Central Board of School Education

#### Marking Scheme 2016

[Official]

#### CBSE AISSCE 2016 Marking Scheme for Informatics Practices

(Sub Code: 065 Paper Code 90/1 Delhi)

General Instructions:

- Marking scheme is the final document for all references with regard to evaluation and cannot be altered under any circumstance.
- The answers given in the marking scheme are SUGGESTIVE, Examiners are expected to award marks for all alternative correct Solutions/Answers conveying the similar meaning.
- All programming questions have to be answered with respect to Java Language only.
- In Java, ignore case sensitivity for identifiers (Variables / Functions / Structures / Class Names).
- In SQL related questions :
  - A. Both ways of text/character entries should be acceptable. For example: "AMAR" and 'amar' both are acceptable.
  - B. All date entries should be acceptable for example: 'YYYY-MM-DD', 'YY-MM-DD', 'DD-Mon-YY', "DD/MM/YY", 'DD/MM/YY', "MM/DD/YY", 'MM/DD/YY' and {MM/DD/YY} are correct.
  - C. Semicolon should be ignored for terminating the SQL statements.
  - D. Ignore case sensitivity for commands.
  - E. Ignore headers in output questions.

	E.	ignore neaders in output questions.	
1	(a)	Two doctors have connected their mobile phones to transfer a picture file of a person suffering from a skin disease. What type of network is formed? Which communication media out of Coaxial cable, Optical fiber, Bluetooth, Satellite link should be used to transfer the file?	2
	Ans	PAN Bluetooth	
		(1 mark each for each correct answer)	
	(b)	State reason why Star topology requires more cable length than Bus topology.	2
	Ans	Star topology involves a central hub or switch to which all individual node(s) are connected with individual cable, therefore more cable is required in Star topology than Bus topology.	
	V	(2 marks for correct answer) Note : Full 2 marks to be allotted if reason represented with the help of diagram	
	(c)	"Open Source Software developers work for the good of community". Is this statement true? Give reason.	2
	Ans	<ul> <li>Yes, the above statement is true.</li> <li>Open source developers choose to make the source code of their software publicly available to which many developers can view/use the software and also modify it.</li> <li>Users can download the software free of cost.</li> <li>So, they work for the good of the community.</li> </ul>	

		(1 mark for stating 'Yes') (1 mark for correct reason)	
	(d)	What happens during 'Domain Name Resolution'?	2
	Ans	The process of translating a domain name to an IP address is called Domain name resolution.	
		(2 marks for correct answer) Note : Full 2 marks to be allotted if reason is represented with the help of example.	
	(e)	How is 'Denial of service' attack, a threat to Network security?	2
	Ans	Denial-of-service (DoS) is an indication that an attacker (hacker) or unauthorised user has attempted to connect/access data and thus suggests a threat on network security.	
		(2 marks for correct answer) Note : 1½ mark for only stating what is DoS .	
2	(a)	Identify the odd one out of the following statements. State reason for your choice. i) switch ii) do while iii) while iv) for	1
	Ans	i) switch switch is a selection statement but others are looping / iteration statements.	
		(½ mark for identifying) (½ mark for reason)	
	(b)	What is the difference between setVisible() and setEnabled() methods?	1
	Ans	setVisible() sets the visibility of a component i.e. whether the component will be visible or hidden on form. setEnabled() sets whether the component can trigger an event or not.	
		(1 mark for correct answer) Note : Full 1 mark to be allotted if difference explained with the help of example.	
	(C)	<pre>What is the difference between the following statements i) and (ii)     i)    a = 5;     ii) if (a = = 5)         x = 3;</pre>	1
	Ans	<ul> <li>In i) variable a is being assigned the value 5 whereas in ii) a is being checked for equality with 5</li> <li>OR</li> <li>In i) assignment operator is used and in ii) relational operator '==' is used.</li> </ul>	
		(1 mark for mentioning correct difference)	
	(d)	Write the output in jtextField1 if depcode is 3.	1

		switch(depcode)	
		{	
		case 1 :	
		allowance = 4000;	
		break;	
		case 2 : $2200$	
		allowance = 3200; break;	
		Dicur,	
		default :	
		allowance = 1000;	
		}	
		<pre>jTextField1.setText(" "+allowance);</pre>	
	Ans	1000	
		(1 mark for correct answer)	
	(e)	Sandhya is creating a webpage. She is entering HTML code on her computer. In between, she keeps pressing 'Refresh'/ 'Reload' button	2
		on her browser. What is the purpose?	
	Ans	The purpose of 'Refresh'/'Reload' is to view the changes in the webpage.	
		(2 marks for correct answer)	
	(f)	What does 'XML' stand for? How is the purpose of HTML different from XML?	2
	Ans	XML stands for eXtensible Markup Language. HTML is used to create web pages / display data whereas XML is used to describe/store/transport data.	
		(1 mark for expanding XML) (1 mark for correct difference) Note : Full 1 mark to be allotted if purpose of only HTML is specified.	
	(g)	Write Java code (statements) to declare Y as integer variable. Then, assign the value 30 to a variable Y. Increase the value of Y by 5 and store the increased value in Z.	2
	Ans	int Y;	
	V.	Y = 30; Y = Y + 5; Z = Y;	
		(½ mark for declaring Y)	1
		(1/2 mark for initialising Y to 30)	
		(1/2 mark for incrementing the value of Y)	
		( $\frac{1}{2}$ mark for assigning the final value to Z)	
3	(a)	What is MySQL?	1
	· · /		
	Ans	MySQL is a Relational Database Management System.	

	Note: ½ mark to be awarded if only 'Open Source Software' is mentioned	
(b)	Charvi is inserting "Sharma" in the "LastName" column of the "Emp" table but an error is being displayed. Write the correct SQL statement. INSERT INTO Emp(`Sharma') VALUES (Lastname) ;	1
Ans	INSERT INTO Emp(Lastname) VALUES (`Sharma') ;	
	(1 mark for correct answer)	
(c)	Kunal created the following table with the name 'Friends':FriendCodeNameHobbiesF101BijoySwimmingF102AbhinavReading booksF103JyotsnaDancingNow, Kunal wants to delete the 'Hobbies' column. Write the MySQL statement.	1
Ans	ALTER TABLE Friends DROP Hobbies; OR ALTER TABLE Friends DROP COLUMN Hobbies;	
	<ul> <li>(½ mark for ALTER TABLE)</li> <li>(½ mark for DROP Hobbies)</li> <li>OR</li> <li>(½ mark for just mentioning ALTER TABLE command)</li> </ul>	
(d)	Mrs. Sen entered the following SQL statement to display all Salespersons of the cities "Chennai" and 'Mumbai' from the table 'Sales'. Table :Sales <u>Scode Name City</u> 101 Aakriti Mumbai 102 Aman Punjab 103 Banit Delhi 104 Fauzia Mumbai SELECT * FROM Sales WHERE City='Chennai' AND City='Mumbai'; Rewrite the correct statement if wrong or write statement is correct.	1
Ans	SELECT * FROM Sales WHERE City='Chennai' OR City='Mumbai'; OR SELECT * FROM Sales	
	WHERE City='Chennai'   City='Mumbai'; OR SELECT * FROM Sales WHERE City IN ('Chennai', 'Mumbai');	

	(1 mark for correct SQL statement) Note : ½ mark to be allotted if only error is identified.	
(e)	i) Name 2 Aggregate (Group) functions of SQL.	2
	<pre>SUM(), MAX(), MIN(), AVG(), COUNT(), COUNT(*) (Any Two)</pre>	
	(1/2 mark each for any 2 Group functions) Note : Function names without parentheses also to be accepted as correct answers.	
	ii) Consider the table:	
	Table: Company	
	SID SALES	
	<u>\$101</u> 20000	
	<u>\$103 NULL</u>	
	<u>\$104</u> 10000	
	<u>\$105</u> 15000	
	What output will be displayed by the following SQL statement?SELECTAVG (SALES)FROMCompany;	
Ans	15000	
	(1 mark for correct answer)	
(f)	Given below is the 'Stu' table:	2
Ans	RNO       NAME         1       Amit         2       Bhishm         The following Statements are entered:         SET AUTOCOMMIT = 0;         INSERT INTO Stu VALUES(5, 'Rahul');         COMMIT;         UPDATE Stu set name='Rahuliya' where Rno= 5;         SAVEPOINT A;         INSERT INTO Stu VALUES(6, 'Cristina');         SAVEPOINT B;         INSERT into Stu values(7, 'Fauzia');         SAVEPOINT C;         ROLLBACK TO B;         Now what will be the output of the following statement:         SELECT * FROM Stu;	
	Image: Note of the sector o	
(g)	Consider the table 'Hotel' given below.	2
(5)	כוואוטכו נווכ נמטוכ דוטנכו צויכוו שבוטיי.	-

		Table : H	lotel			
			EMPID	Category	Salary	
			E101	MANAGER	60000	
			E102	EXECUTIVE	65000	
			E103	CLERK	40000	
			E104	MANAGER	62000	
			E105	EXECUTIVE	50000	
			E106	CLERK	35000	
		entered the corre SELECT FROM Ho	the following SC ect SQL stateme Category, Sa	L statement. Ider nt.	y of each Category. He ntify error(s) and Rewrite	
	Ans	SELECT FROM H	Category, A		CON	
		ÔR	s for correct an for only identij	NO		
4	(a)	When is i	if-else if statem	nent preferred over	er switch statement?	1
	Ans	• Wh	en range checks		e used ar have to be used	
		(1 mark	for any one coi	rrect point)		
	(b)	What is t	he purpose of b	reak statement?		1
	Ans	'break'	statement tern		/ switch and transfers op / switch .	
		Note : F	for correct an ull 1 mark to be s mentioned.		eak terminates the loop /	
	(C)		ll be displayed g code is execute		and jTextField2 after the	1
		int s; s = 2;				
		•	*s++)/2;			
		-	leld1.setText	t(" "+t);		
		-	leld2.setText			
	Ans	4 will be	displayed in jTe	extField1		
			displayed in jTe			
		(½ mark	for each corre	ct answer)		

(d)	<pre>Write the contents of jTextField1, jTextField2, jTextField3 and jTextField4 when the following statements are executed : String x; String str = "Java"; x = str.concat("study"); double a = 7.8765; jTextField1.setText(x.length()+" "); jTextField2.setText(x.toUpperCase()); jTextField3.setText(x.substring(2,5)); jTextField4.setText(Math.round(7.8765)+" ");</pre>	2
Ans	jTextField1: 9 jTextField2: JAVASTUDY jTextField3: vas jTextField4: 8 OR 9 JAVASTUDY vas 8	
(e)	<pre>(½ mark for each line of output) Rewrite the following code using WHILE loop: int sum = 0; for(int i=9;i&gt;=1;i) {     if(i%3==0)         sum = sum + i;     else         sum = sum - i; }</pre>	2
Ans	<pre>int sum = 0, i= 9; while (i&gt;=1) { if(i%3==0) sum = sum + i; else sum = sum - i; i; }</pre>	
	<ul> <li>(½ mark for correct initialisation of i)</li> <li>(½ mark for correct condition)</li> <li>(½ mark for correct loop body)</li> <li>(½ mark for correct updation of i)</li> </ul>	
(f)	The following code has error(s). Rewrite the correct code underlining all the corrections made : int x = 10; int y = 50;	2

		I
	do;	
	{	
	$\mathbf{x}+5 = \mathbf{x};$	
	$\mathbf{y}-5 = \mathbf{y};$	
	while ( x <= y );	
Ans	int $x = 10;$	
	int y = 50;	
	do	
	{	
	$\frac{\mathbf{x}=\mathbf{x}+5}{2}$	
	$\mathbf{y} = \mathbf{y} - 5;$	
	<pre>while ( x &lt;= y );</pre>	
	(½ mark for correcting each error)	
	OR G	
	(1 mark for only identifying any four errors)	
(g)	Vijay has developed a software for planning personal budget. A	
	screenshot of the same is shown below:	
	PERSONAL BUDGET PLAN	
	Total Income	
	EXPENSES	
	Bills(Water/Electricity)	
	Groceries Money to be sent to Hostel	
	Entertainment	
	Other Expenses	
	CALCULATE CLEAR CLOSE	
	SUM OF EXPENSES	
	GRAND TOTAL OF EXPENSES	
	SAVINGS	
4		
×	Total Income, Expenses of Bills (Water/Electricity), Groceries,	
	Entertainment, other expenses and whether money is to be sent to	
	Hostel are entered by the user. Sum of Expenses, Grand Total of	
	Expenses and Savings are calculated and displayed by the program.	
	Write the code to do the following :	
	i. When 'CALCULATE' button is clicked, Sum of Expenses, Total	3
	Expenses and Savings should be calculated and displayed in	2
	appropriate text fields.	
	• Sum of Expenses is calculated by adding expenses on	
	Bills(Water/Electricity), Groceries, Entertainment and other	
	expenses.	

	<ul> <li>Grand Total of Expenses is calculated according to the following criteria: If 'Money to be sent to Hostel' checkbox is selected, 3000.00 is to be added to the sum of expenses. If it is not selected, Grand Total of Expenses is the same as sum of expenses.</li> </ul>	
Ans	<ul> <li>Savings = Total Income - Grand Total of Expenses.</li> <li>//Calculation of Sum of Expenses</li> <li>jTextField6.setText("" +</li> <li>Integer.parseInt(jTextField2.getText()+</li> <li>Integer.parseInt(jTextField3.getText()+</li> <li>Integer.parseInt(jTextField4.getText()+</li> <li>Integer.parseInt(jTextField5.getText());</li> </ul>	
	<pre>//Calculation of Grand Total of Expenses if(jCheckBox1.isSelected()) jTextField7.setText("" + 3000 + Integer.parseInt(jTextField6.getText())); else jTextField7.setText("" + Integer.parseInt(jTextField6.getText()));</pre>	
	<pre>// Calculation of Savings jTextField8.setText(``" + Integer.parseInt(jTextField1.getText()) - Integer.parseInt(jTextField7.getText()));</pre>	
	<ul> <li>(1 mark for calculating and displaying 'Sum of Expenses')</li> <li>(1 mark for correct use of ifelse statement)</li> <li>(½ mark for calculating and displaying 'Grand Total of expenses')</li> <li>(½ mark for calculating and displaying 'Savings')</li> </ul>	
(ii)	When 'CLEAR' button is clicked, all text fields and checkbox should be cleared.	1
2×.	<pre>jTextField1.setText(""); jTextField2.setText(""); jTextField3.setText(""); jTextField4.setText(""); jTextField5.setText(""); jTextField6.setText(""); jTextField7.setText(""); jTextField8.setText("");</pre>	
	( ½  mark for clearing any text field) ( ½  mark for clearing  check box) Note : NULL in place of "" to be accepted for clearing text field.	
(iii)	When 'CLOSE' button is clicked, the application should close.	1
	<pre>System.exit(0);</pre>	

		(1 mark for co	rrect answer)			
5	(a)	Anita has create Table: Order	ed the following ta	ble with the name	'Order'.	2
			Column Name	Constra	int	
			Orderld	Primary I	Кеу	
			OrderDate	Not Null		
			OrderAmount			
			Storeld			
		One of the rows	s inserted is as foll	ows :		
		Orderld	OrderDate	OrderAmount	StoreId	
		0101	2015-02-12	34000	S104	
	i.	What is the data Order ?	type of columns (	Drderld and OrderD	ate in the table	
	Ans	Data type of Orc Data type of Orc	lerld: varchar/o lerDate:date	char		
		(½ mark each j	for each correct o	output)		
	ii.		ng to insert the fo		1	
		Orderld	OrderDate	OrderAmount	StoreID	
		0102 Will she be able	NULL to successfully ins	59000 ert it? Give reason	S105	]
	Ans	(ii) No			•	
	7.110	· /	ull Constraint appl	ied on attribute Ar	nimalName	
			nentioning "NO")			
		· ·	entioning correct	t reason)		
	(b)		It of the following			2
	(i)		BoardExaminat			
	Ans	oard	bourdExaminat	1011 , 2, +)		
		(1/2 mark forco	rrect output)			
	(ii)	SELECT ROUND	• •			
	Ans	67_25	<pre>&gt;</pre>			
4		(1/2 mark for co	errect output)			
	(iii)		R('INFORMATION	FORM', 'FOR')		
	Ans	3		, - ••• /		
		( <sup>1</sup> / <sub>2</sub> mark for co	orrect output)			
	(iv)		FYEAR(*2015–01-	-10')		
	Ans	10		,		
		(1/2 mark for co	errect output)			
	(c)		• /	(iv) and output for	(v) and (vi).	6

	StoreId	Name	Location	City	NoOfEmpl	DateOpened	SalesAmo
		-		1	oyees		unt
	S101	Planetfash ion	KarolBagh	Delhi	7	2015-10-16	300000
	S102		Nehru Nagar	Mumbai	11	2015-08-09	400000
	S103	Vogue	Vikas Vihar	Delhi	10	2015-06-27	200000
	S104	Superfashi on	Defence Colony	Delhi	8	2015-02-18	450000
	S105	Rage	Bandra	Mumbai	5	2015-09-22	600000
(i)		name, loca alesAmount		SalesAm	ount of s	tores in des	cending
Ans	FROM St	core	ation,Cit	_	eAmount	-	
	•	k for SELEC k for ORDE	•		2		
(ii)			stores alor	-		ount of those	e stores
Ans	FROM St WHERE N	Name like	\%fashic	on%';			
	•	k for SELEC k for condi					
(iii)			mes,Locat 1 <sup>st</sup> March 20		Date Op	ened of sto	res that
Ans	FROM St WHERE I OR	ore )ateOpene Name,Loc	ation,Dat d <'03/01 ation,Dat	- L/2015′	;		
	WHERE D	ateOpene	d <030120	015;			
	•	for SELEC	•				
(iv)	To display	total Sales	Amount of o	each city	/ along w	ith city nam	e.
A			sAmount)	,City			
Ans	FROM St GROUP E	ore BY City;					

6 (a)	City Delhi Mumbai (1 mark f ) SELECT N where No s Empty Set OR No Output (1 mark Write SQ structure Fie Ev Lo Cli Ev S CREATE ( EventIc	for correct and for correct and L query to creat entId entId entId entID entDate TABLE Event to VARCHAR (5)	swer) (name),left(na s<3; swer) ite a table 'Event' v Type Varchar(5) Varchar(50) Integer Date	with the f	ollowing traint ARY KEY	2
6 (a)	) SELECT N where No s Empty Set OR No Output (1 mark Write SQ structure Fie Ev Lo Cli Ev S CREATE ( EventIc	Vame, length DOfEmployees for correct and L query to crea eld entId entId entId entDate TABLE Event t VARCHAR (5)	swer) Type Varchar(5) Varchar(50) Integer Date	with the f	ollowing traint ARY KEY	2
6 (a)	where No s Empty Set OR No Output (1 mark Write SQ structure Fie Ev Lo Cli Ev S CREATE ( EventIc	for correct and for correct and L query to creat entId entId entId entID entDate TABLE Event to VARCHAR (5)	s<3; swer) Ite a table 'Event' v Varchar(5) Varchar(30) Varchar(50) Integer Date	with the f	ollowing traint ARY KEY	2
6 (a)	s Empty Set OR No Output (1 mark Write SQ structure Ev Ev Lo Cli Ev s CREATE ( EventIc	for correct and L query to created entidentidential entidential entDateeential TABLE Evention TABLE Evential	swer) Ite a table 'Event' v Type Varchar(5) Varchar(30) Varchar(50) Integer Date	Const PRIMA	traint ARY KEY	2
	Write SQ structure Ev Lo Cli Ev S CREATE ( EventIc	L query to crea eld entId entId entName cation ientID entDate TABLE Event t VARCHAR (5)	te a table 'Event' v Type Varchar(5) Varchar(30) Varchar(50) Integer Date	Const PRIMA	traint ARY KEY	2
	structure Fie Ev Lo Cli Ev s CREATE ( EventIc	e: entId entId entName cation ientID entDate TABLE Event t VARCHAR (5)	Type Varchar(5) Varchar(30) Varchar(50) Integer Date	Const PRIMA	traint ARY KEY	2
	Client] EventDa ); (1/2 Mark (1/2 Mark (1/2 Mark	on VARCHAR(5 ID INTEGER, ate DATE for CREATE T for Column No for PRIMARY	ABLE ) ames with Data Ty KEY Constraint)	pes)		
(b)		for NOT NULL the tables give	•	1		2
	TeacherId	Name	Address	State	PhoneNumber	
	T101	Savita Sharma	A-151, Adarsh Nagar	Delhi	991019564	
	T102	Deepak Ghai	K-5/52, Vikas Vihar	Mumbai	893466448	
	T103	MahaLakshmi	D-6	Delhi	981166568	
	T104	Simi Arora		Mumbai	658777564	

	1	1	Table:Cours	e	ı	
	Courseld	Subject		Teache	erld Fee	
	C101	Introductory Mathe	ematics	T101	4500	
	C103	Physics		T101	5000	
	C104	Introductory Comp	uter Science	T102	4000	
	C105	Advance Computer	Science	T104	6500	
(i)	Which colu	mn is used to rela	ate the two	tables?		
Ans	TeacherId column is used to connect the two tables.					
	(1 mark f	or correct colum	n name)			
(ii)		le to have a prin fy your answer wi				
Ans	Yes. As in the Table:Course, Courseld can be used as Primary key and TeacherId is the foreign key.					
	· · ·	for correct answ for correct justij		S		
(c)	With reference to the above given tables, write commands in SQL for (i) and (ii) and output for (iii) :					
(i)	To display Courseld, Teacherld, Name of Teacher, Phone Number of Teachers living in Delhi.					
Ans	FROM Cou WHERE Co	courseId, Teac arse, Faculty ourse.TeacherI y = `Delhi';				
	•	or correct use of for each conditio		,		
(ii)	To display TeacherID, Names of Teachers, Subjects of all teachers with names of Teachers starting with 'S'.					
Ans	<pre>SELECT TeacherId,Name,Subject FROM Faculty, Course WHERE Faculty.TeacherId = Course. TeacherId AND Name like `S%;;</pre>					
	(1 mark for correct use of SELECT and FROM) ( ½ mark for each condition)					
(iii)	SELECT CourseId, Subject, TeacherId, Name, PhoneNumber FROM Faculty, Course WHERE Faculty.TeacherId = Course.TeacherId AND Fee >= 5000;					
Ans	CourseId S	whiest	TeacherID	Name	PhoneNumber	

		C105	Advance Computer Science	<b>T104</b>	Simi Arora	658777564	
		(1 mark	for each line of co	prrect outp	ut)		
7	(a)	<ul> <li>(1 mark for each line of correct output)</li> <li>"In e-Business, customers should shop only when they trust the e-store provider for payment methods"- Justify the statement</li> </ul>					1
	Ans	In e-business, security about the transaction being made by the customer is of utmost importance. A customer should ensure that information about his/her bank accounts, credit cards should not be available to unauthorized persons/e-stores as account may be hacked or money may get stolen/embezzled.					
		(1 mark for correct justification)					
	<ul> <li>(b) Which of the following statements is NOT true in e-Governance? Rewrite the statement after correcting it.</li> <li>(i) Online applications and tracking of status of applications should be provided.</li> <li>(ii) Citizens should not be required to submit documents in physical form.</li> <li>(iii) On line Forms should be made tricky so that only well educated users can enter data.</li> <li>(iv) Government should interact with citizens and enlighten them about different schemes through social media and web based platforms.</li> </ul>						2
	Ans	(iii) Online F	Forms should be mad	le so simple	e that all user	s can enter data	
		<ul> <li>( 1 mark for identifying (iii) as answer)</li> <li>( 1 mark for writing correct statement)</li> <li>OR</li> <li>( ½ mark each for mentioning any one of (i), (ii) or (iv) as True)</li> </ul>					
	(c)						2
	Ans						
		<b>S.No.</b> 1 2	Function To enter EMAIL ID To choose GENDER		Te	ext field dio Button	

#### **CBSE AISSCE 2016 Marking Scheme for Informatics Practices**

(Sub Code: 065 Paper Code 90/1 Delhi)

	3	To enter NATIONALITY from countries given as options.	Combobox	
	4	To enter REMARKS in the form of a paragraph about the purpose of visit.	Text Area	
	( ½ ma	rk for each answer)		

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