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Part III — COMPUTER SCIENCE
(Vocational Component under General Stream)
(English Version)

Time Allowed : 3 Hours]

[Maximum Marks : 150

- Note :**
- i) Candidates should answer *all* the questions in **PART - I** (Objective type) (1 to 75) in the separate OMR Answer Sheet supplied. (Refer instructions given in the OMR Answer Sheet)
 - ii) The number of the sign '—' (dash) as found in the right-hand top corner of the Question Paper (i.e.,

—

 (1) or

— —

 (2) or

— — —

 (3) or

— — — —

 (4) should be shaded in the OMR Answer Sheet using HB Pencil.
 - iii) Time allotted for answering question numbers 1 to 75 is first 75 minutes.
 - iv) **Parts - II and III** questions (76 to 110) should be answered in the main answer-book.

PART - I

Choose the best answer :

75 × 1 = 75

1. Which of the following formulae calculates the sum of numbers in the cell A2 of sheet 1 and A1 of sheet 2 ?
 - A) = sum (sheet 1 . A2 + sheet 2 . A1)
 - B) = sum (sheet 1 : A2 ; sheet 2 : A1)
 - C) = sum (sheet 1 . A2 ; sheet 2 . A1)
 - D) = sum (sheet 1 . A2 : sheet 2 . A1).

Turn over

10. What is the range of int data type ?
- A) - 32768 to 32767 B) - 32767 to 32768
C) - 32728 to 32727 D) - 32728 to 32729.
11. Which of the following class access specifiers is optional ?
- A) Public B) Protected
C) Private D) Class.
12. Data members are called as
- A) Methods B) Attributes
C) Datatypes D) Pointers.
13. Which of the following members can be accessed only from within the class ?
- A) Private B) Public
C) Protected D) Static.

14. Class product

```
{  
    int a, b ;  
    float P ;  
    public :  
        void assign_data( ) ;  
        void display( ) ;
```

```
};
```

```
void main( )
```

```
{
```

```
    product P1, P2 ;
```

```
}
```

The number of bytes allotted for the variable P1 is

- A) 12 B) 10
C) 8 D) 4.

Turn over

54. In StarOfficeWriter, to display the ruler on the screen, select ruler under
- A) File
B) Edit
C) Format
D) View.
55. Visicalc was invented by
- A) Dan Bricklin
B) Bob Frankston
C) Bill Gates
D) Dan Bricklin and Bob Frankston.
56. MPEG stands for
- A) Moving Pictures Experts Group
B) Model Pictures Expression Group
C) Moving Pictures Expression Group
D) Morphing Pictures Experts Group.
57. Conversion of analog sound waves to a digital format is called as
- A) echo
B) sound forge
C) frequency
D) sampling.
58. Which of the following is a technique to blend two or more images to form a new image ?
- A) Warping
B) Morphing
C) Modelling
D) Animating.
59. In which year was real audio format developed ?
- A) 1982
B) 1995
C) 1994
D) 1981.
60. Which tag is used to add in-line sound to a web page ?
- A) <inline>
B) <bgsound>
C) <sound>
D) <helper>

61. The statement `int A ; b ;` is invalid because
- A) only one variable should be given
 - B) capital A is not allowed
 - C) variables should be separated by comma
 - D) all of these.
62. Which of the following statements, marks the end of the function in C++ ?
- A) Continue
 - B) Break
 - C) Return
 - D) End.
63. In which of the following methods any change made in the format parameter is reflected back in the actual parameter ?
- A) Call by value
 - B) Call by reference
 - C) Call by function
 - D) Call by statement.
64. The function that returns no value is declared as
- A) Main
 - B) Friend
 - C) Void
 - D) Online.
65. Which of the following is called scope resolution operator ?
- A) &
 - B) *
 - C) ::
 - D) ? :
66. CBT means
- A) Computer Based Tutorials
 - B) Common Based Tutorials
 - C) Computer Based Teaching
 - D) Computer Based Teacher.
67. Which of the following IT Enabled Services is a category of pertaining to collection, digitization and processing of data ?
- A) Call Centres
 - B) Data Management
 - C) E-Governance
 - D) Web based services.

68. Which of the following refers to the process of converting a non-digital material to digital form ?
- A) Data conversion B) Medical transcription
C) Data digitization D) Digital conversion cracking.
69. Which of the following securities refers to the protection of hardware ?
- A) Personal B) Personnel
C) Physical D) Data.
70. If a software runs on an idle computer without the knowledge of the organization, it is called as theft of
- A) software B) organization
C) computer time D) hardware.
71. Name of a destructor begins with
- A) + B) ?
C) ~ D) !
72. Which of the following is a class from which other classes are derived ?
- A) Derived class B) Base class
C) Function class D) Superclass.
73. Which of the following is a default visibility mode ?
- A) Public B) Protected
C) Private D) Class.
74. Classes used only for deriving other classes are called as
- A) base B) derived
C) abstrart D) static.
75. What will be the 85% usage of computer ?
- A) Word processing B) Database
C) Spreadsheet D) Presentation.

PART - II

Answer any *twenty* questions in *one or two* sentences each : 20 × 2 = 40

76. Define Text editing.
77. How will you delete the entire table in StarOfficeWriter ?
78. Name the different types of cell referencing in StarOfficeCalc ?
79. Write a note on text operators in StarOfficeCalc.
80. What is a database ?
81. What distinguishes information from data ?
82. Define Warping.
83. Write about the types of Video compressions.
84. What is Custom Animation ?
85. What is Rehearse Timing ?
86. Define Object.
87. Find the value of C in the following C++ snippet :

```
X = 10 ;  
F = 20 ;  
C = X++ + ++F ;
```
88. Define Tokens.
89. What is type cast ?
90. Write the syntax of switch-case statement.
91. What are the advantages of using functions in C++ ?
92. Define array.
93. Find the errors in the following C++ snippets :
a) `int a [5.5] ;` b) `float num [A] ;`
94. Define Data Abstraction.
95. What is meant by array of objects in C++ ?
96. How are functions involved in function overloading ?
97. When is a copy constructor executed ?
98. Write the syntax for deriving a class from its base class.
99. What is the use of call centres ?
100. Write a note on cracking.

PART - III

Answer any seven of the following questions in five to ten sentences each :

7 × 5 = 35

101. Explain the different ways of selecting text in StarOfficeWriter document.
102. Explain the various functions of the icons in the table formatting toolbar.
103. What are functions ? How can you use them in your worksheet ? Explain with an example.
104. Explain the procedure to insert a chart in a worksheet.
105. How will you generate reports in StarOfficeBase ?
106. Explain Nested-if statement with an example.
107. Differentiate between call by value and call by reference of functions in C++.
108. What are the rules of operator overloading ?
109. Debug the following C++ program to get the given output :

```
#include < oistream.h >
class add
{
    int num 1,num2,sum ;
    public
    add()
    {
        cout<<"\n Constructor without parameters.." ;
        num 1 = 0 ;
        num 2 = 0 ;
        sum = 0 ;
    }
    ad ( int s1, int s2 )
    {
        cout<<"\n parameterized constructor..";
        num 1 = S1 ;
        num 2 = S2 ;
        sum = NULL ;
    }
    add ( add a )
    {
        cout<<"\n Copy Constructor..." ;
        num1 = a . num1 ;
        num2 = a . num2 ;
        sum = NULL ;
    }
}
```

Turn over

```

}
Void getdata( )
{
    num1 = 10 ;
    num2 = 20 ;
}
void putdata( )
{
    cout<<"\n The numbers are..." ;
    cout<<num1<<"\t"< num2 ;
    sum=num1 + num ;
    cout<<"\n The sum of the numbers"<<sum ;
}
void main[ ]
{
    add a, b ( 10, 20 ), c(b) ;
    a.getdata( ) ;
    cout >>"\n Object a : " ;
    a. putdata( ) ;
    cout >>"\n Object b : " ;
    b. putdata( ) ;
    cout >>"\n Object c : " ;
    c. putdata( ) ;
}

```

Constructor without parameters..

parameterized constructor..

Copy constructor...

Object a :

The numbers are... 10 20

The sum of the numbers 30

Object b :

The numbers are... 10 20

The sum of the numbers 30

Object c :

The numbers are... 10 20

The sum of the numbers 30

110. Find the output of the following C++ program :

```
#include<iostream.h>
#include<conio.h>
class base
{
public:
base( )
{
cout<< "\n Constructor of base class ...";
}
~ base( )
{
cout<< "\n Destructor of base class ...";
}};
class derived : public base
{
public:
derived( )
{
cout<< "\n Constructor of derived..";
}
~ derived( )
{
cout<< "\n Destructor of derived..";
}};
class derived2 : public base
{
public :
derived2( )
{
cout<< "\n Constructor of derived2 ..";
}
~ derived2( )
{
cout<< "\n Destructor of derived2 ..";
}
};
void main( )
{
derived 2 x ;
}
```

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