

# COMPUTER SCIENCE 2011

Time: 20 Minutes

Max. Marks: 15

NOTE: This paper comprises Two independent options – (i) Programming Using 'C' and (ii) Programming Using Visual Basic. The candidates have to attempt any One Option, Programming Using 'C' OR programming Using Visual Basic, whichever they have offered.

## OPTION - I (PROGRAMMING USING 'C')

### SECTION 'A' (MULTIPLE CHOICE QUESTIONS)

1. Choose the correct answer for each from the given options:

- (i) The declaration of scanf () & printf () is included in this header file:  
\* <conio.h> \* <stdio.h> \* <math.h> \* none of these
- (ii) This is not a relational operator:  
\* && \* >= \* == \* <
- (iii) This statement can terminate any loop immediately:  
\* continue \* switch \* break \* none of these
- (iv) This is a valid integer (int) type data:  
\* 32768 \* 10.5 \* 2560 \* All of these
- (v) = is an operator of the type:  
\* Assignment \* Arithmetic \* Relational \* Logical
- (vi) This is not an arithmetic operator: \* + \* / \* % \* x
- (vii) This is called the collection of related fields:  
\* Record \* Table \* Entity \* Attribute
- (viii) This is a primary object in MS-Access:  
\* Form \* Report \* Table \* Query
- (ix) || is the type of operator:  
Logical \* Arithmetic \* Relational \* Address
- (x) Every C statement must be terminated with:  
\* ; \* " \* ' \* ,
- (xi) This is a valid variable name:  
\* \$amount \* 23balance \* marks\_obt \* printf()
- (xii) The float type data occupies:  
\* 8 bytes \* 1 byte \* 2 bytes \* 4 bytes
- (xiii) This is invalid variable declaration:  
\* double p \* unsigned int I \* float p, q; \* string name;
- (xiv) What will be the output of the following statement?  
printf ("%0.2f" ,633.5584);  
\* 63.33 \* 63 \* 633.55 \* none of these
- (xv) This is correctly initialized statement:  
\* float y=23; \* integer y=23 \* Char y='yes'; \* int y=23;

# COMPUTER SCIENCE 2011

Time: 2 Hours 40 Minutes

Marks: 60

## OPTION - I (PROGRAMMING USING 'C')

### SECTION 'B' (SHORT-ANSWER QUESTIONS)

NOTE: Answer any 6 questions from this section. No answer should exceed 6-7 lines. (36)

- 2.(i) Define Relational operators with suitable examples.
- (ii) Convert the following mathematical expression into C-language:  
(a)  $x = \frac{(2ab)^2}{3c}$  (b)  $y = \frac{4}{3} \pi r^3$  (c)  $z = \frac{(a^2 - b^2)^2}{(a - b)}$
- (iii) Define any Three I/O Functions with suitable examples.
- (iv) Write a program to generate the following output  
\*  
\*\*  
\*\*\*  
\*\*\*\*  
\*\*\*\*\*
- (v) Define IDE & discuss how it is useful in C programming.
- (vi) What is a function? What are the advantages of using functions?
- (vii) What is the output of following program statement?  
for (a=1; a<=10; a++)  
printf ("%d" , Pow (a,2);
- (viii) Elaborate the term primary key with its characteristics.
- (ix) Describe advantages of data base management system

### SECTION 'C' (DETAILED- ANSWER QUESTIONS)

NOTE: Answer 2 question from this section.(24)

- 3.(a) Explain Data types used in C language with suitable examples. (b) What are the main objects of MS-Access?
- 4.(a) What repetitive control structures are used in c? Discuss for () loop with example.  
(b) Define Any three of the following: (i) Escape sequence (ii) Logical operators (iii) Query (iv) Header Files
- 5.(a) Write a program that prints all the ASCII characters from 0 to 255.  
(b) Elucidate the term data base model. Explain relational and data base model

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## OPTION - II

### (PROGRAMMING USING VISUAL BASIC)

### SECTION 'A' MULTIPLE CHOICE QUESTIONS

1. Choose the correct answer for each from the given options:

- (i) This control presents a group of buttons from which user can choose only one: \* Command button \* Check box \* Option button \* Combo box
- (ii) This range is valid for storing integer data type:  
\* -13245 to 123450 \* -65537 to 65538  
\* 0 to 4220 \* -32768 to 32767
- (iii) This control represents an action that is carried out where user clicks the button: \* Check box \* List box \* Combo box \* Command button
- (iv) This is used to declare variable explicitly:  
\* Var \* Set \* Dim \* None of these
- (v) This data type can accommodate all types of data:  
\* Object \* Date \* Variant \* Fixed length string
- (vi) When the variable's scope is limited to a procedure, it is called: \* Global variable \* Local variable \* Host variable \* All of these
- (vii) A loop which uses a counter variable is known as:  
\* For.....Next \* For.... Each  
\* While .... Wend \* Do .... loop
- (viii) The Collection of related records is called:  
\* Field \* File \* Entity \* Attribute
- (ix) A Form file is saved with one of the following extension:  
\* .FrX \* .Frm \* .Ocx \* none of them
- (x) Default property of first Form is:  
\* Form1 \* Form \* Any \* None of these
- (xi) This type of variable is used in all procedures:  
\* Dim \* Private \* Public \* None of these
- (xii) An Array index value starts from:  
\* 0 \* -1 \* 1 \* None of them
- (xiii) A primary key must contain: \* Filtered data \* Default values \* Unique data \* None of these
- (xiv) A software that manages the creation, storage, access, update, deletion and use of database is:  
\* DBMS \* Database \* System software \* None of them
- (xv) This data type is used to store long text entries in MS-Access: \* Memo \* Text \* Number \* OLE object

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## OPTION - II

### (PROGRAMMING USING VISUAL BASIC)

### SECTION 'B' (SHORT-ANSWER QUESTIONS)

NOTE: Answer 6 part question from this section. No answer should exceed 6-7 lines. (36)

- 2.(i) Define term function. Explain how it is different from subroutine?
- (ii) Write a program to generates the following output:  
\*  
\*\*  
\*\*\*  
\*\*\*\*  
\*\*\*\*\*
- (iii) Differentiate between the following: (a) List Box and Combo box (b) While ... Wend and For ... Next
- (iv) Describe common methods of form & Its key properties
- (v) Differentiate between primary key and foreign key.
- (vi) What is Multiple Document Interface? Define its Characteristics.
- (vii) Elaborate advantages of data base management system.
- (viii) Define various data types used in MS-Access.
- (ix) How do we connect VB with data base

### SECTION 'C' (DETAILED- ANSWER QUESTIONS)

NOTE: Answer Two questions from this section. (24)

- 3.(a) Define Relationships in DBMS & RDBMS.  
(b) Define the term database model. Explain relational and hierarchical model.
- 4.(a) Write a program that generate the following output  
20 18 16 14 12 10 8 6 4 2 0  
(b) Define any three of the following: (i) Check box (ii) Report (iii) Query (iv) Select Case
- 5.(a) Elucidate the term ActiveX control. Discuss Scroll bar & Text box controls. (b) What are main objects of MS-Access?