



MAHARASHTRA STATE BOARD OF TECHNICAL EDUCATION  
(Autonomous)  
(ISO/IEC - 27001 - 2005 Certified)

WINTER – 2022 EXAMINATION  
MODEL ANSWER

Subject: Basic C Programming

Subject Code 22374

**Important Instructions to examiners:**

- 1) The answers should be examined by key words and not as word-to-word as given in the model answer scheme.
- 2) The model answer and the answer written by candidate may vary but the examiner may try to assess the understanding level of the candidate.
- 3) The language errors such as grammatical, spelling errors should not be given more Importance (Not applicable for subject English and Communication Skills).
- 4) While assessing figures, examiner may give credit for principal components indicated in the figure. The figures drawn by candidate and model answer may vary. The examiner may give credit for any equivalent figure drawn.
- 5) Credits may be given step wise for numerical problems. In some cases, the assumed constant values may vary and there may be some difference in the candidate's answers and model answer.
- 6) In case of some questions credit may be given by judgement on part of examiner of relevant answer based on candidate's understanding.
- 7) For programming language papers, credit may be given to any other program based on equivalent concept.
- 8) As per the policy decision of Maharashtra State Government, teaching in English/Marathi and Bilingual (English + Marathi) medium is introduced at first year of AICTE diploma Programme from academic year 2021-2022. Hence if the students in first year (first and second semesters) write answers in Marathi or bilingual language (English +Marathi), the Examiner shall consider the same and assess the answer based on matching of concepts with model answer.

Q. No	Sub Q.N.	Answer	Marking Scheme
1.	a) Ans.	<b>Attempt any <u>FIVE</u> of the following:</b> <b>Define Algorithm</b> <b>Algorithm:</b> Algorithm is a stepwise procedure for solving any problem in computer.	<b>10</b> <b>2M</b> <i>Correct definition</i> <b>2M</b>
	b) Ans.	<b>Give syntax of if - else ladder</b> Syntax of if-else ladder is: if(condition_expression_One) { Statement 1; } else if(condition_expression_Two) { Statement 2; }	<b>2M</b> <b>Correct syntax 2M</b>



MAHARASHTRA STATE BOARD OF TECHNICAL EDUCATION  
(Autonomous)  
(ISO/IEC - 27001 - 2005 Certified)

WINTER – 2022 EXAMINATION  
MODEL ANSWER

Subject: Basic C Programming

Subject Code **22374**

		<pre>} else if(condition_expression_Three) { Statement 3; } else { Statement 4; }</pre>	
	<b>c)</b> <b>Ans.</b>	<b>Define an array</b> Array is a fixed-size sequential collection of elements of the same type.	<b>2M</b> <i>Correct definition</i> <b>2M</b>
	<b>d)</b> <b>Ans.</b>	<b>State the need of structure.</b> <b>Need of structure</b> 1. Array cannot store heterogeneous elements in it. It can only store elements of similar data types. 2. By using structure in 'C' language one can store elements of different data types (heterogeneous) in single group. 3. Structure reduces complexity of a program code by using one group instead of using different arrays for different variables. 4. Structure helps to construct a complex data type which is more meaningful.	<b>2M</b> <i>Relevant description</i> <b>2M</b>
	<b>e)</b> <b>Ans.</b>	<b>Give syntax to declare a pointer variable.</b> General syntax to declare pointer. datatype *var_name;  <i>Eg:</i> int *var = 20;	<b>2M</b> <i>Correct syntax</i> <b>2M</b> <i>Example optional</i>
	<b>f)</b>	<b>Draw a flowchart to find whether a given number is even or odd</b>	<b>2M</b>



MAHARASHTRA STATE BOARD OF TECHNICAL EDUCATION  
(Autonomous)  
(ISO/IEC - 27001 - 2005 Certified)

WINTER – 2022 EXAMINATION  
MODEL ANSWER

Subject: Basic C Programming

Subject Code **22374**

<p><b>Ans.</b></p>	<pre>graph TD; START([START]) --&gt; Input[/Input Value A/]; Input --&gt; Decision{IS a%2==0?}; Decision -- Yes --&gt; PrintEven[/Print "The number is even"/]; PrintEven --&gt; STOP([STOP]); Decision -- No --&gt; PrintOdd[/Print "The number is odd"/]; PrintOdd --&gt; STOP;</pre>	<p><i>Correct flowchart</i> <b>2M</b></p>
<p><b>g) Ans.</b></p>	<p><b>List features of C preprocessors.</b> Features of C preprocessors are:</p> <ol style="list-style-type: none"><li>1) <b>#define</b> Substitutes a preprocessor macro.</li><li>2) <b>#include</b> Inserts a particular header from another file.</li><li>3) <b>#undef</b> Undefines a preprocessor macro.</li><li>4) <b>#ifdef</b> Returns true if this macro is defined.</li><li>5) <b>#ifndef</b> Returns true if this macro is not defined.</li><li>6) <b>#if</b> Tests if a compile time condition is true.</li><li>7) <b>#else</b></li></ol>	<p><b>2M</b> <i>Any two features 1M each</i></p>



MAHARASHTRA STATE BOARD OF TECHNICAL EDUCATION  
(Autonomous)  
(ISO/IEC - 27001 - 2005 Certified)

WINTER – 2022 EXAMINATION  
MODEL ANSWER

Subject: Basic C Programming

Subject Code 22374

		The alternative for #if. 8) <b>#elif</b> #else and #if in one statement. 9) <b>#endif</b> Ends preprocessor conditional. 10) <b>#error</b> Prints error message on stderr.	
2.	a) Ans.	<b>Attempt any <u>THREE</u> of the following:</b> <b>Write an algorithm to find area of circle.</b> Algorithm to find area of the circle: Step 1: Start Step 2: Read/Input radius Step 3: Calculate area, $area = 3.14 * radius * radius$ Step 4: Print/Display area Step 5: Stop	<b>12</b> <b>4M</b> <i>Correct algorithm</i> <b>4M</b>
	b) Ans.	<b>Explain 'for' loop with an example</b> <b>Syntax of for loop:</b> for (initialization; condition; increment/decrement) { executable statements; } for loop is an entry controlled loop. In this loop, control conditions are tested before the start of the loop execution. The initialization step is executed first, and only once. This step allows us to declare and initialize any loop control variables. Next, the condition is evaluated. If it is true, the body of the loop is executed. If it is false, the body of the loop does not execute and the flow of control jumps to the next statement just after the for loop. After the body of the for loop executes, the flow of control jumps	<b>4M</b>  <i>Correct explanation</i> <b>2M</b>  <i>Correct example</i> <b>2M</b>



WINTER – 2022 EXAMINATION  
MODEL ANSWER

Subject: Basic C Programming

Subject Code 22374

		<p>back up to the increment statement. This statement allows us to update any loop control variables.</p> <p>The condition is now evaluated again. If it is true, the loop executes and the process repeats itself i.e. body of loop, then increment step, and then again condition. After the condition becomes false, the for loop terminates.</p> <p><b>Example:</b></p> <pre>for(int i=0;i&lt;=10;i++) { printf(“%d”,i); }</pre>										
	<p>c) Ans.</p>	<p><b>Differentiate between character array and integer array with respect to size and initialization.</b></p> <table border="1"><thead><tr><th>Parameter</th><th>Character Array</th><th>Integer Array</th></tr></thead><tbody><tr><td>Size</td><td>Last location in character array is filled with '\0' so the array size should be so declared that it should have one last location for '\0' character.</td><td>No extra location than the number of elements is required.</td></tr><tr><td>Initialization</td><td>Initialization can be done like : char str[4]={'a','b','c','\0'}; <b>or</b> char str[4]="abc";</td><td>Initialization can be done like : int arr[4]={1,2,3,4};</td></tr></tbody></table>	Parameter	Character Array	Integer Array	Size	Last location in character array is filled with '\0' so the array size should be so declared that it should have one last location for '\0' character.	No extra location than the number of elements is required.	Initialization	Initialization can be done like : char str[4]={'a','b','c','\0'}; <b>or</b> char str[4]="abc";	Initialization can be done like : int arr[4]={1,2,3,4};	<p>4M</p> <p>Each parameter 2M</p>
Parameter	Character Array	Integer Array										
Size	Last location in character array is filled with '\0' so the array size should be so declared that it should have one last location for '\0' character.	No extra location than the number of elements is required.										
Initialization	Initialization can be done like : char str[4]={'a','b','c','\0'}; <b>or</b> char str[4]="abc";	Initialization can be done like : int arr[4]={1,2,3,4};										
	<p>d) Ans.</p>	<p><b>List the categories of functions and explain any one with example. Different categories of function:</b></p> <ol style="list-style-type: none"><li>1) Function with no arguments and no return value.</li><li>2) Function with arguments and no return value.</li><li>3) Function with no arguments and return value.</li><li>4) Function with arguments and return value.</li></ol> <p><b>1) Function with no arguments and no return value:</b> This category of function cannot return any value back to the calling program and it does not accept any arguments also. It has to be declared as void.</p>	<p>4M</p> <p>List 2M</p> <p>Explanation of any one category 2M</p>									



MAHARASHTRA STATE BOARD OF TECHNICAL EDUCATION  
(Autonomous)  
(ISO/IEC - 27001 - 2005 Certified)

WINTER – 2022 EXAMINATION  
MODEL ANSWER

Subject: Basic C Programming

Subject Code 22374

		<p><i>For example:</i> void add() {   inta,b,c;   a=5;   b=6;   c=a+b;   printf(“%d”,c); }</p> <p>It should be called as add();</p> <p><b>2) Function with arguments and no return value:</b> This category of function cannot return any value back to the calling program but it takes arguments from calling program. It has to be declared as void. The number of arguments should match in sequence, number and data type.</p> <p><i>For example:</i> void add(intx,int y) {   int z;   z=x+y;   printf(“%d”,z); }</p> <p>It should be called as add(4,5); where x will take 4 and y will take 5 as their values.</p> <p><b>3) Function with no arguments and return value:</b> This category of function can return a value back to the calling program but it does not take arguments from calling program. It has to be declared with same data type as the data type of return variable.</p> <p><i>For example:</i> int add() {   inta,b,c;   a=5;   b=6;   c=a+b;</p>	
--	--	---	--



MAHARASHTRA STATE BOARD OF TECHNICAL EDUCATION  
(Autonomous)  
(ISO/IEC - 27001 - 2005 Certified)

WINTER – 2022 EXAMINATION  
MODEL ANSWER

Subject: Basic C Programming

Subject Code 22374

		<pre>return(c); }</pre> <p>It should be called as <code>int x = add();</code> where x will store value returned by the function.</p> <p><b>4) Function with arguments and return value:</b> This category of function can return a value back to the calling program but it also takes arguments from calling program. It has to be declared with same data type as the data type of return variable.</p> <p><b>For example:</b></p> <pre>int add(intx,int y) { int z; z=x+y; return(z); }</pre> <p>It should be called as <code>int s = add(4,5);</code> where x will have 4 and y will have 5 as their values and s will store value returned by the function.</p>	
3.	a) <b>Ans.</b>	<p><b>Attempt any <u>THREE</u> of the following:</b> <b>Write a program to display Fibonacci series upto limit 'n' (Take input of n from user)</b></p> <pre>#include &lt;stdio.h&gt; main() { int i, n; int t1 = 1, t2 = 1; int t3 = t1 + t2; printf("Enter the number of terms: "); scanf("%d", &amp;n); printf("Fibonacci Series: %d %d ", t1, t2); for (i = 2; i &lt; n; i++) { printf("%d ", t3); t1 = t2; t2 = t3; t3 = t1 + t2; } }</pre>	<p><b>12</b> <b>4M</b></p> <p><i>Correct logic 2M</i></p> <p><i>Correct syntax 2M</i></p>



MAHARASHTRA STATE BOARD OF TECHNICAL EDUCATION  
(Autonomous)  
(ISO/IEC - 27001 - 2005 Certified)

WINTER – 2022 EXAMINATION  
MODEL ANSWER

Subject: Basic C Programming

Subject Code 22374

<b>b) Ans.</b>	<p><b>Explain two dimensional array with an example.</b></p> <p><b>Two dimensional array:</b> The array which is used to represent and store data in a tabular form is called as two dimensional array. Such type of array is specially used to represent data in a matrix form.</p> <p><b>Declaration of two dimensional arrays:</b> Syntax:- Data type arrayname [row size] [column size];</p> <p><b>Eg :</b> int arr[3][4]; This will declare array “arr” with 3 rows and 4 columns. Initialization can be done as design time or runtime.</p> <p>1. Design time: This can be done by providing “row x column” number of elements to the array. Eg for a 3 rows and 4 columns array, 3x4=12 elements can be provided as : arr[3][4]={ { 2,3,4,6},{ 1,4,6,3},{ 6,6,4,3}}};</p> <p>2. Runtime: For this loop structures like “for” can be used in a nested form, where outer loop will increment row and inner loop will increment column.</p> <p><b>Eg :</b> for(i=0;i&lt;3;i++) { for(j=0;j&lt;4;j++) { scanf(“%d”,&amp;arr[i][j]); } } }</p> <p><b>Example to initialize and retrieve two dimensional arrays:</b> main() { int arr[2][2]={{ 1,2},{ 4,5}}; int i,j; for(i=0;i&lt;2;i++) { for(j=0;j&lt;2;j++) { printf( “%d”,arr[i][j]); } } }</p>	<p><b>4M</b></p> <p><i>Explanation</i> <b>3M</b></p> <p><i>Example</i> <b>1M</b></p>
--------------------	---	--





MAHARASHTRA STATE BOARD OF TECHNICAL EDUCATION  
(Autonomous)  
(ISO/IEC - 27001 - 2005 Certified)

WINTER – 2022 EXAMINATION  
MODEL ANSWER

Subject: Basic C Programming

Subject Code 22374

		<pre>printf("\n"); } }</pre>	
	<p>c)</p> <p><b>Ans.</b></p>	<p><b>Define pointer and write output of the following program:</b></p> <pre>#include&lt;stdio.h&gt; int main() {     char *ptr;     char str[] = "MAHARASHTRA STATE BOARD OF     TECHNICAL EDUCATION";      ptr=str;     ptr = ptr+11;     printf("%S", ++ptr);     return 0; }</pre> <p><b>Definition of pointer:</b> A pointer is a variable that stores memory address of another variable of similar data type.</p> <p><b>Output of the given code:</b> STATE BOARD OF TECHICAL EDUCATION</p>	<p>4M</p> <p><i>Correct definition 2M Output 2M</i></p>
	<p>d)</p> <p><b>Ans.</b></p>	<p><b>Describe file inclusion in C with an example.</b></p> <p>File can be included to a C source code with #include directive. If any header file which is available in standard library, it can be included along with #include and pair of &lt;&gt; brackets as</p> <pre>#include &lt;filename.h&gt;</pre> <p><b>Eg :</b><pre>#include&lt;stdio.h&gt;</pre><p>Other type of #include compiler supports is called local include, whose syntax is as follows,<pre>#include "filename.h"</pre><p>filename in double quotes "" causes compiler to search for the file first in the current directory and if it's not there it's searched in the standard locations.</p><p><b>Eg :</b></p><p><b>Prog.c</b></p><pre>#include&lt;stdio.h&gt; #include "Circle.h"</pre></p></p>	<p>4M</p> <p><i>Explanation 2M Example 2M</i></p>



MAHARASHTRA STATE BOARD OF TECHNICAL EDUCATION  
(Autonomous)  
(ISO/IEC - 27001 - 2005 Certified)

WINTER – 2022 EXAMINATION  
MODEL ANSWER

Subject: Basic C Programming

Subject Code 22374

		<pre>int main() { float r; printf("Enter radius of Circle\n"); scanf("%f", &amp;r); printf("Area of Circle is %f\n", (r*PI)); return 0; } <b>Circle.h</b> #define PI 3.14159265358979323846 Here Circle.h is a user define file which defines constant PI inside it. It is included in Prog.c as #include "Circle.h"+++</pre>	
4.	a) Ans.	<p><b>Attempt any <u>THREE</u> of the following:</b></p> <p><b>Explain increment and decrement operator with an example.</b></p> <p><b>Increment operator:</b></p> <p>i. Increment operator (++) is a unary operator. It operates on one operand.</p> <p>ii. It is used to add 1 in existing value.</p> <p><b>Example:</b></p> <pre># include &lt;stdio.h&gt; # include&lt;conio.h&gt; void main() { int a=6; clrscr(); printf("%d",a); a++; printf("\n%d",a); getch (); } In above example due to increment operator (++) value of <b>a</b> will became 7.<p><b>Decrement operator:</b></p><p>i. Decrement operator (--) is a unary operator. It operates on one operand.</p><p>ii. It is used to subtract one from its existing value.</p></pre>	<p><b>12</b> <b>4M</b></p> <p><i>Increment operator 2M</i></p> <p><i>Decrement operator 2M</i></p>



MAHARASHTRA STATE BOARD OF TECHNICAL EDUCATION  
(Autonomous)  
(ISO/IEC - 27001 - 2005 Certified)

WINTER – 2022 EXAMINATION  
MODEL ANSWER

Subject: Basic C Programming

Subject Code **22374**

	<p><b>Example:</b></p> <pre># include &lt;stdio.h&gt; # include&lt;conio.h&gt; void main() { int a=5; clrscr(); printf(“%d”,a); a--; printf(“\n%d”,a); getch (); } </pre> <p>In above example due to decrement operator (--) value of <b>a</b> will become 4.</p>	
<p><b>b)</b></p> <p><b>Ans.</b></p>	<p><b>Write a program to accept marks of four subjects from user. Calculate and display total and percentage marks of students.</b></p> <pre>#include&lt;stdio.h&gt; void main() { int marks[4]; int total=0; float perc=0.0; int i; for(i=1;i&lt;=4;i++) { printf("Enter marks of subject %d ",i); scanf("%d",&amp;marks[i]); } for(i=1;i&lt;=4;i++) { total=total+marks[i]; } printf("Total is :%d\n",total); perc=total/(float)4; printf("Percentage is %5.2f",perc); } </pre>	<p><b>4M</b></p> <p><i>Correct logic 2M</i></p> <p><i>Correct syntax 2M</i></p>



MAHARASHTRA STATE BOARD OF TECHNICAL EDUCATION  
(Autonomous)  
(ISO/IEC - 27001 - 2005 Certified)

WINTER – 2022 EXAMINATION  
MODEL ANSWER

Subject: Basic C Programming

Subject Code 22374

<b>c)</b>	<b>Write a program to accept a string as input from the user and determine its length without using string function.</b>	<b>4M</b>
<b>Ans.</b>	<pre>#include&lt;stdio.h&gt; void main() { char str[50]; int i, len=0; printf("Enter a string : "); scanf("%s",str); for(i=0; str[i]!='\0'; i++) { len++; } printf("The length of string is %d ",len); }</pre>	<i>Correct logic 2M</i>  <i>Correct syntax 2M</i>
<b>d)</b>	<b>Explain recursion with suitable example.</b>	<b>4M</b>
<b>Ans.</b>	<p><b>Recursive function:</b> Recursion is the process of function calling itself again and again. A recursive function contains function call to itself in the body of function.</p> <p><b>Example:</b></p> <pre>#include&lt;stdio.h&gt; #include&lt;conio.h&gt; int factorial(int n); void main() { int n,fact; clrscr(); printf("enter the number"); scanf("%d",&amp;n); fact=factorial(n); printf("factorial of %d=%d",n,fact); getch(); } int factorial(int n) { if(n==1) {</pre>	<i>Recursion definition 1M</i>  <i>Example 3M</i>



MAHARASHTRA STATE BOARD OF TECHNICAL EDUCATION  
(Autonomous)  
(ISO/IEC - 27001 - 2005 Certified)

WINTER – 2022 EXAMINATION  
MODEL ANSWER

Subject: Basic C Programming

Subject Code **22374**

		<pre>return(1); } else { return(n * factorial(n-1)); //recursive function call } } </pre> <p>In the above example recursive function factorial() is used to print the Factorial of a number.</p>	
	<p>e) <b>Ans.</b></p>	<p><b>Write a program to swap two numbers using call by value.</b></p> <pre>#include&lt;stdio.h&gt; #include&lt;conio.h&gt; //swap function void swap(int a, int b) { int temp; temp=a; a=b; b=temp; printf("Numbers after swapping no1=%d and no2=%d",a,b); } void main() { int n1, n2; clrscr(); printf("Enter the 2 numbers"); scanf("%d%d",&amp;n1,&amp;n2); printf("Numbers before swapping no1=%d and no2= %d",n1, n2); swap(n1,n2); getch(); } </pre>	<p><b>4M</b> <i>Correct logic 2M</i></p> <p><i>Correct syntax 2M</i></p>
<p>5.</p>	<p>a) <b>Ans.</b></p>	<p><b>Attempt any <u>TWO</u> of the following:</b></p> <p><b>Write a program using switch statement to check whether entered character is VOWEL or CONSONANT.</b></p> <pre>#include &lt;stdio.h&gt; #include&lt;conio.h&gt; int main() </pre>	<p><b>12</b> <b>6M</b></p>



MAHARASHTRA STATE BOARD OF TECHNICAL EDUCATION  
(Autonomous)  
(ISO/IEC - 27001 - 2005 Certified)

WINTER – 2022 EXAMINATION  
MODEL ANSWER

Subject: Basic C Programming

Subject Code **22374**

	<pre>{     char ch;     clrscr();     printf("Enter a character : ");     scanf("%c",&amp;ch);     switch(ch)     {         case 'a':         case 'e':         case 'i':         case 'o':         case 'u':         case 'A':         case 'E':         case 'I':         case 'O':         case 'U':     }     printf("Entered character is a Vowel");     break;     default:     printf("Entered character is consonant");     }     getch(); }</pre>	<p><i>logic for checking vowel-2M,</i></p> <p><i>checking-consonant-2M,</i></p> <p><i>correct syntax-2M</i></p>
<p><b>b) Ans.</b></p>	<p><b>Write a program for addition of two 3 x 3 matrices.</b></p> <pre>#include&lt;stdio.h&gt; #include&lt;conio.h&gt; void main() {     int a[3][3],b[3][3],c[3][3],i,j;     clrscr();     printf("\n Enter first matrix");     for(i=0;i&lt;3;i++)     {         for(j=0;j&lt;3;j++)         {             scanf("%d",&amp;a[i][j]);         }     } }</pre>	<p><b>6M</b></p> <p><i>logic to input matrix 1- 1M,</i></p> <p><i>matrix 2- 1M,</i></p> <p><i>perform addition - 2M,</i></p> <p><i>display result -1M,</i></p> <p><i>correct syntax-1M</i></p>



WINTER – 2022 EXAMINATION  
MODEL ANSWER

Subject: Basic C Programming

Subject Code **22374**

	<pre>} printf("\n Enter second matrix"); for(i=0;i&lt;3;i++) { for(j=0;j&lt;3;j++) { scanf("%d",&amp;b[i][j]); } } for(i=0;i&lt;3;i++) { for(j=0;j&lt;3;j++) { c[i][j]=a[i][j]+b[i][j]; } } printf("\n Addition:\n"); for(i=0;i&lt;3;i++) { for(j=0;j&lt;3;j++) { printf("%d\t",c[i][j]); } printf("\n"); } getch(); }</pre>	
<p>c)</p> <p><b>Ans.</b></p>	<p><b>Develop a program to find diameter, circumference and area of circle using function.</b></p> <pre>#include &lt;stdio.h&gt; void calculate(float radius) { float d,c,a; d=2*radius; c=2*3.14*radius; a=3.14*radius*radius; printf("\n Diameter of circle = %f",d); printf("\n Circumference of circle = %f",c);</pre>	<p><b>6M</b></p> <p><i>input radius 1M</i></p> <p><i>calculating diameter- 1M</i></p> <p><i>circumference-1M,</i></p>



MAHARASHTRA STATE BOARD OF TECHNICAL EDUCATION  
(Autonomous)  
(ISO/IEC - 27001 - 2005 Certified)

WINTER – 2022 EXAMINATION  
MODEL ANSWER

Subject: Basic C Programming

Subject Code **22374**

		<pre>printf("\n Area of circle = %f",a); } void main() { float r; printf("\n Enter Radius : "); scanf("%f",&amp;r); calculate(r); }</pre>	<p><i>area-1M,</i></p> <p><i>use of function-1M,</i></p> <p><i>display result-1M</i></p>
6.	a)	<p><b>Attempt any <u>TWO</u> of the following:</b></p> <p><b>Write a program to calculate sum of all odd numbers between 1 to 100</b></p>	<p><b>12</b></p> <p><b>6M</b></p>
	Ans.	<pre>#include&lt;stdio.h&gt; #include&lt;conio.h&gt; void main() { int i,sum=0; clrscr(); for(i=1;i&lt;=100;i++) { if(i%2!=0) { sum=sum+i; } } printf("Sum=%d",sum); getch(); }</pre>	<p><i>Use of loop-1M,</i></p> <p><i>checking odd number-2M,</i></p> <p><i>display sum-1M,</i></p> <p><i>correct syntax-2M</i></p>
	b)	<p><b>Design a program to read n numbers of an array and display it in reverse order.</b></p>	<p><b>6M</b></p>
	Ans.	<pre>#include &lt;stdio.h&gt; #include&lt;conio.h&gt; voidmain() { int n,arr[100],i; clrscr(); printf("\n Enter number of elements : "); scanf("%d",&amp;n);</pre>	<p><i>Logic for input array values-2M,</i></p> <p><i>display in reverse order-2M,</i></p>





MAHARASHTRA STATE BOARD OF TECHNICAL EDUCATION  
(Autonomous)  
(ISO/IEC - 27001 - 2005 Certified)

WINTER – 2022 EXAMINATION  
MODEL ANSWER

Subject: Basic C Programming

Subject Code **22374**

	<pre>printf("\n Enter array elements : "); for(i=0; i&lt;n; i++) scanf("%d",&amp;arr[i]); printf("\n Array elements in reverse order : "); for(i=n-1; i&gt;=0; i--) printf("%d",arr[i]); getch(); }</pre>	<p><i>correct syntax-2M</i></p>
<p><b>c)</b></p> <p><b>Ans.</b></p>	<p><b>Give a method to create, declare, initialize structure and also develop a program for structure ‘Student’ with elements roll no and name. Accept and display data for one student.</b></p> <p>Syntax to create and declare structure:</p> <pre>struct structure_name { Data_type member1; Data_type member2; . . . Data_typememberN; }structure_object;</pre> <p>Structure variable can be declared at the end of structure declaration or inside main().</p> <pre>Void main() { Struct structure_name structure_variable1, structure_variable2, . . . ,structure_variableN; }</pre> <p>Initialization:</p> <p>Syntax: struct structure_name structure_variable={ Value1,value2,...,value N);</p> <p>Program: #include &lt;stdio.h&gt;</p>	<p><b>6M</b></p> <p><i>Method to create, declare and initialize structure 2M</i></p> <p><i>Declaration structure with structure variable- 2M</i></p> <p><i>Accepting values-1M</i></p> <p><i>displaying value-1M</i></p>



MAHARASHTRA STATE BOARD OF TECHNICAL EDUCATION  
(Autonomous)  
(ISO/IEC - 27001 - 2005 Certified)

WINTER – 2022 EXAMINATION  
MODEL ANSWER

Subject: Basic C Programming

Subject Code **22374**

	<pre>#include&lt;conio.h&gt; struct Student {     int rollno;     char name[10]; }s1; voidmain() { printf("\n Enter roll no : "); scanf("%d",&amp;s1.rollno); printf("\n Enter Name : "); scanf("%s",&amp;s1.name); printf("\n Entered rollno = %d",s1.rollno); printf("\n Entered Name = %s",s1.name); getch(); }</pre>	
--	--	--