5107

Register Number ☐☐☐☐☐☐

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 correct answer :

75 × 1 = 75

1. Which statement accomplishes jump from the current loop ?

   A) Break

   B) Continue

   C) Exit

   D) Quit.

2. Which induces the reusability of the code ?

   A) Objects

   B) Classes

   C) Functions

   D) Variables.

[Turn over

3. Which functions execute faster but require more memory space ?

   A) Inline

   B) Strcpy

   C) Strlen

   D) Strcmp.

4. Which option is invalid when related to functions of C++ ?

   A) Actual parameter can be passed in the form of a constant to be formal parameter of value type

   B) The actual parameter can be passed only as variable to the formal parameter of reference type

   C) The default value in the formal parameter is given in the form of variable initialization

   D) The default value for an argument can be given in between the argument list.

5. What is the scope of the variable a in the following snippet ?

   ```
   if ( x < y )
   {
       int a ;
       a ++ ;
   }
   ```

   A) local

   B) function

   C) file

   D) class.

6. The members of a class are accessed using the operator

   A) .

   B) ::

   C) :

   D) ;

7. Which of the following is not true ?

   A) Member functions can be of static type.

   B) The return type of a member function cannot be of object data type.

   C) A non-member function cannot access the private data of a class.

   D) Several different classes can use the same function name.

Data abstraction is achieved through

A)   encapsulation   B)   polymorphism

C)   inheritance   D)   data hiding.

In C++, class variables are known as

A)   class   B)   functions

C)   members   D)   objects.

).   Which operator cannot be overloaded ?

A)   +   B)   ++

C)   >   D)   ::

1.   A filter is also a type of

A)   table   B)   form

C)   report   D)   query.

2.   Which is a printed information that is assembled by gathering data based on user supplied criteria ?

A)   Table   B)   Form

C)   Report   D)   Query.

13. To insert a calc cell range into a text document, choose

A)   Edit → paste   B)   Edit → copy

C)   Edit → paste special   D)   Edit → copy special.

14. Which is used to assemble information from data ?

A)   DBMS   B)   Datum

C)   Information   D)   Sorting.

15. Which key uniquely identifies a record in a table ?

A)   Primary   B)   Secondary

C)   Tertiary   D)   Record pointer.

[Turn over

16. Which key combination is pressed to move backward through cells ?

A) Tab + F5

B) Shift + F6

C) Shift + Tab

D) Esc.

17. If Table → Table properties command is used, which one of the following dialog box is opened ?

A) Table properties

B) Format Table

C) Table Format

D) Cell properties.

18. If the length of the document is more than the width, the orientation is called

A) portrait

B) default

C) landscape

D) both (A) and (C).

19. The default margins for top, bottom and left, right margins are

A) 1·25 ″, 1 ″

B) 1 ″, 1·25 ″

C) 1 ″, 1 ″

D) 1·25 ″, 1·25 ″.

20. The intersection of rows and columns creates

A) table

B) cells

C) address

D) formula.

21. Which enables online educational programs leading to degrees and certification ?

A) e-banking

B) e-shopping

C) e-learning

D) Tele-medicine.

22. The expansion of BPO is

A) Business Pupil Outsourcing

B) Business People Outsourcing

C) Business Project Outsourcing

D) Business Process Outsourcing.

23. Which refers to the conversion of non-digital material to digital form ?

A) Data security

B) Digitization

C) ITES

D) Medical Transcription.

Which laws prevent computer crimes in India ?

A) Cyber

B) IT

C) Common

D) Cracking.

Computer ethics has its roots in the work of

A) Charles Babbage

B) Blaise Pascal

C) Norbert Wiener

D) Bjarne Stroutstrup.

Which one of the following is object oriented programming language ?

A) C

B) C++

C) Pascal

D) Visual Basic.

7. A kind of self sufficient 'subprogram' with a specific functional area is called as

A) Object

B) Class

C) Program

D) C++.

8. Which is not a C++ keyword ?

A) auto

B) goto

C) constant

D) const.

29. Which marks the end of a string literal ?

A) '\o'

B) '/o'

C) '\n'

D) '/n'.

30. Which is the conditional operator ?

A) ?

B) ? :

C) : ?

D) ::

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Note : Read the following C++ snippet carefully and answer Question Nos. 31 and 32 :

```
class simple
{
        private :
                int x ;
        public :
                simple ( int y )
                {
                        x = y ;
                }
                ~ simple( )
                {
                }
};
```

31. What is the name of the constructor ?

A) simple

B) ~ simple

C) private

D) public.

32. What type of constructor is used in this snippet ?

A) Non-parameterized

B) Copy

C) Parameterized

D) Default.

33. Which is the most powerful feature of an object oriented programming language ?

A) Encapsulation

B) Polymorphism

C) Inheritance

D) Data hiding.

How the derived class should be indicated ?

A)   Class der_name : visibility mode base class_id

B)   Class der_name :: visibility mode base class_id

C)   Class der_name ; visibility mode base class_id

D)   Class der_name, visibility mode, base class_id.

. The default visibility mode is

A)   private   B)   protected

C)   public   D)   class.

. Which unit enables data storage and management ?

A)   Archive   B)   Memoframe

C)   Projection TV   D)   Robot.

7. Operator functions must be

A)   member function   B)   friend function

C)   either (A) or (B)   D)   function.

8. Integral promotions are purely

A)   compiler oriented   B)   computer oriented

C)   data oriented   D)   program oriented.

39. Which function initializes the class object ?

A)   Constructor   B)   Destructor

C)   Main( )   D)   User defined.

40. Which constructor is executed when an object is passed by reference to constructor ?

A)   Default   B)   Copy

C)   Parameterized   D)   Non-parameterized.

41. Which is an application that allows you to send and receive messages over cell phones ?

A)   SMS   B)   MMS

C)   SSM   D)   MSS.

42. The most common version of *e*-learning packages is

    A) CBT/WBT   B) CBE/WBE
    C) CB/WB   D) CT/WT.

43. GIF is limited to how many bit palettes ?

    A) 4   B) 18
    C) 8   D) 16.

44. AIFF format was developed by

    A) Microsoft   B) AT & T
    C) Apple   D) Infosys.

45. Shockwave format is used to store multimedia components created using

    A) Microsoft   B) Apple
    C) Paint   D) Flash.

46. Which of the following is not a word processor ?

    A) Lotus Amipro   B) Word Pro
    C) MS Word   D) Lotus 123.

47. To move to the end of the document, press

    A) Home   B) End
    C) Ctrl + Home   D) Ctrl + End.

48. Which key combination is used to centre a paragraph ?

    A) Ctrl + C   B) Ctrl + R
    C) Ctrl + E   D) Ctrl + J.

49. Each time the Increase Indent button is clicked, the paragraph is indented to .... from left margin.

    A) 1 inch   B) $\frac{1}{2}$ inch
    C) $\frac{3}{4}$ inch   D) 2 inch.

50. Which key may be pressed to select the spelling command ?

    A) F5   B) F7
    C) Ctrl + F5   D) Ctrl + F7.

The function used to find the square root of a given number is

A) sqr( )

B) sqrt( )

C) sqt( )

D) square root( ).

Each table column represents

A) Record

B) Field

C) Data

D) Database.

The hierarchical database structures were primarily used for

A) super computers

B) mini computers

C) mainframe computers

D) micro computers.

4. In Star Base, which of the field types is not allowed ?

A) Date

B) Time

C) Date / Time

D) Project.

55. The expansion of SQL is

A) Special Query Language

B) Special Queue Language

C) Structured Query Language

D) Structured Queue Language.

56. Which variables are automatically initialized to zero when they are declared ?

A) Auto and Static

B) Static and Extern

C) Static and Register

D) Register and Extern.

57. Extraction or get from operator is

A) >

B) >>

C) <

D) <<.

58. Which of the following is the invalid variable declaration ?

A) int a, b ;

B) int a ;

int b ;

C) int a ;

float b ;

D) int a ; b ;

[Turn over

59. Which creates object files from source code ?

   A)   Computer

   B)   C++

   C)   Compiler

   D)   Program.

60. What is the error thrown by the compiler for the following snippet ?

   if (a > b) ;

       cout << "Greater" ;

   else

       cout << "Lesser" ;

   A)   Misplaced if

   B)   Misplaced else

   C)   Misplaced if ... else

   D)   Misplaced else ... if.

61. An array in C++ is

   A)   user defined data type

   B)   built-in-data type

   C)   derived data type

   D)   default data type.

62. The array subscript always commences from

   A)   1

   B)   – 1

   C)   0

   D)   100.

63. Strings are otherwise called as

   A)   characters

   B)   names

   C)   literals

   D)   constants.

64. Which binds the data and its associated functions together ?

   A)   Object

   B)   Class

   C)   Program

   D)   Method.

65. Which members can be accessed from outside the class also ?

   A)   Private

   B)   Protected

   C)   Public

   D)   Static.

66. To create a new presentation using a template, press

   A)   Alt + Shift + N

   B)   Shift + Ctrl + N

   C)   Shift + N

   D)   Alt + F + N.

To start a slide presentation, press

A) F1

B) F2

C) F11

D) F5 .

To change the slide background, choose

A) File → Page → Background

B) Format → Page → Background

C) Edit → Page → Background

D) View → Page → Background.

. In StarOffice Impress, to open the style list the key to be pressed is

A) F1

B) F2

C) F11

D) F5 .

). To print in StarOffice, the key combination to be pressed is

A) Alt + P

B) Alt + F + P

C) Ctrl + P

D) Ctrl + F + P.

1. Which bar is used to display the current cell and its contents ?

A) Function

B) Object

C) Formula

D) Scroll.

2. Default data format is

A) dd/mm/yy

B) mm/dd/yy

C) yy/mm/dd

D) dd/yy/mm.

73. Fill command is available under which menu ?

A) File

B) Format

C) Edit

D) Help.

74. Which are predefined formula that are available in StarOfficeCalc ?

A) Functions

B) Wizards

C) Cell address

D) Formats.

75. Which icon is used to insert objects from other application into a worksheet ?

A) Insert Formula

B) Insert Floating Frame

C) Insert Applet

D) Insert OLE Object.

[Turn over

PART – II

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

76. Define Text editing.

77. How to create a header ?

78. What is date arithmetic ? Explain.

79. Explain how to generate the series :

    33, 30, 27, ... 3.

80. What is a database ?

81. Explain how to use Autofilter.

82. What is inline sound and video ?

83. Define Morphing.

84. What are Rehearse Timings ?

85. How to rename a slide ?

86. Define Encapsulation.

87. What is meant by type definition ?

88. What is the impact of modifiers ?

89. If $x = 10$, $f = 20$, $c = x$ ++ + ++f;

    What is the value stored in the variable ?

    c is .... x is .... f is ....

90. Write down the syntax of the following :

    i)   if ...... else

    ii) do ...... while.

91. What are the advantages of functions ?

92. What is the use of strcmp( ) ?

93. Write down the syntax of a 2D array declaration. Write an example.

94. How is memory allocated to an object of a class ?

95. List the specifications of a class.

96. How are functions invoked in function overloading ?

97. Write down any four rules for definition and usage of destructor.

98. What are the types of inheritance ?

99. Define virus.

100. What is a call centre ?

PART – III

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

7 × 5 = 35

101. How to create bullets and numbered lists ?

102. Explain the functoins of any 10 icons of the Table formatting tool bar.

103. Explain how to create charts in worksheet.

104. List and describe the other features available with spreadsheet software in addition to its ability to calculate numbers.

105. Write any five advantages of computerized data processing.

106. Explain switch statement with a suitable example.

107. Explain call by value with an example.

108. Explain function overloading with an example.

[Turn over

109. Write the output of the following c++ program :

```cpp
#include<iostream.h>
#include<conio.h>
class add
{
int num1,num2,sum;
public:add()
{
clrscr();
cout<<"\n constructor without parameters";
num1=0;
num2=0;
sum=0;
}
add(int s1,int s2)
{
cout<<"\n parameterised constructor....";
num1=s1;
num2=s2;
sum=NULL;
}
void getdata()
{
cout<<"\n enter the data....";
cin>>num1>>num2;
}
void addition(add b)
{
sum=num1+num2 + b.num1+b.num2;
}
void putdata()
{
cout<<"\n the numbers are...";
cout<<num1<<'\t'<<num2;
cout<<"\n the sum of the numbers are"<<'t'<<sum;
};
void main()
{
add a,b(10,20);
a.getdata();
a.addition(b);
cout<<"\n object a:";
a.putdata();
getch();
}
```

0. Debug the errors in the following c++ program :

```cpp
include<iostream.h>
class A

private:
        int a1;
public:
        int a2;
protected:
        int a3;
};
class B:public A
{
public:
void func()
{
        int b1,b2,b3;
        b1=a1;
        b2=a2;
        b3=a3;
}
};
void Main()
{
        B der;
        der.a3 =0;
        der.func ();

}
}
```

10. Debug the errors in the following c++ program :

```cpp
#include <iostream.h>
class A
{
private:
    int a1;
public:
    int a2;
protected:
    int a3;
};
class B:public A
{
public:
    void func()
    {
        int b1,b2,b3;
        b1=a1;
        b2=a2;
        b3=a3;
    }
};
void Main()
{
    B der;
    der.a3 =0;
    der.func ();
}
```