Version No.			

ROLL NUMBER						

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.**

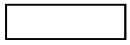
Q:1 Fill the relevant bubble for each part on bubble sheet. Each part carries one mark.

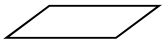
(1) What is the output of following code?

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

(6) Which one of the following is the most suitable for making two ways decision?

A. if statement
B. if-else statement
C. switch statement
D. Nested-if statement

(7) How many times "FBISE" will be displayed by the following code?

```
for (int i=1; i<10; i=+2) printf ("FBISE");
```

A. 1
B. 5
C. Infinite
D. The loop will not run.

(8) What is the output of the following code?

```
int i ;for(i=1;i<=2;i++) printf ("\n i=%d", i);
```

A.
```
i=2
i=3
```
B.
```
i=1
i=2
```
C.
```
i=1
i=3
```
D.
```
i=2
i=1
```

(9) Which one of the following gates has an output = A.B?

A. NAND
B. NOR
C. OR
D. AND

(10) When the input to an inverter is LOW(0) the output will be:

A. HIGH or 0
B. LOW or 0
C. HIGH or 1
D. LOW or 1

(11) What is the output of following HTML code?

```
<ol>
<li> Magnetic Disk </li>
<li> CD and DVD </li>
</ol>
```

A.
- Magnetic Disk
- CD and DVD

B.
1. Magnetic Disk
2. CD and DVD

C.
1. Magnetic Disk
   - CD and DVD

D.
Magnetic Disk
CD and DVD

(12) Which one of the following is correct HTML statements to divide browser window into 3 columns?

A. <fram col = 30%, 30%, 40%>
B. <framset col = 30%, 30%, 40%>
C. <framset col 30%, 30%, 40%>
D. <fram row = 30%, 30%, 40%>

(13) Which of the tags are correct to create list?

A. <DL> <DT></DT> </DD>
B. <DL></DL> <DT></DT> <DD></DD>
C. <DL></DL> <DT /DT> <DD /DD>
D. <DL /DL> <DD> </DD>

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:

$$F = \overline{xyz} + \bar{x}yz + x\bar{y}$$

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 od 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)

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

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 Deviser) 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 Languge	K	2
18	B: 2(v) OR	3.2 Operators OR 7.3 Text formatting tags	xi) Define and explain the order ofprecedence 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 ntroduction to Int	• 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: Programming Techniques **10%**	Unit 2: Programming 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)