

Version No.			

ROLL NUMBER						



0	0	0	0
1	1	1	1
2	2	2	2
3	3	3	3
4	4	4	4
5	5	5	5
6	6	6	6
7	7	7	7
8	8	8	8
9	9	9	9

0	0	0	0	0	0	0
1	1	1	1	1	1	1
2	2	2	2	2	2	2
3	3	3	3	3	3	3
4	4	4	4	4	4	4
5	5	5	5	5	5	5
6	6	6	6	6	6	6
7	7	7	7	7	7	7
8	8	8	8	8	8	8
9	9	9	9	9	9	9

Answer Sheet No. _____

Sign. of Candidate. _____

Sign. of Invigilator _____

COMPUTER SCIENCE
SSC-II
SECTION – A (Marks 13)
Time allowed: 15 Minutes

Section – A is compulsory. All parts of this section are to be answered on this page and handedover to the Centre Superintendent. Deleting/overwriting is not allowed. **Do not use lead pencil.**



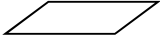

Q:1 Fill the relevant bubble for each part on bubble sheet. Each part carries one mark.

- (1) What is the output of following code?

```
int a = 15; float s = 5.50; printf ("%f", a/s);
```

A. 2	B. 2.72
C. 3	D. 5

- (2) Which one of the following symbols is used in flow chart for the statement “Marks<33”?

A. 	B. 
C. 	D. 

- (3) Which one of the following functions is used to read string “Computer Science”?

A. scanf()	B. gets()
C. getchar()	D. getch()

- (4) Which statement is equivalent to “j = j + a;” ?

A. j+=a;	B. j=+a;
C. j++a;	D. j=a++;

- (5) Which escape sequence can be used to insert a Tab in “C” Language?

A. \a	B. \b
C. \t	D. \n



Federal Board SSC-II Examination
Computer Science Model Question Paper
(Curriculum 2009)

Time allowed: 2.45 hours

Total Marks: 42

Note: Answer all parts from Section 'B' and all questions from Section 'C' on the **E-sheet**. Write your answers on the allotted/given spaces.

SECTION – B (Marks 22)

Q.2 Attempt all parts from the following. All parts carry equal marks. (11x2= 22)

i. Write down any TWO important advantages of algorithm in problem solving?

OR

Write down any TWO characteristics of flowcharts in problem solving?

ii. Point out valid and invalid variable names.

a. Define b. 5name c. a5 d. US\$

OR

Write down two rules for naming variables.

iii. Write down the ONE important purpose each of Conditional Statements and Repetition Statements.

OR

State two differences between while and do-while loops.

iv. Write down any TWO characteristics of High Level Languages.

OR

Why computer understands machine language directly? Give two reasons.

v. Evaluate each of the following expression assuming, a=2, z=1.3, c=1 and d=3:

a. $b = d/a + d \% a;$ b. $x = (a + c)/(z + 0.3);$

OR

Use appropriate text formatting tags for the followings with one example.

a. font size b. font face

vi. Rewrite the code using Conditional Operator.

```
if (marks > 40)
    printf("PASS");
else
    printf("FAIL");
```

OR

Write a C program to print sum of odd numbers from 1 to 100.

vii. Write down the TWO benefits of web portal.

OR

Give two uses of Internet browsers.

- viii. Differentiate between an assignment operator (=) and an equal to (==) operator by giving an example.

OR

Construct Truth Table for the following Boolean Expression:

$$F = \overline{xyz} + \overline{xyz} + \overline{xy}$$

- ix. Write a program in C to generate the following series using for() loop.
5 10 15 20 25 30 35 40 45 50

OR

Write a program in C to find the factorial of a number.

- x. What will be the output of the following code?

```
void main() {
    int u, i;
    for (u = 1; u <= 5; u++)
    {
        for (i = 1; i <= u; i++)
        {
            printf("%d \t", i);
        }
        printf("\n");
    }
}
```

OR

Rewrite the following code using for loop:

```
int sum = 0, num = 0;
do {
    sum = sum + num;
    printf("Enter an integer value");
    scanf("%d", &num);
}
while (num >= 0 && num <= 15);
```

- xi. Draw NAND (\overline{xy}) and NOR ($\overline{x+y}$) gates.

OR

Write down the names and purpose of any TWO format specifiers.

SECTION – C (Marks 20)

Note: Attempt all questions. Marks of each question are given within brackets. (4x5=20)

Q.3 Draw a flowchart to calculate the exponent of a given number. (5)

OR

Write a C program to print the following pattern using nesting loop.

```
5 4 3 2 1
5 4 3 2
5 4 3
5 4
5
```

Q.4 Simplify the Boolean Function F, using Karnaugh Mapping (K-map). (5)

$$F = xyz + \overline{xyz} + x\overline{yz} + \overline{xy}z + xy\overline{z} + \overline{xy}z$$

OR

Rewrite the following code after removing the errors: (5)

```
# include < std.h>
# include < conio.h>
void main ( );
{   int p, s;
    printf("\n Enter a number:);
    scanf("%d", p);
    s=p%2;
    if(s=0)   printf("even number%d", p)
    else      printf("odd number%d", p);
    getch(); }
```

Q.5 Rewrite the following program using switch statement: (5)

```
void main( )
{   char ch;
    clrscr( );
    printf("Enter a single character");scanf("%c", ch);
    if ( ch == 'a' || ch == 'A' ||ch == 'e' || ch == 'E' ||ch == 'i' || ch ==
        'I' || ch == 'o' || ch == 'O' ||ch == 'u' || ch == 'U')
        printf("It is a vowel");
    else
        printf("It is a consonant");
}
```

OR

Write a C program to input two numbers and find the GCD (Greatest Common Diviser) of the numbers.

Q.6 Explain FIVE modules of C programming environment. (5)

OR

What is the purpose of using comments in C programs? Explain the two types of comments with examples. (5)

* * * * *

COMPUTER SCIENCE SSC-II

(Curriculum 2009)

Student Learning Outcomes

Sr No	Section: Q. No. (Part no.)	Contents and Scope	Student Learning Outcomes *	Cognitive Level **	Marks
1	A: 1(i)	3.1 Input / Output functions	iii) Use output functions like: • printf ()	U	1
2	A:1(ii)	1.3 Flow Chart	iv) Use of flow chart symbols	U	1
3	A: 1(iii)	3.1 Input / Output functions	ii) Use input functions like: • scanf () • getch () , getche () , getchar () • gets ()	U	1
4	A: 1(iv)	3.2 Operators	iii) Use the following assignment operators: • Compound assignment operator (+ =, - =, * =, / =, % =)	U	1
5	A: 1(v)	3.1 Input / Output functions	vi) Explain the use of the following escape sequences using programming examples: •Alert - \a • Backspace – \b • Newline – \n • Carrage Return – \r • Tab – \t	K	1
6	A: 1(vi)	4.1 Control Structure	vi) Use if-else statement	K	1
7	A: 1(vii)	5.1 Loop Structure	ii) Know that for loop structure is composed of: • For • Initialization expression • Test expression • Body of the loop • Increment / decrement expression	A	1
8	A: 1(viii)	5.1 Loop Structure	ii) Know that for loop structure is composed of: • For • Initialization expression • Test expression • Body of the loop • Increment / decrement expression	U	1
9	A: 1(ix)	6.2 Logic Gates	iv) Explain the following logic gateswith the help of truth tables: • AND • OR • NAND • NOR • NOT	U	1
10	A: 1(x)	6.2 Logic Gates	iv) Explain the following logic gateswith the help of truth tables: NOT	K	1
11	A: 1(xi)	7.4 Creating Lists	ii) Create: • Unordered list • Ordered list	U	1
12	A: 1(xii)	7.8 Creating Frames	iii) Create a frameset	U	1
13	A: 1(xiii)	7.4 Creating List	i) Types of List	U	1
14	B: 2(i)	1.2 Algorithm	i) Explain role of algorithm in problem solving OR characteristics of flowcharts	K	2
15	B: 2(ii)	2.4 Constants and Variables	ii) Explain the rules for specifying variable names OR Rules for specifying variable names	U	2
16	B: 2(iii)	4.1 Control	i) Define a control statement.	K	2

		Structure OR 5.1 Loops	Define a conditional statement OR while and do-while loops		
17	B: 2(iv)	2.1 Introduction	iii) Elaborate characteristics of High Level Language OR Machine Language	K	2
18	B: 2(v) OR	3.2 Operators OR 7.3 Text formatting tags	xi) Define and explain the order of precedence of operators OR ii) Text formatting tags	U	2
19	B: 2(vi) OR	3.1 Input / Output functions OR 5 Loop control structure	iv) Define Format specifiers • decimal - %d • integer - %i • float - %f • double - %g,e • char - %c • long int - %ld OR ii) the FOR statement	A	2
20	B: 2(vii)	7.1 Introduction to Internet	• ii) Explain the following types of websites Portal OR Internet browsers		2
21	B: 2(viii) OR	3.2 Operators OR 6.2 K-Map	viii) Differentiate between assignment (=) and equal to operator (==) OR iii) Simplification of Three variable functions	U	2
22	B: 2(ix) OR	5.1 Loop Control OR 5.1 For Loop Control	iii) Basics of Loops OR ii) The for Loop	K / A	2
23	B: 2(x)	5.1 Loops	vi) Nested Loop OR While loop	A	2
24	B: 2(xi) OR	6.2 Logic Gates OR 3.2 Ternary Operator	v) Creating NAND and NOR gates using Basic Gates OR viii) Conditional Operator	U	2
26	C: 3 OR	1.3 Flow Chart OR 5.1 Loop Structure	(v) Draw flow charts of algorithms OR vi) Nested Loops	A	5
27	C: 4 OR	6.3 Simplification using K Maps OR 4.1 Use of If-Else	• iii) Simplify three variable Boolean function/expression OR • v) Use of If- Else statement	A	5
28	C: 5 OR	4.1 Control Structure OR 7.6 HyperLinks	ix) Switch statement OR iii, iv, v) Types of Hyperlinks	A/ K	5
29	C: 6 OR	Programming Environment OR Comments in C	iii) Explain the following modules of the C programming environment • Editor • Compiler • Linker • Loader • Debugger OR Comments in C program	K	5

*** Student Learning Outcomes**

National Curriculum for Computer Sciences Grades IX-XII, 2009 Page no. 14-25)

****Cognitive Level**

K: Knowledge

U: Understanding

A: Application

COMPUTER SCIENCE SSC-II

Table of Specifications

Assessment Objectives		Unit 1: Programmi ng Technique s 10%	Unit 2: Program ming in C 10%	Unit 3: Input / Output Handling 15%	Unit 4: Control Structure 15%	Unit 5: Loop Structure 15%	Unit 6: Computer Logic and Gates 15%	Unit 7: World Wide Web and HTML(Major partcover in Practical) 20%	Marks	Total marks (55 Theory + 25 Practical)	% Covered 100%
Knowledge (K) based	Section - A			1(5)(01)	1(6)(01)		1(10)(01)		03	34	35%
	Section - B	2(i)(02) OR 2(i)(02) 2(iv)(02) OR 2(iv)(02)			(iii)(02)	(iii)(02)		2(vii)(02) OR 2(vii)(02)	16		
	Section - C		6-(05) OR 6-(05)					5-(05)	15		
Understanding (U) based	Section - A	1(2)(01)		1(1)(01) 1(3)(01) 1(4)(01)		1(8)(01)	1(9)(01)	1(11)(01) 1(12)(01) 1(13)(01)	09	44	45%
	Section - B		2(ii)(02) OR 2(ii)(02)	2(viii)(02) 2(xi)(02)	2(v)(02)	2(vi)(02) 2(x)(02)	2(viii)(02) 2(xi)(02)	2(v)(02)	20		
	Section - C	3-(05)			4-(05)		4-(05)		15		
Application (A) based	Section - A					1(7)(01)			01	19	20%
	Section - B			2(vi)(02)		2(vi)(02) 2(ix)(02) OR 2(ix)(02)			08		
	Section - C				5-(05)	3-(05)			10		
Total marks		14	14	10	15	19	11	14	97	100 %	

* Unit 7: Major content will examine in Practical paper. 10% covered in Theory paper and remaining will cover in Practical paper.

Hence weightage distributed to other units.

KEY: 1(1)(01)

Question No (Part No.) (Allocated Marks)