


SLC Brush-Up Exam - 2011
Answer Key

Round: #1: Set: A

Group 'A'
[Fundamentals - 22 marks]

1. Answer the following question:

(5×2=10)

- a) What do you mean by communication media? Give any two examples of guided media.
- A communication media is a channel through which data, information, and various form of files on a network can be transmitted from one point to another in the form of electromagnetic signals. Transmission media can be divided into two types. They are Guided and Unguided media. The two examples of guided media are:
i) Twisted Pair Cable ii) Coaxial Cable
- b) What is an Internet? Write any three services of Internet.
- Internet is a network of networks or interconnection of several thousands of computers of different types belonging to various networks all over the world. It is the world largest computer network with no central authority to control. The three services of Internet are:
i) Electronic Mail
ii) Newsgroups
iii) E-commerce
- c) What is a backup? Why is backup vital to computer security system?
- Backup is the way of securing the information, they are the separate copy of the important computer data or files kept in another location. Backups are vital to computer security system to save the important data from the natural disasters, like an earthquake, tornado etc. a backup provides security to the computer system because the important data and software are kept ion another location.
- d) How does virus spread form one computer to another?
- Virus spread from one computer to another in various ways. It is usually passed through the infected files of the disk and from the Internet. Some viruses transfer if you boot your computer with an infected disk. Other can infect your system when you copy a file from an infected disk. It is also passed when you download a file from the Internet or access data or programs on the network.
- e) What do you mean by multimedia? Name any four media used in multimedia technology.
- Multimedia is the integration or combination form of different media. It is the technology of presenting information in more attractive, interesting, interactive and understandable manner. The five types of media used in multimedia technology are:
i) Text
ii) Graphics
iii) Animation
iv) Video
v) Sound

2. a) Perform the following Binary calculation:

(2×1=2)

i) $(100100) + (11011) - (11101)$

➤ (100010)

ii) $101110 \div 111$

➤ (Quotient = 110 Remainder = 100)

[Note: Students have to show the whole process to get full marks.]

b) Perform as indicated:

(2×1=2)

i) $(608)_{10}$ into Binary

➤ $(1001100000)_2$

ii) $(765)_8$ into Hexadecimal

➤ $(1F5)_{16}$

3. **Select the correct answer:** (4×0.5=2)
- a) Computer virus has its infection to ----- .
 i) Monitor ii) Mouse iii) Keyboard iv) **Hard disk**
- b) In which communication media do data travels in the form of light signal?
 i) Telephone wire ii) **Fiber optics** iii) Coaxial cable iv) Twisted pair
- c) Which one is the example of software used in multimedia?
 i) CD-ROM ii) Sound Card iii) **Sound Forge** iv) All
- d) Cyberspace means?
 i) Computer space ii) **WWW** iii) Cyber Café iv) None

4. **Write the full form of the following:** (4×0.5=2)
- a) PAT = Port Address Translation
 b) CDMA = Code Division Multiple Access
 c) NITC = National Information Technology Center
 d) VOIP = Voice Over Internet Protocol

5. **Match the following:** (4×0.5=2)
- Group A Group B
- a) TCP/IP (i) Addressing data, converting them into packets and routing
 b) POP (ii) Fetching mails from the mail server to a user's computer
 c) ARP (iii) Convert the network address of a computer to MAC address
 d) SMTP (iv) Transfer mail and attachment on the network

6. **Give the appropriate technical terms of the following:** (4×0.5=2)
- a) A device that forwards signals between networks in network traffic = **Router**
 b) A physical layout of network through which network devices are connected = **Network Topology**
 c) The moving graphic images = **Animation**
 d) Website used to search information on the Internet = **Search Engine**

Group 'B'
[Database Management - 10 Marks]

7. **Answer the following question:** (3×2=6)
- a) State the major importance of managing computer database.
 ➤ The major importance of managing computer database are:
 i) Centralized control
 ii) Efficient access of data
 iii) Easy in data administration or data management
 iv) Provides concurrent access, recovers the data from the crashes
- b) Define DBA? List major roles of DBA in managing database.
 ➤ An information specialist who has responsibility for the database is called a Database Administrator (DBA). His/her duties fall into four major areas: Database planning, implementation, operation and security.
- c) What is indexing in database?
 ➤ A database index is a data structure that improves the speed of data retrieval operations on a database. It improves the performance of a database.

8. **Choose the correct answer [Choose all that apply]:** (4×0.5=2)
- a) Which object can be stored in memo field?
 i) Hyperlink ii) **Data** iii) Picture iv) **Word**
- b) What is extension of access database?
 i) DBF ii) **MDB** iii) MBD iv) None
- c) The name of caption can be declared up to ----- characters.
 i) 1024 ii) 2024 iii) **2048** iv) 2005
- d) The frame work for storing records in database is ----- .
 i) Query ii) Form iii) Report iv) **Table**

9. **Match the following:** (4×0.5=2)
- Group A Group B
- a) Show final information (i) Report
 b) Data entry (ii) Form
 c) Change the table structure (iii) Design view
 d) Each column in a table (iv) Field

Group 'C'
[Programming - 18 Marks]

10. a) What do you understand by User-defined function? (1)
➤ User-defined function is created by user during programming. In QBASIC, FUNCTION ... END FUNCTION statement is used to create a user-defined function.
- b) Differentiate between **int** and **float** data type in C language. (1)
➤ **int** is used to define integer numbers where as **float** is used to define floating point numbers.

```
{
    int Count;
    float Miles;
    Count = 5;
    Miles = 5.6;
}
```

11. Write down the function of the following statements: (2×0.5=1)
- a) **NAME** = This statement is used to change the file name.
Syntax: NAME <Old Filename> AS <New Filename>
- b) **CONST** = This statement is used to define symbolic constant.
Syntax: CONST <var name>=[value]
Eg: CONST pi=3.14

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

```
DECLARE SUB show (n)
CLS
FOR I = 1 TO 10
    READ n
    CALL show(n)
NEXT I
DATA 7,15,6,10,15,32,8,22,25,5
END
=====
SUB show (x)
IF x MOD 5 <> 0 THEN
    PRINT x;
END IF
END SUB
```

- The output of the above program is:

```
7 6    32    8    22
```

[Note: The memory table should be shown to obtain full marks.]

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

```
REM to check Armstrong or not
DECLARE FUNCTION check (n)
CLS
INPUT "Any number "; n
IF check(n) = 0 THEN
    PRINT "Armstrong"
ELSE
    PRINT "Not Armstrong"
END IF
END
=====
FUNCTION check (n)
n=a
WHILE n < 0
    r = n MOD 10
    s = s + r * 3
    n = n \ 10
WEND
IF a = s THEN
    check = 1
ELSE
```

```

        check = 0
END IF
END FUNCTION

```

➤ The corrected code is given below:

```

REM to check armstrong or not
DECLARE FUNCTION check (n)
CLS
INPUT "Any number "; n
IF check(n) = 1 THEN
    PRINT "Armstrong"
ELSE
    PRINT "Not Armstrong"
END IF
END

FUNCTION check (n)
a = n
WHILE n <> 0
    r = n MOD 10
    s = s + r ^ 3
    n = n \ 10
WEND
IF a = s THEN
    check = 1
ELSE
    check = 0
END IF
END FUNCTION

```

14. Study the following program and answer the given questions.

(2×1=2)

```

DECLARE SUB test (a, b)
CLS
x = 7: y = 5
CALL test(x, y)
PRINT x, y
END

=====
SUB test (a, b)
FOR i = a TO b STEP -1
    a = a + b
    b = b + a
NEXT i
END SUB

```

- a) If the value of **x** and **y** are exchanged then what will be the output of the program?
 ➤ 5 7
- b) What will be the output of the program if **CALL test(x,y)** is written below **PRINT x,y**?
 ➤ 7 5

15. a) Write a program to display the below output using a **SUB** procedure.

(3)

```

123456789
1234567
12345
123
1

```

```

➤ DECLARE SUB display ()
CLS
CALL display
END

```

```

SUB display
a# = 123456789
FOR i = 1 TO 5
    PRINT TAB(i); a#
    a# = a# \ 100
NEXT i
END SUB

```

- b) Write a program that asks length and breadth of a triangle and calculates its area using a **FUNCTION** procedure. [Area of triangle = $\frac{1}{2}b \times h$] (3)

```

➤ DECLARE FUNCTION area (b, h)
CLS
INPUT "Base of a triangle "; b
INPUT "Height of a triangle "; h
PRINT "Area of triangle = "; area (b, h)
END

=====
FUNCTION area (b, h)
a = (b * h) / 2
area = a
END FUNCTION

```

- c) Write a program that asks students' name, roll and class and stores into "class.dat" only those records who are studying in class 10. User can supply the records as per his/her need. (3)

```

➤ OPEN "class.dat" FOR OUTPUT AS #1
top:
CLS
INPUT "Type student's name "; s$
INPUT "Roll Number "; r
INPUT "Class "; c
WRITE #1, s$, r, c
INPUT "More records "; y$
IF y$ = "y" THEN GOTO top
CLOSE #1
END

```
