

# KENDRIYA VIDYALAYA SANGATHAN, MUMBAI REGION

## 1<sup>ST</sup> PRE-BOARD EXAMINATION-2018-19

**TIME- 3 HRS.**

**CLASS-XII SUBJECT-COMPUTER SCIENCE**

**MARKS-70**

### MARKING SCHEME

<b>QUE-1</b>		
<b>[A]</b>	<b>Write the type of C++ tokens (keywords and user defined identifiers) from the following :</b>	<b>2</b>
	(i) continue (ii) Delete (iii) const (iv) School_Name	
<b>Ans.</b>	<b>Keywords-</b> continue , const <b>Identifiers-</b> Delete , School_Name <b>Note- Each correct answer give 1/2 mark.</b>	
<b>[B]</b>	<b>Specify the required header files for the following code.</b>	<b>1</b>
	<pre>void main() { float Number = 1234.5678;   char code; // single character   cout&lt;&lt;"Enter ur code";   cin&gt;&gt;code;   if( isalpha(code)=='Z' )     { cout&lt;&lt;setprecision(4)&lt;&lt;Number; }   else     { cout&lt;&lt;"Code is wrong"; } }</pre>	
<b>Ans.</b>	for cin and cout - iostream.h for isalpha- ctype.h setprecision- iomanip.h <b>Note- Each correct answer give 1/2 mark.</b>	
<b>[C]</b>	<b>Find out errors from the following code and rewrite it after correcting all the errors. Underline each corrections.</b>	<b>2</b>
	<pre>Class Citizen { long CID=120564;   char CNAME[20]; protected   Citizen()   { CID = 120564; strcpy(CNAME,"NARENDRA" ); } public :   void GetDetails()   { cin&gt;&gt;CID; getdata(CNAME); }   void Display()   { cout&lt;&lt;CID; puts(CNAME); } } void main() { Citizen C1;</pre>	

	<pre> GetDetails.obj(); obj.Display(); } </pre>	
<b>Ans.</b>	<pre> class Citizen          // Letter 'c' of class should be lowercase { long CID;            // No initialization   char CNAME[20]; protected :           // colon is missing   Citizen()   { CID = 120564; strcpy(CNAME,"NARENDRA" ); } public :   void GetDetails()   { cin&gt;&gt;CID; gets(CNAME); } // gets() to be used   void Display()   { cout&lt;&lt;CID; puts(CNAME); } } void main() { Citizen C1;   obj.GetDetails ();      // object before function's name to call it.   obj.Display(); } </pre>	
<b>[D]</b>	<p><b>Find and write the output of the following C++ program code :</b></p> <p><b>Note : Assume all required header files are already being included in the program.</b></p>	<b>2</b>
	<pre> void main( ) { int  Ar[ ] = { 6 , 3 , 8 , 10 , 4 , 6 , 7 };   int  *Ptr = Ar , l ;   cout&lt;&lt;++*Ptr++ &lt;&lt; '@' ;   l = Ar[3] - Ar[2] ;   cout&lt;&lt;++*(Ptr+l)&lt;&lt; '@'&lt;&lt;"\n" ;   cout&lt;&lt;++l + *Ptr++ &lt;&lt; '@' ;   cout&lt;&lt;*Ptr++ &lt;&lt; '@'&lt;&lt; '\n' ;   for( ; l &gt;=0 ; l -=2)     { cout&lt;&lt;Ar[l] &lt;&lt; '@' ; } } </pre>	
<b>Ans.</b>	<p><b>7@11@</b>  <b>6@8@</b>  <b>11@3@</b></p> <p><b>Note-</b> (½ Mark for writing each correct value) OR (Only ½ Mark for writing all '@' at proper places)</p>	
<b>[E]</b>	<p><b>Write the output of the following C++ program code: Assume all necessary header files included.</b></p>	<b>3</b>
	<pre> class seminar { private:   char topic[30]; int charges; public:   seminar()   { strcpy(topic,"Registration"); charges=5000;}   seminar(char t[])   { strcpy(topic,t); charges=5000; }   seminar(int c)   { strcpy(topic,"Registration with Discount");     charges=5000-c;   } } </pre>	

	<pre> void register(char t[ ],int c) {   strcpy(topic,t);     charges=charges+c; } void register(int c=2000) {   charges=charges+c;   } void show() {   cout&lt;&lt;topic&lt;&lt;"@"&lt;&lt;charges&lt;&lt;endl; } }; void main() {   seminar s1,s2(1000),s3("Genetic Mutation"),s4;     s1.show();     s2.show();     s1.register("ICT",2000);     s1.show();     s2.register("Cyber Crime",2500);     s2.show();     s3.register();     s3.show();     s4=s2;     s4.register("Cloud Computing",4000);     s4.show(); } </pre>				
<b>Ans.</b>	<b>Output-</b> <b>Registration@5000</b> <b>Registration with discount@4000</b> <b>ICT@7000</b> <b>Cyber Crime@6500</b> <b>Generic Mutuation@7000</b> <b>Cloud Computing@10500</b> <u><b>Note-</b> (½ Mark for writing each corrected line)</u>				
<b>[F]</b>	<b>Look at the following C++ code and find the possible output(s) from the options (i) to (iv) following it. Also, write the maximum values at can be assigned to each of the variables N and M.</b>				<b>2</b>
	<pre> void main() {   randomize();     int N=random(3),M=random(4);     int DOCK[3][3] = {{1,2,3},{2,3,4},{3,4,5}};     for(int R=0; R&lt;N; R++)     {   for(int C=0; C&lt;M; C++)         {   cout&lt;&lt;DOCK[R][C]&lt;&lt;" "; }         cout&lt;&lt;endl;     } } </pre>				
	<b>(1)</b>	<b>1 2 3</b> <b>2 3 4</b> <b>3 4 5</b>	<b>(3)</b>	<b>1 2</b> <b>2 3</b>	

	(2)	1 2 3 2 3 4	(4)	1 2 2 3 3 4	
<b>Ans-</b>	<b>Possible outputs are</b> (2) 1 2 3    (3) 1 2 2 3 4        2 3 <b>Maximum Value of M=3 and N=2</b> <b>Minimum Value of M=0 and N=0</b>				
<b>QUE-2</b>					
<b>[A]</b>	Why Object Oriented Programming is more preferable than Procedural Programming Language? Give at least two reasons for it.				<b>2</b>
<b>Ans-</b>	Obeject Oriented Programming models real world situation. It emphasis on Data of object rather than doing things. <b>Note- 2 marks for proper reasons.</b>				
<b>[B]</b>	<b>Define a class Seminar with the following specification:</b>				<b>4</b>
	<b>private members</b> SeminarId                      long numeric value Topic                              string of 20 characters VenueLocation                string of 20 characters Fee                                floating value CalcFee() function to calculate Fee depending on VenueLocation. <b>VenueLocation              Fee</b> Outdoor                        5000 Indoor Non-AC                6500 Indoor AC                      7500 <b>public members</b> 1. Initialise the values for SeminarId as 5475894 ,Topic as "Cloud Computing" and VenueLocation as "Chennai" using constructor. 2. Register() function to accept values for SeminarID, Topic, VenueLocation and call CalcFee() to calculate Fee. 3. ViewSeminar() function to display all the data members on the screen.				
<b>Ans-</b>	<b>Marks distribution-</b> Member declarations- 1/2 Mark CalcFee() function definition- 1Mark constructor definition- 1/2 Mark Register() function definition with calling a CalcFee() function- 1 Mark ViewSeminar() function definition- 1 Mark				
<b>[C]</b>	<b>Observe the following C++ code and answer the questions (i) and (ii).</b>				<b>2</b>
	<pre> class GAME { private:     int Pcode, Round, Score; public:     GAME()                                //Member Function 1     { Pcode=1; Round=0; Score=0; }     GAME(GAME &amp;G)                        //Member Function 2     { Pcode=G.Pcode+1;       Round=G.Round+2;       Score=G.Score+10;     } }; </pre>				

	<pre> void main() {     _____;    // statement 1      _____;    // statement 2  } </pre>	
	<p>(i) Which Object Oriented Programming feature is illustrated by the Member Function 1 and Member Function 2 together in the class GAME ?</p> <p>(ii) Write Statement 1 and Statement 2 to execute Member Function1 and Member Function 2 respectively.</p>	
<b>Ans-</b>	<p>(i) <b>constructor OR function overloading</b></p> <p>(ii) <b>Game G1;        // statement 1</b>  <b>Game G2(G1); //statement 2</b></p>	
<b>[D]</b>	<b>Answer the questions (i) to (iv) based on the following c++ program code:</b>	<b>4</b>
	<pre> class DIGITAL {     int ID; protected:     float Amount; int Seconds; public:     DIGITAL();     void Register();     void Disp(); };  class PRINT {     int PID; protected:     float Amount; int SQinch; public:     PRINT();     void Get();     void Print(); };  class MEDIA : Public PRINT, private DIGITAL {     int MID; public:     MEDIA();     void Enter();     void Print(); };  void main() {     MEDIA M;        //Statement 1     _____;    //Statement 2 } </pre>	
	<p>(i) Which type of Inheritance out of the following is illustrated in the above example ?</p> <p>(ii) Write the names of all the member functions, which are directly accessible by the object M of class MEDIA as declared in main( ) function.</p> <p>(iii) What will be the order of execution of the constructors, when the object M of class MEDIA is</p>	

	declared inside main ( ) ? (iv) Write Statement 2 to call function Print( ) of class PRINT from the object Mof class MEDIA.																					
Ans-	(i) Multiple Inheritance (ii) Enter( ) , Print(),Get(),Print() function class PRINT (iii) The order of execution of constructors as follows. DIGITAL() or PRINT () PRINT () or DIGITAL() MEDIA()																					
QUE-3																						
[A]	<p>Write the definition of a function MIXER(int A[], int N) in C++, which should multiply 2 to the odd values present in the array and multiply 3 to the even values present in the array. The entire content of the array A having N elements should change without using any other array.</p> <p>Example : if the array A contains</p> <table border="1"><tr><td>23</td><td>20</td><td>5</td><td>11</td><td>10</td></tr></table> <p>Then the array should become</p> <table border="1"><tr><td>46</td><td>60</td><td>10</td><td>22</td><td>30</td></tr></table> <p>Note: The function should not display the content of the array.</p>	23	20	5	11	10	46	60	10	22	30	2										
23	20	5	11	10																		
46	60	10	22	30																		
Ans-	<pre>void MIXER(int A[], int N) {     for (int i=0;i&lt;N;i++)     {         if(A[i]%2 !=0)         { A[i]=A[i]*2; }         else         { A[i]=A[i]*3; }     } }</pre> <p>Note- Correct use of loop- 1 Mark , correct use of condtion check and assign value-1 Mark</p>																					
[B]	<p>Write definition for a function TOPBOTTOM(int M[][5],int N,int M) in C++, which finds and displays sum of the values in topmost row and sum of the values in bottommost row of a matrix M . (Assuming the N represents number of Row and the parameter M represents number of Columns). For example, if the content of array M having N as 4 and M as 5 is as follows :</p> <table border="1"><tr><td>10</td><td>20</td><td>30</td><td>40</td><td>50</td></tr><tr><td>12</td><td>15</td><td>32</td><td>4</td><td>15</td></tr><tr><td>38</td><td>4</td><td>11</td><td>24</td><td>15</td></tr><tr><td>5</td><td>10</td><td>15</td><td>20</td><td>25</td></tr></table> <p>The function should find the sum and display the same as :</p> <p>Sum of Top Row : 150 Sum of Bottom Row : 75</p>	10	20	30	40	50	12	15	32	4	15	38	4	11	24	15	5	10	15	20	25	3
10	20	30	40	50																		
12	15	32	4	15																		
38	4	11	24	15																		
5	10	15	20	25																		
Ans-	<pre>void TOPBOTTOM(int M[][5],int N,int M) {     int SumTRow=0,SumBRow=0;     int i=0;</pre>																					

	<pre> for(int j=0;j&lt;5;j++) { SumTRow=SumTRow+M[i][j]; } int i=N-1; for(int j=0;j&lt;5;j++) { SumBRow=SumBRow+M[i][j]; } cout&lt;&lt;"\n Sum of Top Row:"&lt;&lt;SumTRow; cout&lt;&lt;"\n Sum of Bottom Row:"&lt;&lt;SumBRow; } </pre> <p><b>Note-</b> correct use of each loops with top and bottom row initialization index- 2 Mark Sum statement and Display it -1 Mark.</p>	
<b>[C]</b>	<p><b>G[15][20] is a two dimensional array, which is stored in the memory along the column with each of its element occupying 4 bytes, find the address of the element G[5] [10], if the element G[2] [4] is stored at the memory location 52000.</b></p>	<b>3</b>
<b>Ans-</b>	<p><b>Base Address- 51752</b>  <b>Address of G[5][10]= 52372</b>  <b>Note-</b> Write a correct formula – 1Mark , Base Address Value with calculation- 1 Mark  Address of G[5][10] with calculation- 1 Mark.</p>	
<b>[D]</b>	<p><b>Write a function to insert new book in the Queue using dynamic memory allocation for the following structure.</b></p> <pre> struct book { int bookid;   char bookname[20];   book *next; }; class Library { book *Front, *Rear; public:   Library()   { Front=NULL; Rear =NULL; }   void ADDBOOK();   void DELBOOK();   void DISPBOOK();   ~Library(); }; </pre>	<b>4</b>
<b>Ans-</b>	<pre> void ADDBOOK(int Bid,char BName[]) { book *newbook = new book;    // allocate memory for new book entry    - 1 Mark   newbook -&gt; bookid =Bid;        // give values to the new allocated book   strcpy(newbook -&gt; bookname,BName);   newbook -&gt; next=NULL;   if(Front==NULL &amp;&amp; Rear==NULL) // if first node created   {     Front = Rear =newbook;      // assign new node as Front and Rear Node   } } </pre> <p style="text-align: right;">} 1 Mark } 1 Mark</p>	

	<pre> else {     Rear-&gt;next=newbook;    // otherwise link new node and Rear Node     Rear=newbook;         // Make new node as Rear node after linking } </pre>	1 Mark
[E]	<p>Evaluate the following POSTFIX expression. Show the status of Stack after execution of each operation separately:</p> <p><b>45, 45, +, 32, 20, 10, /, -, *</b></p>	2
<b>QUE-4</b>	<p>Final Value is – <b>2700</b> - 1 Mark</p> <p>Show the stacks contents step by step- 1 Mark</p>	
[A]	<b>Give the output of the following code. Total size of the file is 270 bytes.</b>	1
	<pre> class Candidate { int CNo;   char CName[15];   char City[10]; } void main() { ifstream F;   Candidates C;    // Candidates is the class type   F.open("Candidates.dat",ios::in   ios:: binary);   F.seekg(0,ios::end);   int Size = F.tellg();   cout&lt;&lt;"Total Records are:"&lt;&lt; Size / sizeof(C);   F.seekg( -4*sizeof(C), ios::cur);   cout&lt;&lt;" Modified record at:"&lt;&lt;F.tellg()/sizeof(C); } </pre>	
<b>Ans-</b>	<p>Total Records are: 10      <b>1/2 Mark</b></p> <p>Modified record at: 6      <b>1/2 Mark</b></p>	
[B]	Write a user-defined function named <b>Count()</b> that will read the contents of text file named <b>"Report.txt"</b> and display the count of the number of words that start with either <b>"T"</b> or <b>"W"</b> .	2
<b>Ans-</b>	<pre> void Count() {     ifstream ifile;     ifile.open(("Reprt.txt",ios::in);     char str[15];     int Cnt=0;     while(ifile)     {         ifile&lt;&lt;str;         if(str[0]=='T'    str[0]=='W')         {             Cnt++;         }     }     ifile.close();     cout&lt;&lt;"\n Number of T or W are:"&lt;&lt;Cnt; } </pre>	<p>1/2 Mark</p> <p>1 Mark</p> <p>1/2 Mark</p>



[C]	Write a function in C++ to search and display details, whose destination is “Cochin” from binary file “Bus.Dat”.	3																																				
	<pre>class BUS {   int Bno;           // Bus Number     char From[20];     // Bus Starting Point     char To[20];       // Bus Destination public:     char* StartFrom ( );         { return From; }     char* EndTo ( );         { return To; }     void input()         { cin&gt;&gt;Bno&gt;&gt;; gets(From); get(To); }     void show( )         { cout&lt;&lt;Bno&lt;&lt; “:”&lt;&lt;From &lt;&lt; “:” &lt;&lt;To&lt;&lt;endl; } };</pre>																																					
Ans-	<pre>void DispDestination() {     BUS B;     ifstream ifile;     ifile.open(“Bus.dat”,ios::in   ios::binary);     while(ifile.read( (char*)&amp;B,sizeof(B) )     {         if( strcmp(B.EndTo(),”Cochin”)==0)         {             B.show();         }     }     ifile.close(); }</pre> <div><div>1 Mark</div><div>// 1 Mark</div><div>1 Mark</div></div>																																					
QUE-5																																						
[A]	Differentiate between Primary Key and Unique Key with appropriate examples.	2																																				
Ans	<p><b>Primary Key-</b> It is used for Unique Value of the Column as well it does not allow empty/NULL value.</p> <p><b>Unique Key-</b> It is also used for Unique Value of the Column but it allows empty/NULL value.</p> <p><b>e.g.</b></p> <p><b>CustometID</b> -column is used for unique value for Customer Id without NULL value.</p> <p><b>CustContactNo</b> - column is also used for unique value of Customer Contact No but it might contain NULL or empty value.</p> <p><b>Note-</b> Difference <b>1 Mark</b> proper example- <b>1Mark</b></p>																																					
[B]	<p>Consider the following tables ACTIVITY and COACH and answer (b) and (c) parts of this question:</p> <p><b>Table: ACTIVITY</b></p> <table><tr><th>A Code</th><th>ActivityName</th><th>Stadium</th><th>ParticipantNum</th><th>Prize Money</th><th>Schedule Date</th></tr><tr><td>1001</td><td>Relay 100x4</td><td>Star Annex</td><td>16</td><td>10000</td><td>23-Jan-04</td></tr><tr><td>1002</td><td>High jump</td><td>Star Annex</td><td>10</td><td>12000</td><td>12-Dec-03</td></tr><tr><td>1003</td><td>Shot Put</td><td>Super Power</td><td>12</td><td>8000</td><td>14-Feb-04</td></tr><tr><td>1005</td><td>Long Jump</td><td>Star Annex</td><td>12</td><td>9000</td><td>1-Jan-04</td></tr><tr><td>1008</td><td>Discuss Throw</td><td>Super Power</td><td>10</td><td>15000</td><td>19-Mar-04</td></tr></table>	A Code	ActivityName	Stadium	ParticipantNum	Prize Money	Schedule Date	1001	Relay 100x4	Star Annex	16	10000	23-Jan-04	1002	High jump	Star Annex	10	12000	12-Dec-03	1003	Shot Put	Super Power	12	8000	14-Feb-04	1005	Long Jump	Star Annex	12	9000	1-Jan-04	1008	Discuss Throw	Super Power	10	15000	19-Mar-04	
A Code	ActivityName	Stadium	ParticipantNum	Prize Money	Schedule Date																																	
1001	Relay 100x4	Star Annex	16	10000	23-Jan-04																																	
1002	High jump	Star Annex	10	12000	12-Dec-03																																	
1003	Shot Put	Super Power	12	8000	14-Feb-04																																	
1005	Long Jump	Star Annex	12	9000	1-Jan-04																																	
1008	Discuss Throw	Super Power	10	15000	19-Mar-04																																	

**Table : COACH**

P Code	N a m e	A c o d e
1	A h m a d H u s s a i n	1 0 0 1
2	R a v i n d e r	1 0 0 8
3	J a n i l a	1 0 0 1
4	N a a z	1 0 0 3

**(b) Write SQL commands for the flowing statements:**

- (i) To display the names of all activities with their Acodes in descending order.
- (ii) To display sum of PrizeMoney for the Activities played in each of the Stadium separately.
- (iii) To display the coach's name and Activity Codes and it's Activity Name for each Coach.
- (iv) To display the Activity Name, No. of Participants and Schedule Date which has schedule date before 15/01/2004.

**(c) Give the output of the following SQL queries:**

- (i) SELECT COUNT(DISTINCT ParticipantsNum) FROM ACTIVITY;
- (ii) SELECT MAX(ScheduleDate),MIN(ScheduleDate) FROM ACTIVITY;
- (iii) SELECT Name,ActivityName FROM ACTIVITY A,COACH C  
WHERE A.Acode=C.Acode AND A.ParticipantsNum=10;
- (iv) SELECT DISTINCT Acode FROM COACH;

**Ans- 1-Mark correct answer, 1/2 for partial answer.**

**(b)**

- (i) SELECT ActivityName FROM ACTIVITY ORDER BY ACode DESC;
- (ii) SELECT **ActivityName, SUM(PrizeMoney)** FROM ACTIVITY GROUP BY ActivityName ;
- (iii) SELECT Name,Acode,ActivityName FROM ACTIVITY,COACH  
WHERE ACTIVITY.ACode= COACH.ACode;
- (iv) SELECT ActivityName,ParticipantsNum,ScheduleDate FROM ACTIVITY  
WHERE ScheduleDate<'15/01/2004' ;

**(c) Correct Answer-1/2 Mark, No partial mark**

- (i) 5
- (ii) **Max- '19-03-04' , Min-'12-12-03'**
- (iii) **Name ActivityName**  
Ravinder Discuss Throw
- (iv) **Acode**  
1001  
1003  
1008

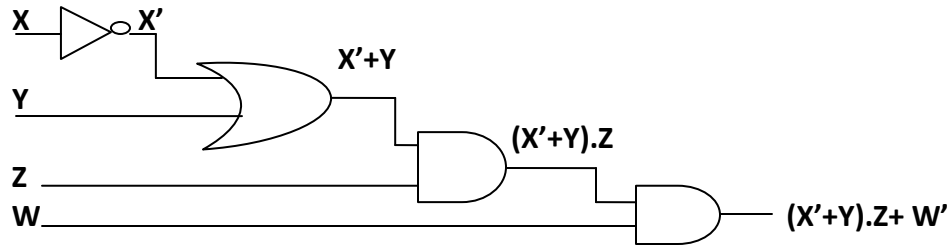
**QUE-6**

**[A] Verify the following using Boolean Laws.**  
 $U' + V = U'V' + U'.V + U.V$

**Ans-**

$$\begin{aligned}
 \text{L.H.S.} &= U' + V \\
 &= U'.(V' + V) + V(U' + U) \\
 &= U'.V' + U'V + U'V + UV \\
 &= U'V' + U'V + UV \\
 &= \text{R.H.S.}
 \end{aligned}$$

**Correct step2 & 3- Each step 1 Mark**

[B]	Draw the Logic Circuit for the following Boolean Expression : (X'+Y).Z + W'	2																																				
Ans-																																						
[C]	Write the SOP form of a Boolean Function F for the following given truth table:	1																																				
	<table><tr><th>A</th><th>B</th><th>C</th><th>F</th></tr><tr><td>0</td><td>0</td><td>0</td><td>1</td></tr><tr><td>0</td><td>0</td><td>1</td><td>0</td></tr><tr><td>0</td><td>1</td><td>0</td><td>0</td></tr><tr><td>0</td><td>1</td><td>1</td><td>1</td></tr><tr><td>1</td><td>0</td><td>0</td><td>0</td></tr><tr><td>1</td><td>0</td><td>1</td><td>0</td></tr><tr><td>1</td><td>1</td><td>0</td><td>1</td></tr><tr><td>1</td><td>1</td><td>1</td><td>1</td></tr></table>	A	B	C	F	0	0	0	1	0	0	1	0	0	1	0	0	0	1	1	1	1	0	0	0	1	0	1	0	1	1	0	1	1	1	1	1	
A	B	C	F																																			
0	0	0	1																																			
0	0	1	0																																			
0	1	0	0																																			
0	1	1	1																																			
1	0	0	0																																			
1	0	1	0																																			
1	1	0	1																																			
1	1	1	1																																			
Ans-	F(A,B,C)=A'B'C' + A'B'C + A.B.C' + A.B.C																																					
[D]	Evaluate using K-Map: A, B, C, D = π (2, 3, 5, 7, 9, 10, 11, 12, 15)	3																																				
Ans-	<div><table><tr><th></th><th>C+D 0+0</th><th>C+D' 0+1</th><th>C'+D' 1+1</th><th>C'+D 1+0</th></tr><tr><th>A+B 0+0</th><td></td><td></td><td>0</td><td>0</td></tr><tr><th>A+B' 0+1</th><td></td><td>0</td><td>0</td><td></td></tr><tr><th>A'+B' 1+1</th><td>0</td><td></td><td>0</td><td></td></tr><tr><th>A'+B 1+0</th><td></td><td>0</td><td>0</td><td>0</td></tr></table><p>Draw &amp; Place Value in K-Map- 1/2 Mark 2-Quads , 2 Pairs - Each encircled quad/pair – 1/2 Mark x 4 = 2</p><p>F(A,B,C,D) = (C'+D'). (B+C').(A+B'+D').(A'+B+D') - Final Answer -1/2 Mark</p></div>		C+D 0+0	C+D' 0+1	C'+D' 1+1	C'+D 1+0	A+B 0+0			0	0	A+B' 0+1		0	0		A'+B' 1+1	0		0		A'+B 1+0		0	0	0												
	C+D 0+0	C+D' 0+1	C'+D' 1+1	C'+D 1+0																																		
A+B 0+0			0	0																																		
A+B' 0+1		0	0																																			
A'+B' 1+1	0		0																																			
A'+B 1+0		0	0	0																																		
QUE-7																																						
[A]	Differentiate between Bus and Star topology of Networks with Diagram.	2																																				
Ans-	Any one difference – 1 Mark Diagram of each network- 1 Mark																																					
[B]	What kind of data gets stored in cookies and how is it useful?	1																																				
Ans-	Cookies store websites visited pages links/paths, session, user credentials etc. in text files. 1/2 Mark It is used whenever an user opens a webpage, the web browser first loads it from web cookies which reduces loading time. 1/2 Mark																																					

[C]	<b>Out of the following, which all comes under cyber crime?</b> <b>(i)</b> Stealing away a brand new hard disk from a showroom. <b>(ii)</b> Getting in someone's social networking account without his consent and posting on his behalf. <b>(iii)</b> Secretly copying data from server of a organization and selling it to the other organization. <b>(iv)</b> Visiting online access of a friends blog.	1																				
Ans	<b>(ii)</b> Getting in someone's social networking account without his consent and posting on his behalf. <b>(iii)</b> Secretly copying data from server of a organization and selling it to the other organization.																					
[D]	Write the expanded names for the following abbreviated terms used in Networking and Communications: <b>(i) CDMA (ii) GSM (iii) XML (iv) URL</b>	2																				
Ans-	<b>(i)</b> CDMA- Code Division Multiple Access <b>(ii)</b> GSM – Global System for Mobile System <b>(iii)</b> XML – Extended Markup Language <b>(iv)</b> URL - Uniform Resource Locator																					
[E]	<b>ABC Technologies has set up their new center at Cochin for its office and web based activities. They have 4 blocks of buildings as shown in the diagram below:</b>	4																				
	<div><div><div><div>BLOCK A</div><div>BLOCK C</div><div>BLOCK B</div><div>BLOCK D</div></div></div><div><div><div>Distance between the Blocks</div><table><tr><td>Black A to Block B</td><td>50 m</td></tr><tr><td>Block B to Block C</td><td>150 m</td></tr><tr><td>Block C to Block D</td><td>25 m</td></tr><tr><td>Block A to Block D</td><td>170 m</td></tr><tr><td>Block B to Block D</td><td>125 m</td></tr><tr><td>Block A to Block C</td><td>90 m</td></tr></table></div><div><div>No. of Computers</div><table><tr><td>Black A</td><td>25</td></tr><tr><td>Block B</td><td>50</td></tr><tr><td>Block C</td><td>125</td></tr><tr><td>Block D</td><td>10</td></tr></table></div></div><div><p>(i) Suggest a cable layout of connections between the blocks.</p><p>(ii) Suggest the most suitable place (i.e. block) to house the server of this organization with a suitable reason.</p><p>(iii) Any where repeater required ? why?</p><p>(iv) The organization is planning to link its front office situated in the city in a hilly region where cable connection is not feasible, suggest an economic way to connect it with reasonably high speed?</p></div></div>	Black A to Block B	50 m	Block B to Block C	150 m	Block C to Block D	25 m	Block A to Block D	170 m	Block B to Block D	125 m	Block A to Block C	90 m	Black A	25	Block B	50	Block C	125	Block D	10	
Black A to Block B	50 m																					
Block B to Block C	150 m																					
Block C to Block D	25 m																					
Block A to Block D	170 m																					
Block B to Block D	125 m																					
Block A to Block C	90 m																					
Black A	25																					
Block B	50																					
Block C	125																					
Block D	10																					
Ans-	<b>(i) Star Topology</b> <div><div><div><div>BLOCK A</div><div>BLOCK C</div><div>BLOCK B</div><div>BLOCK D</div></div><div><div><div>R</div><div>R</div></div></div></div><div><div><div>Bus Topology</div><div><div><div>BLOCK A</div><div>BLOCK C</div><div>BLOCK B</div><div>BLOCK D</div></div><div><div>R</div><div>R</div></div></div></div></div></div>																					

	<p><b>(ii) Block C</b> – to house server computer system.</p> <p><b>(iii)</b> Yes, Repeater is required between Block A and Block C (90 m), Block B and Block C(150m) Block B and Block D(125m) because the distance is more than 90 meters which reduce signal strength.</p> <p><b>(iv) Microwave –economically feasible and fast.</b></p>	
--	---	--