COMPUTER SCIENCE2010

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, whichsoever 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) Which of the following statements causes an exit from a loop or switch ( ) structure?
(A) continue (B) { } (C) <u>break</u> (D) ( )

(ii) Which of the following operator operates on only one operand? (A) >= (B) == (C) && (D) !

(iii) Which one is a valid integer (int) type data?
(A) <u>39910</u> (B) 2,20000 (C) -32001 (D) +32768

(iv) Which loop is suitable when the body of the loop has to run at least once?
(A) <u>for()</u> (B) While() (C) do() (D) All of them

(v) Which of the following functions can print any type of data? (A) putchar() (B) scanf() (C) <u>printf()</u> (D) puts()

(vi) In C language a string of 30 characters is declared as:
(A) char 30 (B) <u>char str [30]</u> (C) string (D) string[30]

(vii) In a flowchart a rectangle is used for:
(A) Decision (B) <u>Processing</u> (C) Input (D) Output

(viii) Which of the following is the extension of a 'C' program? (A) .CP (B) <u>.CPP</u> (C) .EXE (D) .BAK

(ix) Which object creates view, alters and analyzes data in different ways?
(A) <u>Query</u> (B) Form (C) Report (D) None of them

(x) In MS Access, which object is used to represent data in a printed Format?
(A) Query (B) Form (C) <u>Report</u> (D) Macro

(xi) A Relational Operator is used to:
(A) combine values (B) <u>compare values</u>
(C) delete values (D) interchange values

(xii) Which of the following is a primary object in MS-ACCESS? (A) Form (B) Report (C) <u>Table</u> (D) Query

(xiii) Every C program must contain one of the following functions:
(A) printf() (B) <u>main()</u> (C) getch() (D) clrscr()

(xiv) Which format specifier is used for displaying hexadecimal numbers?
(A) %u (B) <u>%x</u> (C) %0 (D) %f

(xv) Which of the following functions can input a string from the keyboard? (A) <u>getche()</u> (B) putch() (C) gets() (D) puts()

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Time: 2 Hours 40 Minutes   Marks: 60

OPTION - I (PROGRAMMING USING 'C')
SECTION 'B' (SHORT-ANSWER QUESTIONS)

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

2.(i) Elaborate the basic structure of C program.

(ii) Differentiate between any Three of the following:
(a) for and while (b) Primary key & Foreign Key
(c) break and continue (d) Switch and if-else

(iii) What is meant by Escape Sequence? Define different Escape Sequence with suitable examples.

(iv) Write a program using for loop that prints the factorial of an inputted number.

(v) Write a program that inputs your age and your sister's age and then display who is older of the two.

(vi) Convert any Two of the following mathematical expressions into equivalent 'C' expressions:

(a) $y = (a + b)^n$ (b) $b = (x + z)^2 - (a^2 + b^3)$

(c) $x = \dfrac{-b + \sqrt{b^2 - 4ac}}{2a}$

(vii) What are library functions? Discuss any three library functions.

(viii) Write a program that generates odd No. from 101 to 150.

(ix) What are the characteristics of a primary key?

SECTION 'C' (DETAILED- ANSWER QUESTIONS)

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

3.(a) What are Operators? Explain Relational and Logical Operators with examples.

(b) Explain different types of files used in C language.

4.(a) Name the control structures used in C language and discuss iterative control structure with syntax.

(b) What are the advantages of Data Base Management System?

5.(a) What is user-defined function? What three elements must be used with a user-defined function?

(b) What data types are used in MS-Access? Discuss.