

COMPUTER SCIENCE 2015

Time: 20 Minutes

Max. Marks: 15

OPTION - I (PROGRAMMING USING 'C')

SECTION "A" (MULTIPLE CHOICE QUESTIONS)

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

- The statements within any C function must be enclosed within a pair of:
• { } • [] • () • " "
- The collection of related fields is called a:
• Record • Field • Database • Attribute
- The default case in the switch statement is:
• Optional • Compulsory • Occasional • Relational
- The for loop counter variables should be of this type:
• Float • int • Char • Double
- A field is sometimes called an/a:
• File • Attribute • Record • Database
- An object whose value can be changed during the program execution is called:
• Symbol • Variable • Constant • Operator
- To control the spacing and number of characters is displayed by:
• Precision specifier • Field-width specifier
• Format specifier • Escape sequence
- This database object is used to present data in a printed format:
• Table • Query • Form • Report
- The memory space required for a float is:
• 2 bytes • 8 bytes • 1 byte • 4 bytes
- A function which invokes itself is called:
• Recursive function • System function
• Library function • Iterative function
- In database, records are also called:
• Attributes • Entities • Tuples • Relations
- This is the symbol of AND operator:
• || • && • & • |
- The control structure use do-whole loop is:
• Sequence • Selection • Iteration • Random
- This symbol in a flow chart represents a process:
• Rectangle • Oval • Circle • Diamond
- The comment begins with the characters set of:
• */ • /* • * • *\

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Time: 2 Hours 40 Minutes

Marks: 60

OPTION - I (PROGRAMMING USING 'C')

SECTION B (SHORT-ANSWER QUESTIONS)(36)

NOTE: Answer 6 questions from this section.

- What is the purpose of the statement `#include<stdio.h>` in a C program? What is statement terminator?
- Define logical operators in C language.
- Differentiate between while loop and the do-whole loop.
- What are escape sequences? Give an example.
- List some of the advantages of database management system.
- Write the full form of the following acronyms:
DML, DDL, SQL, IDE, RDBMS, DBA
- What is a key field? Why is it important in DBMS?
- Write a program that reads radius of a circle and displays the circle/s area. Use this formula $\text{Area} = \pi \times \text{radius} \times \text{radius}$ where π is the constant whose value is 3.14159.
- Rewrite the following mathematical expressions using C function:

$$(a) \sqrt{x+y} \times z^3 \quad (b) \sqrt{(a-b)^3} \quad (c) \left| ab - \frac{U}{V} \right|$$

SECTION 'C' (DETAILED- ANSWER QUESTIONS)

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

- Explain the use of nested if-else statement.
- Write a program that reads three numbers and prints the largest.

- Explain the data types used in MS-Access.
- Write a program in C to call a function which returns the cube of a given number.

- Explain various types of Database model.
- What are the commonly used input/output functions in C? How are they accessed?

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Time: 20 Minutes

OPTION - II

Max. Marks: 15

(PROGRAMMING USING VISUAL BASIC)

SECTION "A" MULTIPLE CHOICE QUESTIONS

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

- The collection of related files is called:
• Record • Field • Database • ADO
- The collection of homogeneous data items is kept in:
• function • structure • procedure • array
- Option buttons are also called:
• Radio buttons • Selected buttons
• Labels • Push buttons
- In MS-Access, a calculation expression is built in:
• Join • Expression builder • Relation • Union
- This method is used to hide the form:
• Hide.hide • Form.hide • Hide.form • Formname.hide
- The method used to remove items for the list box is called:
• Display • Clear • Delete items • Remove items
- When the variable scope is limited to a procedure, it is called:
• Host variable • Global variable
• Local variable • Public variable
- In VB, 'Form' is saved with this extension:
• .frm • .vbf • .vbp • .doc
- This is used to create a calculated field in a query:
• a formula • a filter • a condition • an expression
- In MS-Access, this object creates views, alters and analyzes the data in different ways:
• Form • Query • Report • Macro
- This data type can accommodate all types of data:
• Object • Date • Variant • Fixed length string
- In VB, an integer data type can accommodate number form:
• 0 to 65535 • $3.4e^{-38}$ to $3.4e^{38}$
• -32,768 to + 32,767 • -128 to 127
- This control accepts textual information from the user:
• Label • Text box • Caption • Combo box
- This type of variable is used in all procedures:
• Private • Public • Confidential • Relational
- Default property of first form is:
• Form1 • Form • Any • Formo

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Time: 2 Hours 40 Minutes

OPTION - II

Marks: 60

(PROGRAMMING USING VISUAL BASIC)

SECTION B (SHORT-ANSWER QUESTIONS)(36)

NOTE: Answer 6 question from this section.

- Define any two of the following:
(a) Event Driven Programming
(b) Key Board Events
(c) VB Projects
- Explain Active X controls.
- Differentiate between Procedure and Function.
- Write a program that generates a multiplication table of an inputted number.
- What are main objects of MS-Access?
- What is an Array? Explain with an example.
- Create a single form to add to numbers using text boxes and buttons.
- What is data dictionary? What does it provide in DBMS?
- Write the full form of the following acronyms:
DML, DDL, SQL, IDE, RDBMS, DBA

SECTION C (DETAILED- ANSWER QUESTIONS)(24)

NOTE: Answer 2 questions from this section.

- Define various types of database models.
- Why is a primary key necessary in a database program?

- State all the loop control structure supported by visual basic and compare them by their syntax and an example.
- Discuss various data types used in MS-Access.

- Why is a database management system important to any organization?
- What characteristics should a good DBMS exhibit?