

Secondary Education Examination

Model Questions

Set A

Subject: **Computer Science**

F.M: 50

Time: 1 hr. 30 minutes

Group 'A'

1. **Answer the following questions in one sentence.** **6x1=6**
 - a. Define Network Topology.
 - b. What is downloading?
 - c. Which data type is used to store contact no. in MS-Access?
 - d. Which object is used to print records in MS-Access?
 - e. What is library function?
 - f. Write any two keywords used in C language.
2. **Write appropriate technical term for the following.** **2x1=2**
 - a. The money that is exchanged electronically.
 - b. The buying or selling of goods through Internet.
3. **Write the full form of the following.** **2x1=2**
 - a. IoT
 - b. SMTP

Group 'B'

4. **Answer the following questions.** **9x2=18**
 - a. What is a network protocol? List some of the popular network protocols.
 - b. Define any two major uses of Internet.
 - c. What is cryptography? What is digital signature?
 - d. What is a social media? State the major social media security threats.
 - e. Explain data sorting. List any two advantages of using it.
 - f. What is RDBMS? Name any four RDBMS software.
 - g. Define online payment with examples.
 - h. What is query? List the different types of query.
 - i. What is primary key? List any two advantages of using it.
5. **Write down the output of the given program. Show with dry run in table.** **2**

```
DECLARE SUB SERIES ()
CLS
CALL SERIES
END
SUB SERIES
A = 50
B = 4
FOR I = 1 TO 7
PRINT A
A = A - B
B = B - 1
NEXT I
END SUB
```



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6. **Re-write the given program after correcting the bugs.** 2

```
DECLARE SUB result ()
```

```
CALL SUB result
```

```
END
```

```
SUB result
```

```
N=3
```

```
C=1
```

```
WHILE C<=5
```

```
DISPLAY N
```

```
N=N*10+3
```

```
C=C+1
```

```
LOOP
```

```
CLOSE SUB
```

7. **Study the following program and answer the given questions.** 2

```
DECLARE SUB Octa(A)
```

```
CLS
```

```
INPUT "ENTER A NUMBER"; D
```

```
CALL Octa(D)
```

```
END
```

```
SUB Octa (N)
```

```
WHILE N <> 0
```

```
A = N MOD 8
```

```
B$ = STR$(A)
```

```
N = FIX(N / 8)
```

```
C$ = B$ + C$
```

```
WEND
```

```
PRINT "OCTAL EQUIVALENT IS"; C$
```

```
END SUB
```

Questions:

- List out the parameters used in the program with their types?
- What is the function of STR\$() in the program?

Group 'C'

8. **Convert / Calculate as per the instruction:** 4x1=4

i. $(1562)_8 = (?)_2$

ii. $(1111 \times 110)_2 - (10)_2 = (?)_2$

iii. $(ADD)_{16} = (?)_{10}$

iv. $(1011)_2 + (101)_2$

9. (a) Write a program in Q-BASIC to find area of four walls using function procedure then write SUB..... END SUB program to calculate cost of pasting wallpaper to the walls at the rate of Rs.50 per square feet. 4
Write a program to find area of four walls.
- (b) Write a program to search and display only those records whose percentage is more than 60% from the sequential data file "RESULT.DAT" which contains student's Symbol number, Date of Birth, Total Marks, Percentage and Division. 4
10. Write a C program that asks principal amount, rate and time and calculate simple interest. 4

OR

Write a program that asks any two numbers and displays the smaller one.



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Time: 1 hr. 30 minutes

Group 'A'

1. **Answer the following questions in one sentence.** **6×1=6**
 - a. What is intranet?
 - b. Define AI.
 - c. Which data type is used to store the photo in MS-Access?
 - d. What is foreign key?
 - e. Define modular programming?
 - f. Define C language.
2. **Write the technical term for the following.** **2x1=2**
 - a. The arrangement of connections patterns of computer or nodes and other resources.
 - b. The legal issues related to using of inter-networked information technology.
3. **Write the full form of the following.** **2x1=2**
 - a. UPS
 - b. NIC

Group 'B'

4. **Answer the following questions.** **9x2=18**
 - a. List any two advantages and disadvantages of computer network.
 - b. What is m-commerce? Write its two important services.
 - c. What is IoT? Write any two importance of it.
 - d. What is hardware security? List any two measures of software security.
 - e. What is cyber-crime? Give any four examples of it.
 - f. What is MS-Access? Write any two features of MS-Access.
 - g. Define report. Write the importance of report in DBMS.
 - h. Define a primary key. Write its importance in database.
 - i. Define field and record.
5. **Write down the output of the given program.** **2**

```
DECLARE SUB A (N)
Cls
N = 1357
Call A(N)
End
Sub A (N)
  S = N
  While N > 0
    B = N Mod 10
    R = R * 10 + B
    N = Fix(N / 10)
  Wend
  Print R
End Sub
```



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6. **Re-write the given program after correcting the bugs.** 2

```
DECLARE FUNCTION FACTO(N$)
CLS
INPUT "Enter a number" ; X
PRINT "The factorial is "; FACTO(N)
END
FUNCTION FACTO(N)
F=1
WHILE N=0
F=F*N
N=N-1
WEND
F=FACTO
END FUNCTION
```

7. **Analyze the following program and answer the given questions.** 2

```
OPEN "std.dat" FOR INPUT AS #1
OPEN "temp.dat" FOR OUTPUT AS #2
WHILE NOT EOF(1)
    INPUT #1, RN, N$, TN
    PRINT RN, N$, TN
    INPUT "Do You want to delete this record Y/N"; C$
    IF UCASE$(C$) <> "Y" THEN
        WRITE #2, RN, N$, TN
    END IF
WEND
CLOSE #1, #2
KILL "std.dat"
NAME "temp.dat" As "std.dat"
END
```

- a. Why is the INPUT #1, N\$, A\$, S statement used in the above program?
b. What is the function of NAME in the above program?

Group 'C'

8. **Convert / Calculate as per the instruction:** 4x1=4

- a. Convert the following as instructed.
i. $(101)_2$ into Octal Number ii. $(B27)_{16}$ into Binary
b. Perform the following binary calculations.
i. $(11011)_2 \times (110)_2 - (1111)_2$ ii. $(11011)_2 \div (10)_2$

9. a. Write a program in QBASIC that allows user to enter a number and check whether the given number is prime or composite using sub procedure and check given number is even or odd using function procedure. 4
b. A sequential data file called "Record.txt" has stored data under the field heading Roll No, Name, Gender, English, Nepali and Maths and Computer. Write a program to display all the female students who pass in all subjects. [Note: Assume pass mark in each subjects is 40]. 4
10. Write a program in 'C' language to display the greatest number among three input numbers. 4

OR

WAP to check whether input number is positive, negative or zero.



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