

XII INFORMATICS PRACTICES CBSE Board – 2013

[Time allowed: 3hours] [Maximum Marks: 70]

Instructions (i) **All** questions are compulsory

(ii) Programming Language: C++

1/0\	Write the name of the most suitable wireless communication shannels for each of the following situations	1
1(a)	Write the name of the most suitable wireless communication channels for each of the following situations.	1
	(i) Communication between two offices in different countries.	
_	(ii) To transfer the data from one mobile phone to another.	
Ans:	(i) Satellite	
	(ii) Bluetooth	ļ.,
(b)	What is UNICODE? Name one Indian language, which is supported by UNICODE.	1
Ans:	Unicode provides a unique number for every character, no matter what the platforms, no matter what the	
	program, no matter what the language.	
	Following are some Indian language, which is supported by UNICODE.	
	Devnagari, Bengali, Gurmukhi, Gujarati, Kannada, Malayalam, Oriya, Tamil, Arabic, Telugu	
(c)	Expand the following terms:	1
	(i) FLOSS	
	(ii) HTTP	
Ans:	(i) FLOSS: Free Libre and Open Source Software	
	(ii) HTTP: H yper T ext T ransfer P rotocol	
(d)	Mr. Chandervardhan is not able to identify the Domain Name in the given URL. Identify and write it for him.	1
	http://www.cbsenic.in/aboutus.htm	
Ans:	Domain Name : cbsenic.in	
(e)	What do you understand by Network Security? Name two common threats to it.	2
Ans:	Network security is needed to protect data during their transmission and to guarantee that data transmissions	
	are authentic.	
	1. Trojan horse programs	
	2. Worms	
(f)	Write one advantage of Star Topology over Bus Topology and one advantage of Bus Topology Over Star	2
	Topology.	
Ans:	Advantage of Star Topology over Bus Topology	
	In Star Topology, failure of one node or link doesn't affect the rest of network whereas,	
	In Bus Topology, the main cable (i.e. bus) encounters some problem, whole network breaks down.	
	Advantages of Bus Topology Over Star Topology	
	Bus Topology requires less cable length than a star topology.	
(g)	What is MAC address? What is the difference between MAC address and an IP address?	2
Ans:	A Media Access Control address (MAC address) is a unique identifier assigned to most network adapters or	
	network interface cards (NICs) by the manufacturer for identification, and used in the Media Access Control	
	protocol sub-layer.	
	Difference between MAC address and an IP address	
	1. MAC address is supposedly unique to each network interface card while an IP address is usually replaced	
	2. An IP address reveal which element on which network it is while the same cannot be extracted from a MAC	
	address	
2(a)	Which property of palette ListBox is used to enter the list of items while working in NetBeans?	1
Ans:	model property	
		1



	COSE CS (1) (p)		
(b)	What is the difference between the use of JTeaxtField and JPasswordField in a form?	1	
Ans:	When we type text into a JTextField control, it shows the characters in the control, but in JPasswordField control the typed characters are shown as () for security. ●		
(c)	"The variable/expression in the switch statement should either evaluate to an integer value or String value."	1	
	State True or False.		
Ans:	True		
(d)	Name two attributes of FONT tag of HTML.	1	
Ans:	1. Size		
	2. Face		
	3. Color		
(e)	How many times will the following loops execute? Which one of them is Entry Control and which one is Exit	2	
	Control?		
	Loop 1		
	int i=10, sum=0; int i=10, sum=0;		
	while (i>1)		
	\\ \tag{\tag{\tag{\tag{\tag{\tag{\tag{		
	sum+=i; sum+=i; i-=3;		
	} while (i>1);		
Ans:	Following loops will execute 3 times.	+	
Alis.	Loop 1 is Entry control loop and Loop 2 is Exit control loop.		
(f)	What will be displayed in jTextField1 and jTextField2 after the execution of the following loop?	2	
(.,	int Sum=0,Last=10;	-	
	for (int C=1;C<=Last;C+=2)		
	Sum++;		
	jTextField1.setText(Integer.toString(Sum));		
	jTextField2.setText(Integer.toString(C));		
Ans:	Since C is local variable to the for loop only due which it can't be accessible at line no 4 and 5.		
	Correct code		
	int Sum=0,Last=10;		
	for (int C=1;C<=Last;C+=2)		
	{ 		
	Sum++;		
	jTextField1.setText(Integer.toString(Sum));		
	jTextField2.setText(Integer.toString(C));		
	Output:		
	jTextField1 – 5		
	jTextField2 – 9		
(g)	Differentiate between the <tr> and <td> tags of HTML with the help of an appropriate example.</td></tr>	tags of HTML with the help of an appropriate example.	2
tags of HTML with the help of an appropriate example.			
Ans:	<tr> defines table row Whereas, <td> defines table data (cell).</td></tr>	defines table data (cell).	+-
defines table data (cell).			
	Example:		
	· <html></html>		
	<body></body>		
	<table border=""></table>		
	<tr></tr>		
	<td>1</td>	1	
	<td>2</td>	2	



	CC 20 C 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		
	<tr></tr>		
	<td>3</td>	3	
	<td>4</td>	4	
	- 		

2(2)	Write a SQL command to view the constraints of EMP table.	1	
3(a)	write a SQL command to view the constraints of EMP table.	1	
Ans:	SHOW TABLE EMP;		
	OR		
	Select * from information_schema.key_column_usage where constraint_schema = 'EMP';		
(b)	Mr. Krishnaswami is working on a database and has doubt about the concept of SAVEPOINT in a transaction.	1	
(-,	Write down the meaning of SAVEPOINT and provide a simple example considering yourself as an online web		
	support executive.		
Ancı	SAVEPOINT is a point in a transaction, up till which all changes have been saved permanently.		
Ans:			
	EXAMPLE:		
	mysql>		
	mysql> CREATE TABLE Books		
	-> (
	-> BookID SMALLINT NOT NULL PRIMARY KEY,		
	-> BookTitle VARCHAR(60) NOT NULL,		
	-> Copyright YEAR NOT NULL		
	->)		
	-> ENGINE=INNODB;		
	Query OK, 0 rows affected (0.00 sec)		
	Quely on, o rows unested (0.00 see)		
	mysql>		
	mysql> START TRANSACTION;		
	Query OK, 0 rows affected (0.00 sec)		
	mysql> INSERT INTO Books VALUES (103, 'Opera', 1966);		
	Query OK, 1 row affected (0.00 sec)		
	mysql> INSERT INTO Books VALUES (104, 'Sql Server', 1932);		
	Query OK, 1 row affected (0.00 sec)		
	mysql> SAVEPOINT sp1;		
	Query OK, 0 rows affected (0.00 sec)		
	, , ,		
	mysql>		
	mysql>		
	mysql> drop table Books;		
()	Query OK, 0 rows affected (0.00 sec)	_	
(c)	What is the difference between CURDATE () and DATE () functions?	1	
Ans:	CURDATE () returns the current date whereas, DATE () extracts the date part of a date or datetime expression.		
(d)	Table STUDENT has 4 rows and 2 columns. Table MARKS has 2 rows and 3 columns. How will be the cardinality	1	
	and degree of the Cartesian product of STUDENT and MARKS?		
Ans:	The cardinality is 8 and degree is 5 of the Cartesian product of STUDENT and MARKS.		
(e)	There is a column Salary in a Table EMPLOYEE. The following two statements are giving different outputs.	2	
(~)	a a commission of the contract of the co		


9	What may be the possible reason? SELECT COUNT(*) FROM EMPLOYEE;	
	SELECT COUNT(*) FROM EMPLOYEE;	
9		
	SELECT COUNT(SALARY) FROM EMPLOYEE;	
	If SALARY column is defined as NULL and then if any employee's salary is missing then count function will not	
	count those null valued salary. For example if EMPLOYEE table contains 10 record of employees and out of 10	
	employees say 7 th employee's salary is not entered then output will be 10 and 9 for respective queries.	
	Mr. Kapoor is a programmer at Ekansh Enterprises. He created 5 digit password and stored in a string variable	2
	called strPassword. He wants to store the same password in an Integer type variable called intPassword. Write	
ā	an appropriate Java statement to transfer the content from strPassword to intPassword.	
Ans: i	int intPassword=Integer.parseInt(strPassword);	
(g) 1	Mrs. Kumar is using table STUDENTS with the following columns:	2
F	RNO, ADMNO, NAME, AGGREGATE	
9	She wants to display all information of students in descending order of name and within ascending order of	
ā	aggregate. She wrote the following SQL query and she did not get the desired output:	
9	SELECT * FROM STUDENTS ORDER BY NAME, AGGREGATE DESC;	
Ans: S	SELECT * FROM STUDENTS ORDER BY AGGREGATE, NAME DESC;	
4(a) \	What will be the context of jTextArea1 and jTextField1 after the execution of the following statements?	2
	(i) jTextArea1.setText("Just\tAnother\nDay");	
	(ii) string Subject="Informatics Practices";	
	jTextField1.setText((Subject.length()+10)+" ");	
Ans:	(i) Just Another	
	Day	
	(ii) 31	
(b) F	Rewrite the following program code using a if statement.	2
9	String Remarks;	
i	int Code=Integer.parseInt(jTextField1.getText());	
s	switch(Code)	
{	{	
	case 0 :Remarks="100% Tax Exemption";	
	break;	
	case 1 : Remarks="50% Tax Exemption";	
	break;	
	case 2 : Remarks="3% Tax Exemption";	
	break;	
	default: Remarks="! Invalid Entry";	
}	}	
Ans: S	String Remarks;	
i	<pre>int Code=Integer.parseInt(jTextField1.getText());</pre>	
i	if(Code ==0)	
	Remarks="100% Tax Exemption";	
6	else if(Code ==1)	
	Remarks="50% Tax Exemption";	
6	else if(Code ==2)	
	Remarks="30% Tax Exemption";	
(else	
	Remarks="! Invalid Entry";	
1-1	Observe the following code carefully and find which statement will never get executed in the code?	1
(c) (
	int t=1; //Statement 1	



	CO 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		
	{	//Statement 3	
	if (t>13)	//Statement 4	
	jTextField1.setText("Something");	//Statement 5	
	else	//Statement 6	
	jTextField1.setText("Pass");	//Statement 7	
	t+=3;	//Statement 8	
	}	//Statement 9	
	while (t<=15);	//Statement 10	
Ans:	Statement 5		
(d)	Write a java statement to make the jTextField	1 non-editable.	1
Ans:	jTextField1.setEditable(false);		
(e)		TextField2 after the execution of the following code?	2
	int Last,First=3,Second=5;		
	Last=First+Second++;		
	jTextField1.setText(Integer.toString(Last));		
	jTextField2.setText(Integer.toString(Second));		
Ans:	jTextField1 – 8		
	jTextField2 – 6		
(f)	What will be the contents of Str1 and Str2 after	er the following code is executed?	2
	String Str2,Str1;		
	Str1="Dear Friend";		
	Str2="Hello";		
	Str1=Str2.concat(Str1);		
Ans:	Str1 - HelloDear Friend		
	Str2 - Hello		
(g)	Aditya is a programmer at Edudel enterprises.		5
	English		
	Analytical Skills		
	General Knowledge		
	Total		
	Grade		
	Get Total Get Grade Exit		
	Get Total Get Grade Exit		
	Help him to write code in java for the followin		2
		and display in jTextField4 on the click of command button "Get	
	Total".	diament in its outfields on the clieb of command button "Cot	
	• •	display in jTextField5 on the click of command button "Get	2
	Grade". Criteria for Grade calculat		
	Marks	Grade	
	Above 80	A	
	Above 65 and <=5	5 B	
	Above 50 and <=6	5 C	
	<=50	D	
	(iii) To stop execution and exit from the	ne application on the click of command button "Exit".	1
. '			



```
private void jButtonlActionPerformed(java.awt.event.ActionEvent evt)
                      int a=Integer.parseInt(jTextField1.getText());
                      int b=Integer.parseInt(jTextField2.getText());
                      int c=Integer.parseInt(jTextField3.getText());
                    int total=a+b+c;
                     jTextField4.setText(Integer.toString(total));
     (ii) private void jButton2ActionPerformed(java.awt.event.ActionEvent evt)
                      int t=Integer.parseInt(jTextField4.getText());
                      int a=t/3;
                      if(a > = 80)
                           jTextField5.setText("A");
                      else if(a > 65 \& a < = 55)
                           jTextField5.setText("B");
                      else if(a > 50 \&\& a <= 65)
                           jTextField5.setText("C");
                      else if(a <= 50)
                    jTextField5.setText("D");
     (iii) private void jButton3ActionPerformed(java.awt.event.ActionEvent evt)
                         System.exit(0);
     What is the use of COMMIT statement in SQL? How is it different from ROLLBACK statement?
5(a)
                                                                                                  2
     The COMMIT statement is used to end a transaction and make all changes permanent.
Ans:
                    COMMIT
                                                          ROLLBACK
      COMMIT command permanently saves the
                                            ROLLBACK command undoes the changes
      changes made during the transaction
                                            made during the transaction execution.
      execution.
                                            Syntax: ROLLBACK[WORK];
      Syntax: COMMIT[WORK];
     Mr. James created a table CLIENT with 2 rows and 4 columns. He added 2 more rows to it and deleted one
                                                                                                  1
(b)
     column. What is the Cardinality and Degree of the Table CLIENT?
Ans:
     Cardinality – 4
     Degree – 3
     Consider the following table FITNESS with details about fitness products being sold in the store. Write
                                                                                                  7
(c)
     command of SQL for (i) to (iv) and output for (v) to (vii).
     Table: FITNESS
      PCODE
                                            MANUFACTURER
               PNAME
                                    PRICE
               Treadmill
                                    21000
      P1
                                            Coscore
      P2
               Bike
                                    20000
                                            Aone
```



		DE CO	هراه ه ه						
	P3	Cross Tr	ainer	140	00 Re	eliable			
	P4	Multi Gy	/m	340	00 Co	score			
	P5	Massage	e chair	550	0 Re	grosene			
	P6	Belly Vib	rator Belt	650	0 An	nbaway			
	(i)	To displa	ay the name	es of all th	e produ	cts with price r	nore than	n 20000.	
	(ii)	•	•	•		by the manufac			
	(iii)				•			discount reduction.	
	(iv)			•				xerciser", 28000, "Aone".	
	(v)					NUFACTURER N		•	
	(vi) (vii)		MAX (PRICE	•		TURER)) FROM	I FITNESS;	,	
Ans:	(i)		•			WHERE PRICE:	>20000		
Alis.	(ii)		-			E MANUFACTU	-	ine":	
	(iii)					RICE*25/100);	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
	(iv)					/ibro Exerciser	',"28000"	,"Aone");	
	(v)							stead of MANUFACTURE so it will	
		generate	e an error.						
		The corr	ect Query i	s SELECT *	FROM I	FITNESS WHER	E MANUF	ACTURER LIKE "%e";	
	ļ-	Output:			•				
	PCODE			PRIC		ANUFACTURE	R		
	P1		Treadmill			Coscore			
	P2	Bike		200	00 Ac	one			
	P3	Cross Tr		140		eliable			
	P4		Multi Gym			score			
	P5	Massage		550		egrosene			
	(vi)	COUNT(DISTINCT(N	//ANUFAC	TURER))	1			
	(::\	844V/DD	5						
	(vii)	MAX(PR 6500							
6(a)	Write SC			he table \	/FHICLE	with given con	straint [,]		2
	Table : V		i to orcate t	ine table t	21022	with given con	o er arrier		_
		IN_NAME	DATATYP	E(SIZE)	CONST	RAINT			
	RegNo		CHAR(10)		Primary	у Кеу			
	Regdat	e	DATE						
	Owner		VARCHAR	(30)					
	Addres		VARCHAR	· ,					
Ans:	CREATE VARCHA		CLE(RegNo	CHAR(10)	PRIMAR	Y KEY, Regdate	DATE, O	wner VARCHAR(30), Address	
(b)			there are t	wo tables	with a s	ample data giv	en below	:	6
	Table : E	MPLOYEE							
	ENO	ENAME	SALARY	ZONE	AGE	GRADE	DEPT		
	1	Mona	70000	East	40	Α	10		
	2	Muktar	71000	West	45	В	20		
	3	Nalini	60000	East	26	Α	10		
	4	Sanaj	65000	South	36	Α	20		



	5 S	urya 58	000	North 3	80 E	3	30		
		PARTMENT	1.						
	DEPT	DNAME	HOD	1					
	10	Computers	1						
	20	Economics	2						
	30	English	5						
	Note:	8		<u>.</u>					
		AME refers to	n Emnlove	e Name					
		IAME refers t							
		PT refers to D	•						
		D refers to E	•		O) of the H	lead of th	ne Departn	nent	
		queries for th		-	-, -: -: -:				
	(i)	•		•	and corres	ponding	DNAME of	f all the employees whose age is	2
	()	between 25						, ,	
	(ii)		•		•	ME from t	the tables	DEPARTMENT and EMPLOYEE. Hint:	2
		HOD of the	DEPARTM	ENT table s	hould be n	natched v	with ENO c	of the EMPLOYEE table for getting	
		the desired	result.						2
	(iii)	To display E	NAME, SA	LARY, ZONE	and INCO	ME TAX ((Note: Inco	ome Tax to be calculated as 30% of	2
		salary) of al	I the empl	oyees with	appropriat	te columr	n headings	•	
Ans:	(i)	SELECT C.EN	IO,C.ENAN	ИЕ,C.SALAR	Y,D.DNAM	IE FROM	EMPLOYEE	C,DEPARTMENT D WHERE	
		C.DEPT=D.D	EPT AND (C.AGE>=25	&& C.AGE	<=35;			
	(ii)			NAME FROM	M EMPLOY	EE C,DEP	ARTMENT	D WHERE C.DEPT=D.DEPT AND	
		C.ENO=D.H	-						
	(iii)							ΓΑΧ" FROM EMPLOYEE ;	
(c)		ase STUDENT,	there is a	Table RESU	ILT with th	e followii	ng content	ts:	2
	Table :RES			1					
	REGNO		MARKS	SECTION	CLASSTE		ADMNO	<u>)</u>	
	10004		90	Α	Ms Nath		Z101		
	10211		35	В	Mr. Gok		Z109		
	10923		92	В	Mr. Gok		Z120		
	10313	L	30	Α	Ms Nath		Z234		
	(i)	•					•	in the table RESULT.	1
	(ii)	Write SQL C	•						1
Ans:	(i)						•	able RESULT.	
_, .	(ii)	UPDATE RES							
7(a)	-		-Business	benetited a	common	man? Wr	ite domair	n name of one popular e-Business	2
Α.	site as an e	example.							+-
Ans:	Benefit :	nrough c	l of						
		proved speed	i oi respor	ise					
		st savings	nunication	s informati	on and ka	ovilodas	charing		
		proved comm ductions in in		ıs, IIIIUIIIIdl	OH AHU KI	owieuge	siiai iiig		
		proved efficie	•	roductivity					
		tter transfer (
		proved custo							
		F. 5 - CG CG510	301 410						
	Domain na	ame:							
	Domain na ✓ va								
(b)	✓ ya	ame: tra.com in names of t	wo most c	commonly	sed e-Com	nmerce si	te.		1



Ans:	1. el	oay.in				Ī								
	2. amazon.com													
(c)	Shobhit is	creating	a form for his company. Help her to choose most appropriat	e controls from ListB	ox,	İ								
	ComboBo	x, TextFi	eld, TextArea, RadioButton, CheckBox, Label and Command E	xtArea, RadioButton, CheckBox, Label and Command Button for the followin										
		_												
		SNo	Function			l								
		1	To enter NATIONALITY from all the nationalities given as	options										
		2	To enter AGE between a range 20 to 25											
	3 To allow to select one or more FAVORITE SPORTS out of the given 6 options													
		4	To enter SUGGESTION in the form of a paragraph											
Ans:		SNo	Function	Control		ŀ								
		1	To enter NATIONALITY from all the nationalities given as	ComboBox										
			options											
		2	To enter AGE between a range 20 to 25	ComboBox										
		3	To allow to select one or more FAVORITE SPORTS out of	CheckBox										
			the given 6 options											
			the given o options			ı								