</pre>	lice ice ce e	Remember	CO 4	CLO14	ACSB01.14
9	What is output of the following code? <pre>void fun(int *p) { int q = 10; p = &q; } int main() { int r = 20; int *p = &r; fun(p); printf("%d", *p); return 0; }</pre>	20	Remember	CO 4	CLO14	ACSB01.14

10	What is output of the following code? <pre>#include<stdio.h> int main() { int a[3][4] = { 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12 }; printf(" %u\n", *(a[0]+1)); return 0; }</pre>	2	Remember	CO 4	CLO14	ACSB01.14
11	What is output of the following code? <pre>#include<stdio.h> int main() { int i, a[] = {2, 4, 6, 8, 10}; change(a, 5); for(i=0; i<=4; i++) printf("%d, ", a[i]); return 0; } void change(int *b, int n) { int i; for(i=0; i<n; i++) *(b+1) = *(b+i)+5; }</pre>	2, 15, 6, 8, 10	Remember	CO 4	CLO14	ACSB01.14
12	What is output of the following code? #include<stdio.h> <pre>char*strFun(void) { char *str="IncludeHelp"; return str; } int main() { char *x; x=strFun(); printf("%s",x); return 0; }</pre>	IncludeHelp	Remember	CO 4	CLO14	ACSB01.14
13	What is output of the following code? <pre>#include <stdio.h> int main() { int a[][3] = {1, 2, 3, 4, 5, 6}; int (*ptr)[3] = a; printf("%d ", (*ptr)[1]); return 0; }</pre>	2	Remember	CO 4	CLO 14	ACSB01.14
14	<pre>#include<stdio.h> int main() { int arr[] = {10, 20, 30, 40, 50, 60}; int *ptr1 = arr; int *ptr2 = arr + 5; printf("%d.", (ptr2 - ptr1)); return 0; }</pre>	5	Remember	CO 4	CLO 14	ACSB01.14

15	<pre> int main() { int s[4][2] = { { 1234, 56 }, { 1212, 33 }, { 1434, 80 }, { 1312, 78 } } ; int i, j ; printf ("%d ", *(*(s + 2) + 1)); } </pre>	80	Remember	CO 4	CLO 14	ACSB01.14
MODULE – V						
1	What is output of the following code? <pre> #include<stdio.h> int main() { FILE *fp; char ch; fp=fopen("temp.text","w"); fprintf(fp,"%s","C is like a sea"); fclose(fp); fp=fopen("temp.text","r"); while(!feof(fp)) { ch=fgetc(fp); if(ch != 32) printf("%c",ch); } fclose(fp); return 0; } </pre>	Cislikeasea	Remember	CO 5	CLO16	ACSB01.16
2	What puts() does when it writes to stdout	Adds „n“ to the line written	Remember	CO 5	CLO16	ACSB01.16
3	What is the purpose of the function? Int ferror(FILE *fp)	They check for output errors	Remember	CO 5	CLO16	ACSB01.1 6
4	stderr is similar to?	stdout	Remember	CO 5	CLO17	ACSB01.1 7
5	What happens when we use? fprintf(stderr,“error:could not open file”);	The diagnostic output is directly displayed in the Output	Remember	CO 5	CLO19	ACSB01.1 9
6	Which function can be used to terminate the main function from another function safely?	exit(expr)	Remember	CO 5	CLO19	ACSB01.1 9
7	What is the size of array “line” used in fgets(line, maxline, *fp) function?	maxline	Remember	CO 5	CLO19	ACSB01.1 9
8	Which function has a return type as char pointer?	fgets()	Remember	CO 5	CLO19	ACSB01.19
9	Write the right declaration for fgets inside the library?	char *fgets(char *line, int maxline, FILE *fp);	Remember	CO 5	CLO19	ACSB01.1 9
10	What is the purpose of sprintf?	It writes the formatted data into a string	Remember	CO 5	CLO17	ACSB01.17
11	putchar(c) function/macro always outputs character c to the	standard output	Remember	CO 5	CLO17	ACSB01.17

12	<pre>#include <stdio.h> #include <stdlib.h> int main() { FILE *fp = stdout; int n; fprintf(fp, "%d", 45); }</pre>	45	Remember	CO 5	CLO18	ACSB01.18
13	What are stdout, stdin and stderr ?	File	Remember	CO 5	CLO19	ACSB01.19
14	What is space complexity of bubble sort?	The space complexity for Bubble Sort is $O(1)$.	Remember	CO 5	CLO19	ACSB01.19
15	What puts() does when it writes to stdout	Adds „n“ to the line written	Remember	CO 5	CLO19	ACSB01.19

Signature of the Faculty

HOD, EEE