

14. Study the following program and answer the given questions. (2×1=2)

```
DECLARE FUNCTION show (a, b)
```

```
CLS
```

```
a = 7: b = 25
```

```
PRINT show(a, b)
```

```
END
```

```
=====
FUNCTION show (a, b)
```

```
c = a \ b
```

```
d = b * c
```

```
x = a - d
```

```
show = x
```

```
END FUNCTION
```

- What is the main objective of the above program? Give output.
- Re-write the same program using **SUB-END SUB** statement.

15. a) Write a program that asks any number and calculates its factors using a **SUB** procedure. (3)
- b) Write a program that asks any string value and counts the frequency of vowels present in the supplied string using a **FUNCTION** procedure. (3)
- c) Write a program that asks your name and stores its reverse form into a sequential data file "**REVERSE.DAT**". Make a provision so that user can input 5 records at each program execution. (3)

For model answer: www.brushuponline.edu.np
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SLC Brush-Up Exam - 2011

Round: #3

Set: A

Subject: Computer Science

Full Marks: 50

Time: 1:30 Hours

Pass Marks: 20

Candidates are required to give their answer in their own words as far as practicable.

Group 'A'

[Fundamentals - 22 marks]

- Answer the following question:** (5×2=10)
 - Who is network administrator? Write his/her responsibilities.
 - What is web browser? Name any two web browsers.
 - Why power protection device is needed in computer system? Mention any two software security measures.
 - What is cyber law? Why is it important?
 - List any four protective measures to safeguard your computer from virus.
- a) Perform the following Binary calculation:** (2×1=2)
 - $(1011) + (1000) - (101)$
 - $(1001 \times 101) \div (11)$**b) Perform as indicated:** (2×1=2)
 - $(81)_{10}$ into Binary
 - $(453)_8$ into Hexadecimal
- Select the correct answer:** (4×0.5=2)
 - Protocol to fetch the mail from the mail server is ----- .
 - FTP
 - POP
 - SMTP
 - ARP
 - Which is the web browser?
 - Bing
 - Facebook
 - Google Chrome
 - Explorer
 - Choose the odd one:
 - Hub
 - Switch
 - Modem
 - Router
 - Two way communication simultaneously.
 - Half Simplex
 - Simplex
 - Half Duplex
 - Duplex
- Write the full form of the following:** (4×0.5=2)
 - NAC
 - SMTP
 - IETF
 - PDF
- State True or False:** (4×0.5=2)
 - Router is a device that amplifies the incoming signals, creates a new copy of it and transmits the signals on the network.
 - Pirated software copies viruses to the computer.
 - The Internet is a network between different computers within a room.
 - The digital signature allows the user to attach an original signature on the document of electronic records.

6. Give the appropriate technical terms of the following: (4×0.5=2)
- Cabling structure of LAN.
 - The legal issued adopted by the government to minimize the computer crime.
 - The sharpness of the image on the monitor screen, determined by the number of pixels that make up the image.
 - A software program with the ability to reproduce itself.

Group 'B'

[Database Management - 10 Marks]

7. Answer the following question: (3×2=6)
- Define database. List any two purposes of database.
 - List any two major differences between forms and reports.
 - What is query? List the different types of query.

8. Give the appropriate technical terms of the following: (4×0.5=2)
- Helps in maintaining the centralized control over database.
 - Simplifies data entry by controlling what data is required in a field and how the data is to be displayed.
 - Enables you to limit values that can be accepted into a field.
 - A field or a group of fields that uniquely identifies the records in database.

9. Match the following: (4×0.5=2)

Group A

Group B

- | | |
|-----------------|---|
| a) Action Query | (i) Access mode used to modify the structure of a table |
| b) Record | (ii) The basic structure of relational database. |
| c) Design View | (iii) Collection of data. |
| d) Table | (iv) Set of information stored about a particular entity. |
| | (v) Update/changes to multiple records in one operation. |

Group 'C'

[Programming - 18 Marks]

10. a) Differentiate between **AND** and **OR** operators. (1)
 b) Differentiate between **C** and **QBASIC** programming language. (1)

11. Write down the function of the following statements: (2×0.5=1)
 a) **OPEN** b) **CALL**

12. Write the output of the following program. (2)

```
CLS
FOR i = 2 TO 10 STEP 2
  FOR j = i TO 10 STEP 2
    PRINT j;
  NEXT j
  PRINT
NEXT i
END
```

13. Re-write the given program after correcting the bugs. (2)

```
REM to convert Decimal number into Binary number
DECLARE FUNCTION dec (x)
CLS
INPUT "Any binary number :"; n
PRINT "Decimal Equivalent "; dec(n)
END
=====
FUNCTION dec (n)
p = 1
WHILE n <> 0
  r = n MOD 10
  s = s + r * 10 ^ p
  p = p + 1
  n = n / 10
WEND
s=dec
END FUNCTION
```