

HSC MARCH 2016 COMP.SCI KEY ANSWER

 **SINGLE DASH**

PRADEEP-PG ASST

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1.	D	26	C	51	D
2.	D	27	B	52	D
3.	B	28	B	53	C
4.	C	29	C	54	A
5.	B	30	B	55	C
6.	B	31	B	56	D
7.	A	32	D	57	B
8.	B	33	A	58	A
9.	D	34	A	59	A
10.	D	35	D	60	A
11.	B	36	A	61	A
12.	A	37	B	62	C
13.	B	38	C	63	C
14.	C	39	C	64	A
15.	A	40	A	65	D
16.	C	41	B	66	C
17.	A	42	B	67	B
18.	D	43	D	68	D
19.	C	44	C	69	B
20.	B	45	C	70	C
21.	B	46	A	71	A
22.	A	47	A	72	C
23.	D	48	D	73	D
24.	C	49	D	74	B
25.	D	50	C	75	A

PART II

Answer any Twenty Questions on one or two sentence each:

76. What is meant by text editing

Entering a new text or modifying the existing text in a document is called text editing 2
Copy, Cut, Paste, Find and Replace are some of the commonly used editing functions.

77. How will you create a table in the document

The following steps are used to create a simple, default - style table: 1
When **Table -->Insert-->Table** is selected from the menu bar, the **Insert Table** dialog box appears on the screen.
In the **Name** textbox the name of the table is given. Using the spin arrows in the **Columns** and **Rows** text box the number of columns and rows are entered. 1
StarOffice Writer displays the table as a grid with the specified number of columns and rows.

78. List our the comparative operators in Starcalc

These operators return either true or false 2

Operators	Name	Example
=	Equal	A1=B1
>	Greater than	A1>B1
<	Less than	A1<B1
>=	Greater than or equal to	A1>=B1
<=	Less than or equal to	A1<=B1
<>	Inequality	A1<>B1

79. How will you save a worksheet

To save the worksheet created, go to the **File** menu and select 2
the **Save** or the **Save As** option. Type in a file name and click on **Save** You can also click on the **Save** icon on the **Standard toolbar.CTRL +S**

80. What is database management system

A DBMS(Database management system is a program, or collection of programs 2
that allows any number of users to access data, modify it (if necessary), and construct simple and complex requests to obtain and work with selected records.

81. How flat file database differs from relational data base

A database file that consists of a single data table is a **Flat-file database.** 1
They do not allow for more complex requests. Flat-file database can be quite useful for certain singleuser.
A relational structure represents a database made up of a set of related tables. 1
In a relational database, one or more common fields existing in two or more tables create a relationship between these tables.

- 82. What is multimedia** **2**
Multimedia is a computer-based presentation technique that incorporates text, graphics, sound, animations, and video elements. A combination of these elements grabs the viewers' attention and retains it.
- 83. What is morphing and warping** **2**
Morphing is a technique by which you can blend two or more images to form a new image. Warping is the technique of distorting a single image to represent something else.
- 84. What is custom animation** **2**
This page displays various options that allow you to add or modify animation effects to elements of a slide.
- 85. What is meant by rehearse timings of slide changes?** **2**
StarOffice assists you in defining the right rehearse timings for automatic slide changes. StarOffice records the display time for each slide, so the next time you play the show with automatic slide changes, the timing will be as recorded.
- 86. What is encapsulation** **2**
The mechanism by which the data and functions are bound together within an object definition is called as ENCAPSULATION.
- 87. What are pointer variables?** **2**
A pointer is a variable that holds a memory address. Pointers provide the means through which the memory locations of a variable. eg: int *x;
- 88. . 222121 or 22 21 21** **2**
- 89. Based on operand requirements, how many operators are classified? List out?** **2**
Based on operand requirements, operators are classified into **three types** unary, binary and ternary operators.
- 90. Write the syntax of switch statement** **2**

```
switch (expression)
{
case 1 : action block 1;
break;
case 2 : action block 2;
break;
case 3 : action block 3;
break;
default :
action block 4;
}
```

91. Differentiate between call by value and call by reference**Call by Value****1**

In call by value method, any change in the formal parameter is not reflected back to the actual parameter. In this method, the called function creates new variables to store the value of the arguments passed to it. In this method the actual and formal parameter have different memory locations

Call by reference**1**

In call by reference method, any change in the formal parameter is reflected back to the actual parameter. In this method the actual and formal parameter have same storage area. In this method, the called function arguments - formal parameters become alias to the actual parameters in the calling function.

92. What is an array? List types

An array in C++ is a derived data type that can hold several values of the same type.

1

Arrays are of two types:

1

One dimensional: comprising of finite homogenous elements eg. in a[5]

Multi dimensional: comprising of elements, each of which is itself a eg. int a[3] [3] one- dimensional array

93. NULL**2****94. Write any two characteristics of member functions in C++**

Member functions can access the private data of a class.

A nonmember function cannot do so.

1

Member functions can be of static type

1**95. What are data members and member functions of class?****2**

Data members are the data variables that represent the features or properties of a class. Member functions are the functions that perform specific tasks in a class.

Member functions are called as methods, and data members are also called as attributes.

96. Define operator overloading**2**

The mechanism of giving **special meaning to an operator** is called as **operator overloading**

97. List out the rules for constructor definition and usage

1) The name of the constructor must be same as that of the class

1/2

2) A constructor can have parameter list

1/2

3) The constructor function can be overloaded

1/2

4) The constructor is executed automatically

1/2**98. What are the advantages of inheritance****2**

Reusability of code : Many applications are developed in an organization. Code developed for one application can be reused in another application if such functionality is required. This saves a lot of development time.

2) Code sharing : The methods of the base class can be shared by the derived class.

3) Consistency of interface: The inherited attributes and methods provide a similar interface to the calling methods.

99. What is the use of call centres? 2

A call center is sometimes defined as a telephone based shared service center for specific customer activities and are used for number of customer-related functions like marketing, selling, information transfer, advice, technical support and so on. It operates to provide round the clock and year round service i.e. 24 x 365 service.

100. Write a note on virus 2

A virus is a self-replicating program that can cause damage to data and files stored on your computer. 57000 known virus programs are in existence. 6 new viruses are found each day.

101. What are the steps to be followed for searching a given word and replacing it? 5

You can use the Find & Replace feature in StarOffice Writer to search for and to replace words in a text document.

To Find and Replace Text

1. Choose **Edit --> Find & Replace**.

The Find & Replace dialog box appears

2. In the **Search for** box, type the text that you want to find in your document.

3. In the **Replace with** box, enter the replacement word or phrase.

4. Click **Find** to start the search.

5. When Writer finds the first instance of the word or phrase, do one of the following:

- To replace the found instance of the text with what you entered in the Replace with box, click **Replace**.

- To replace all instances of the text with what you entered in the Replace with box, click **Replace All**.

- To skip the found text and to continue the search, click **Find** again.

6. Click **Close** when you have finished the search.

102. Explain how the indent text with paragraph dialog box 5

Following steps are used to indent text using the Paragraph dialog box:

1. Move the insertion point to the beginning of the paragraph to be indented. To indent several paragraphs, select those paragraphs.

2. Select **Format --> Paragraph** command.

3. Click the **Indents & Spacing** tab in the Paragraph dialog box

4. Do any of the following.

i. To indent from the left, type the amount to be indented in the **Before text** spin box or use the spin arrows to select a value.

ii. To indent text from the right, type the amount or use the **After text** spin arrows to enter the amount in the spin box.

iii. Click the **OK** button. (**Dialog Boxes are not necessary**)

103. What are functions? How will you use them in your worksheet?**Explain with an example?****5**

StarOffice Calc has a wide variety of functions that allow you to perform several frequently done calculations. Functions are predefined formulae that are available in StarOffice Calc.

To select a function, go to **Insert** menu and Select the **Function** option. The **Function Wizard** dialog box appears. A list of all functions is displayed in the **Function** box when **All** is selected in the **Category** box. If a category is selected (e.g. Mathematical) the functions related to that category alone will be displayed in the function box.

To select a function:

- Select the category in the **Category** box.
- Scroll down the list to find the function you want. Click once on the function name to see a short description of that function on the right side of the window. Double – click on it to insert it into the worksheet.

The **Function Wizard** shortcut icon on the formula bar can also be used to select and insert functions.

For example, to insert the SQRT function (a function to find the square root of a number), place the cursor in the cell where you want to insert the function and click on the **Function Wizard** icon. Select **Mathematical** from **Category**. Select the **SQRT** function from the list of functions, which appears by double clicking on it. enter the number or the cell address on which the function should work.

Enter the number **64**. When you click on **OK**, the result is displayed in the cell in the worksheet. One of the most commonly used function is the **Sum** function. This function calculates the sum of a given set of numbers

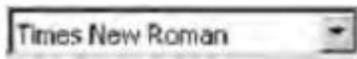
104. What are the formatting options available in Staroffice Calc**5**

Listed below are some of the formatting options available in StarOffice Calc.

B This is the **Bold** icon and is used to display data in bold. To use this icon, highlight the cells and click on the icon.

I This icon is used to display the data in italics.

U This is used to underline the data in highlighted cells.



This is the **Change Font** icon. This icon displays list of fonts that can be used. Select the font by clicking on it.



This icon is used to change the font size of the data. To do so, select the data and click on this icon.



This is the **Font Colour** icon. This can be used to change the font colour.



These are the **Align Left, Align Center, Align Right** and **Justify** icons. They are used to align the contents of cells.



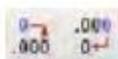
This is the **Number Format: Currency** icon. Clicking on this will display the contents of the selected cells in currency format, that is with a \$ in front and with two decimal digits.



This is the **Number Format: Percent** icon. Clicking on this icon will display the current contents in percentage format. Note that it multiplies the contents of the cell by 100 and displays the result with 2 decimals.



This is the **Number Format: Standard** icon. Clicking on this icon will display the contents of the selected cells in default format.



These are the **Number Format: Add Decimal** and **Number Format: Delete Decimal** icons. They are used to increase or decrease the number of decimal digits that are to be displayed in the selected cells.



W

et

105)What are the advantages of computerised data processing
The following are some of the advantages of the computerized
data processing system: (Any 5)

5 X 1=5

1. Once we collect and enter the data into a computer system, We can perform other operations with less manual labour.
2. Though it takes some time to develop, test and put the required computer programs to use, the processing speed is fast,
3. The chances of errors are less in computerized data processing.
4. We can store large amount of the data and information in the computer storage medium, which is compact.
5. Today computer networks are so common that we can share data and resources from one computer system to the other at a very fast speed and with very little effort.
6. It is easy to edit the data including correction, changes and modifications.
7. Computerized database is highly effective for searching, sorting and merging files and for other data manipulation activities.

(Any 5)

106) List the different types of loops in C++ with syntax.

Explain any one loop with an example

There three kinds of loops in c++

while loop

while <(condition)>{ ... } loop : is called as the **entry-check**loop.

The basic syntax is :

```
while <(condition)>
{
  action block
}
```

for (; ;) .. loop : is an entry controlled loop and is used when an action is to be repeated for a predetermined number of times.

The syntax is

```
for(initial value ; test-condition ; increment)
{
  action block;
}
```

do .. while Loop

3

do ... while <(condition)> is called as exit- check loop, as the condition(test expression) marks the last statement of the body of the loop.

syntax

```
do
{
action block;
} while(condition);
```

Program

```
# include <iostream.h>
# include <conio.h>
void main()
{
clrscr();
int num = 2;
do
{
cout << num * num << '\t';
num += 1;
}
while (num < 6);
getch();
}
```

Working

1. Enters the loop
2. Prints the square of num
3. Increments the control variable by 2
4. Evaluates the condition , based on which the control is transferred to step 2
5. End

107) Explain inline function with an example

An inline looks like a normal function in the source file but inserts the function's code directly into the calling program.

Inline functions execute faster but require more memory space

To make a function inline, one has to insert the keyword **inline** in the function header 3

Program 2

```
# include <iostream.h>
# include <conio.h>

inline float convert_feet(int x)
{
    return x * 12;
}

void main()
{
    clrscr();
    int inches = 45;
    cout << convert_feet(inches);
    getch();
}
```

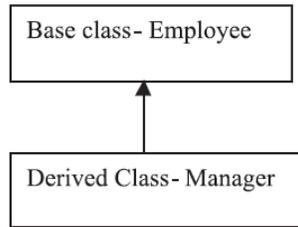
108. Explain types of inheritance

Types of inheritance

Classes can be derived from classes that are themselves derived. There are different types of inheritance viz., Single Inheritance, Multiple inheritance, Multilevel inheritance, hybrid inheritance and hierarchical inheritance. 2

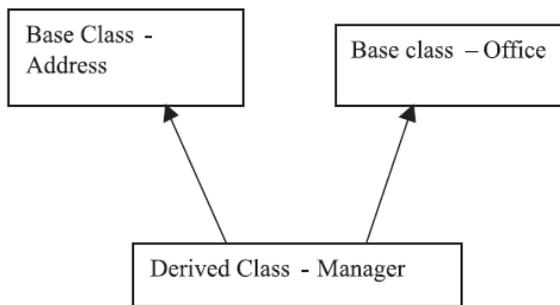
1) Single Inheritance

When a derived class inherits only from one base class, it is known as single inheritance



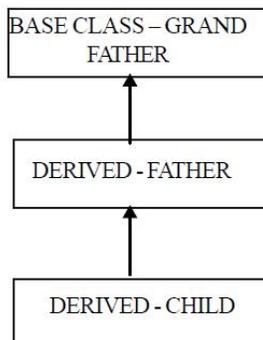
Multiple Inheritance

When a derived class inherits from multiple base classes it is known as multiple inheritance



Multilevel Inheritance

The transitive nature of inheritance is reflected by this form of inheritance. When a class is derived from a class which is a derived class itself – then this is referred to as multilevel inheritance.



109.Debug

10 X 1/2=5

Sno	Line.No	Invalid	Valid
1	3	#include<string.s>	#include<string.h>
2	6	Char s[10];	char s[10];
3	8	Strings()	strings()
4	12	string(char*c)	strings(char*c)
5	14	strcpy(s,c);	strcpy(s,c);
6	16	Char * operator-(strings x1)	char operator-(strings x1)
7	19	strcpy(temp,s);	strcpy(temp,s);
8	23	void main[]	void main()
9	25	clrscr();	clrscr();
10	29	cout>>"\n concatenate strings..." >>concatstr	cout<<"\n Concatenate Strings..."<<concatstr;

110.OUTPUT

5

Constructor without Parameters
 Parameterized Constructor
 Object P
 The Numbers are 7 12
 The Sum = 19
 Object Q
 The Numbers are 15 18
 The Sum = 33

