Informatics Practices

Class: XII

Question-wise & Year-wise Collection of Questions from CBSE's AISSCE Question Papers & solutions from 2011 to 2017.

Open Teaching & Learning Materials

Question Bank (2011-2017) With Solutions

COMPILED BY:

Rajesh Kumar Mishra

PGT (Comp.Sc.)

Kendriya Vidyalaya Khanapara Guwahati (Assam)

rkmalld@gmail.com

For free distribution

NOT FOR COMMERCIAL USE

Question-wise & Year-wise Collection of Questions from CBSE's AISSCE Question Papers & solutions based on Marking Scheme (2011 to 2017)

CLASS XII- INFORMATICS PRACTICES (065)

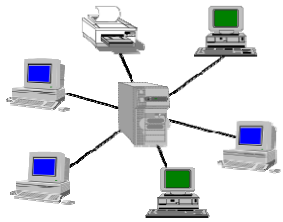
CBSE QUESTION BANK (2011-17)

[Question-wise & Year-wise Collection of Questions from CBSE's AISSCE Question Paper (2011-2017)]

Compiled By: Rajesh Kumar Mishra, PGT(CS), KV Khanapara, Guwahati

QUESTION NO.1 (10 MARKS)

<table>
<tr><th colspan="3">Year - 2011</th><th>M</th></tr>
<tr><td>(a)</td><td>Q.</td><td>Ms. Kant Sengupta wants to prevent unauthorized access to/from his company's local area network. Write the name of a system (software/hardware), which he should install to do the same.</td><td>1</td></tr>
<tr><td></td><td>A.</td><td>Firewall or Intrusion Detection System</td><td></td></tr>
<tr><td>(b)</td><td>Q.</td><td>Seven Brother Fashion Inc. is a fashion company with design unit and market unit 130 meters away from each other. The company recently connected their LANs using Ethernet cable to share the stock related information. But, after joining their LANs, they are not able to share the information due to loss of signal in between. Which device out of the following should you suggest to be installed for a smooth communication?
(i) Modem (ii) Repeater (iii) UPS</td><td>1</td></tr>
<tr><td></td><td>A.</td><td>(ii) Repeater</td><td></td></tr>
<tr><td>(c)</td><td>Q.</td><td>Which of the following is not a feature of Networking?
(i) Resource sharing (ii) Reliability
(iii) Uninterrupted power supply (iv) Reduced cost</td><td>1</td></tr>
<tr><td></td><td>A.</td><td>(iii) Uninterrupted power supply</td><td></td></tr>
<tr><td>(d)</td><td>Q.</td><td>Name any two Indian scripts included in Unicode.</td><td>1</td></tr>
<tr><td></td><td>A.</td><td>Devnagari, Bengali, Gurmukhi, Gujarati, Kannada, Malayalam, Oriya, Tamil, Telugu</td><td></td></tr>
<tr><td>(e)</td><td>Q.</td><td>Mr. Vidya Chauhan is confused between Proprietary and Open source software. Mention at least two points of differences to help her understand the same.</td><td>2</td></tr>
<tr><td></td><td>A.</td><td><table><tr><th>Proprietary software</th><th>Open Source software</th></tr><tr><td>✓ Has to be paid for</td><td>✓ Free and therefore need not be</td></tr><tr><td>✓ Source code not available</td><td>✓ Source code available for change</td></tr><tr><td>✓ Cannot be copied / distributed</td><td>✓ Can be copied and distributed</td></tr></table></td><td></td></tr>
<tr><td>(f)</td><td>Q.</td><td>Identify the type of topology from the following:
(i) In it, each node is connected with the help of a single co-axial cable.
(ii) In it, each node is connected with the help of independent cable with the help of a central switching (communication controller).</td><td>2</td></tr>
<tr><td></td><td>A.</td><td>(i) Bus Topology (ii) Star Topology</td><td></td></tr>
<tr><td>(g)</td><td>Q.</td><td>Define the following with reference to Threats to network security.
(i) Worm (ii) Trojan Horse</td><td>2</td></tr>
<tr><td></td><td>A.</td><td>(i) Worm :
✓ Self-replicating malware without user intervention
✓ Consumes high volume of bandwidth leading to Denial of service (DoS)
(ii) Trojan Horse
✓ Appears to perform a desirable function for the user
✓ Steals information through a 'backdoor' /Records browsing activities without the knowledge of the user Causes system crash or freeze</td><td></td></tr>
</table>

		Year - 2012	M
(a)	Q.	Raj kamal International school is planning to connect all computers, each spread over distance within 45 meters. Suggest an economical cable type having high-speed data transfer, which can be used to connect these computers.	1
	A.	UTP (Unshielded Twisted Pair) or Coaxial Cable	
(b)	Q.	Name two Indian Script included in UNICODE.	1
	A.	Devnagari, Bengali, Gurmukhi, Gujarati, Kannada, Malayalam, Oriya, Tamil etc.	
(c)	Q.	Write examples of one Proprietary and one Open Source Software.	1
	A.	Open source software: Linux, My Sql, Open Office etc. Proprietary Software : Microsoft Office, Oracle etc.	
(d)	Q.	Name any two most popularly used internet browsers.	1
	A.	Firefox, Internet Explorer, Google Chrome etc.	
(e)	Q.	Ms. Rani Sen, General Manager of Global Nations Corporate recently discovered that the communication between her company's accounts office and HR office is extremely slow and signals drop quite frequently. These offices are 125 meters away from each other and connected by an Ethernet cable. (i) Suggest her a device, which can be installed in between the offices for smooth communication. (ii) What type of network is formed by having this kind of connectivity out of LAN,MAN and WAN?	2
	A.	(i) Repeater or Switch (ii) LAN	
(f)	Q.	Give an advantage of using Star topology over Bus topology. Show a network layout of star topology to connect 5 computers.	2
	A.	In star topology, Failure of one node or link doesn't affect the rest of network whereas in the bus topology, if the network cable breaks, the entire network will be down. 	
(g)	Q.	Give suitable example of URL and Domain name.	2
	A.	URL - http://www.cbse.nic.in/index.html Domain – www.cbse.nic.in	
		Year - 2013	M
(a)	Q.	Write the name of the most suitable wireless communication channels for each of the following situations. (i) Communication between two offices in different countries. (ii) To transfer the data from one mobile phone to another.	1
	A.	(i) Satellite (ii) Bluetooth	
(b)	Q.	What is UNICODE? Name one Indian language, which is supported by UNICODE.	1
	A.	Unicode is word wide accepted encoding system which provides a unique code for every character of most of the language of the world for any program or platforms.	

		Following are some Indian language, which are supported by UNICODE. Devnagari, Bengali, Gurmukhi, Gujarati, Kannada, Malayalam, Oriya, Tamil, Telugu	
(c)	**Q.**	Expand the following terms: (i) FLOSS (ii) HTTP	**1**
	A.	(i) FLOSS : **F**ree **L**ibre and **O**pen **S**ource **S**oftware (ii) HTTP : **H**yper **T**ext **T**ransfer **P**rotocol	
(d)	**Q.**	Mr. Chandervardhan is not able to identify the Domain Name in the given URL. Identify and write it for him. http://www.cbse.nic.in/aboutus.htm	**1**
	A.	**Domain Name** : www.cbse.nic.in	
(e)	**Q.**	What do you understand by Network Security? Name two common threats to it.	**2**
	A.	Network security is concerned with privacy and protection data during their transmission and to guarantee that data is not modified or altered while transmissions. 1. Eavesdropping 2. Snooping	
(f)	**Q.**	Write one advantage of Star Topology over Bus Topology and one advantage of Bus Topology Over Star Topology.	**2**
	A.	**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)	**Q.**	What is MAC address? What is the difference between MAC address and an IP address?	**2**
	A.	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 purpose. **Difference between MAC address and an IP address** MAC address is 6 byte physical unique address assigned to each network interface card while an IP address 4 byte logical address assigned to network node.	
		Year – 2014	**M**
(a)	**Q.**	Why is a switch called an intelligent hub ?	**1**
	A.	Switch is called an intelligent hub as it connects several nodes to form a network and redirects the received information to the intended nodes only.	
(b)	**Q.**	What was the objective behind developing UNICODE?	**1**
	A.	UNICODE was developed with the objective to conceive a single standard code to represent most of the language of the world.	
(c)	**Q.**	Expand the following terms: (i) OSS (ii) ODF	**1**
	A.	(i) Open Source Software (ii) Open Document Format	
(d)	**Q.**	What is the use of Repeater in a Network?	**1**
	A.	A Repeater is a device that regenerated the received signals and retransmits it to its destination.	

(e)	**Q.**	Identify the following device : (i) A device that is used to connect different types of network. It performs the necessary translation so that the connected network can communicate properly? (ii) A device that converts data from digital bit stream into an analog signal and vice versa.	**2**
	A.	(i) Gateway (ii) Modem	
(f)	**Q.**	Write one advantage and one disadvantage of using Optical fiber cable.	**2**
	A.	Advantage: (i) Not susceptible to electrical and magnetic interference i.e. free from EMI. (ii) High speed and Data Transmission capacity (iii) Secure Transmission Disadvantage: (i) Expensive and not suitable for domestic use. (ii) Fibers are fragile so installation is typical job. (iii) Difficult to solder/extend.	
(g)	**Q.**	Distinguish between Open Source Software and Proprietary Software.	**2**
	A.		

Open Source Software	Proprietary Software
(1) Source Code is available	1. Source code is not available
(2) Modification to source code can be done.	2. Modification to source code can not be done.
(3) Supported by a community of users and developers	3. Supported by vendors at a cost.
(4) Generally no license fee Example :Open Office	4. License fee is charged Example :Microsoft Office

		Year - 2015	**M**
(a)	**Q.**	A school with 20 stand-alone computers is considering networking them together and adding a server. State 2 advantages of doing this.	**1**
	A.	Sharing Resources- Resources like Printer, storage, Internet and files can be shared. Improved Communication- Communication among users can be faster using e-mail and other services.	
(b)	**Q.**	Distinguish between LAN and WAN.	**1**
	A.	LAN is a local network spread over a building or campus in limited area whereas WAN is big network and can spread across countries.	
(C)	**Q.**	What is the purpose of Modem in network?	**1**
	A.	MODEM is used to connect telephone line to a network so that user can access Internet, voice call and fax etc.	
(D)	**Q.**	Write one example of IP Address.	**1**
	A.	IP address is a unique address assigned to any node in the network. It is a group of 4 byte numbers separated with dot. Example: 135.124.45.20	
(e)	**Q.**	Define 'Domain Name Resolution'.	**2**
	A.	The process of converting Domain name in to its corresponding IP address is called Domain Name resolution. Generally website are accessed through their domain names written in alphabets but to search a web server or any computer in the network its IP address is required. A DNS server of ISP resolves domain name into its IP address.	

(f)	**Q.**	Name two threats to security in a network. What is the role of Firewall in Network security?	**2**
	A.	A network security threat refers any type of access to confidential information. Two common threats are- **Snooping-** It refers to unauthorized access of someone else data, email, computer activity or data communication. **Eavesdropping-** It is act of secretly listening or intercepting someone else private communication or data communication, while data is on the way. Firewall is a security system designed to prevent unauthorized access to or from a private network. It examines any access as per defined security rules and block any suspicious access.	
(g)	**Q.**	Write one advantages and one disadvantage of Open Source Software over Proprietary software.	**2**
	A.	**Advantage-** Open source software are freely accessible and can be freely used, distributed, copied and modified. Whereas Proprietary software is neither open nor freely available. **Disadvantage-** Proprietary software are well functional and offers support after sales. However Open software are provided with limited support.	
Year - 2016			**M**
(a)	**Q.**	Vidya College has three departments that are to be connected into a network. Which of the following communication medium (out of the given options), should be used by the college for connecting their departments for very effective High Speed communication? • Coaxial Cable • Optical Fiber • Ethernet Cable Also name the type of network (out of PAN/LAN/WAN) formed.	**2**
	A.	Optical fiber LAN	
(b)	**Q.**	State reason why Star topology requires more cable length than Bus topology.	**2**
	A.	As Star topology involves a central hub or switch to which all individual node(s) are connected with individual cable, therefore more cabling is required than Bus topology.	
(c)	**Q.**	Seema needs a network device that should regenerate the signal over the same network before the signal becomes too weak or corrupted. Amit needs a network device to connect two different networks together that work upon different networking models so that the two networks can communicate properly. Name the devices that should be used by Seema and Amit.	**2**
	A.	Seema should use Repeater Amit should use Gateway	
(d)	**Q.**	How is a domain name related to an IP address?	**2**
	A.	Each domain name has a corresponding IP Address. When a request to access a website is submitted to web browser, it is submitted to nearest DNS server and its corresponding IP address is returned through Domain Name Resolution process.	
(e)	**Q.**	How is firewall useful in ensuring network security?	**2**
	A.	A Firewall permits only that data to enter or leave a computer/Network for which permissions have been granted by the computer/network administrator.	

Year - 2017			M
(a)	**Q.**	Identify odd one out of the following: Optical Fiber/Coaxial Cable/ Bluetooth/Twisted Pair Cable. Give reason for your answer.	**2**
	A.	Odd one : Bluetooth Reason : Bluetooth is a wireless/unguided communication media while others are wired/guided communication media.	
(b)	**Q.**	How is it easier to diagnose fault in Star topology than in Bus topology?	**2**
	A.	In Star topology each node is directly connected to a central hub / switch, hence fault diagnosis becomes easy. In bus topology all the nodes are connected to the backbone cable. The signal travels through the entire length of the backbone and is received by the node for which it is intended. Hence, fault diagnosis is difficult.	
(c)	**Q.**	What is the purpose of logical address of computer?	**2**
	A.	Logical address refers the address of computer in the network. Generally it is referred by IP address. Logical address of a node or PC can be changed.	
(d)	**Q.**	Does Open source software only mean that the software is free of cost? Give reason for your answer.	**2**
	A.	No , it does not only mean that the software is free of cost. Reason: It also means that the source code is available to user with freedom to use , modify and distribute.	
(e)	**Q.**	Which of the following are valid IP addresses? Give reason(s) if invalid. i) 121.23.1.45 ii) 192.168.0. 254 iii)192.168.0.1 iv) 198.-1.1.1	**2**
	A.	Valid IP addresses: (i) , (ii) , (iii) Invalid IP address: (iv) 198.-1.1.1 because an IP address is a group of four bytes; each of which can be a number from 0 to 255.	

QUESTION NO.2 (10 MARKS)

		Year - 2011	M
(a)	**Q.**	While working in Netbeans, Ms. Khorana wants to display 'Pass' or 'Needs to Reappear' message depending the marks entered in jTextField. Help her to choose more appropriate statement out of 'If statement' and 'Switch statement'.	**1**
	A.	IF statement	
(b)	**Q.**	How one can make a Text Field un-editable on a Frame?	**1**
	A.	<JTextField>.setEditable (false)	
(c)	**Q.**	Which HTML tags are used for making a table and adding rows in a HTML document?	**1**
	A.	✓ <TABLE> </TABLE> tags are used for making a table. ✓ <TR> </TR> are used for adding rows in a HTML document.	
(d)	**Q.**	How is <OL> tag different from <UL> tag of HTML?	**1**
	A.	✓ <OL> stands for ordered list. This tag is used to display an ordered/ numbered list. ✓ <UL> stands for unordered list. This tag is used to display a bulleted list.	

(e)	**Q.**	What will be the value of P and Q after execution of the following code: int P,Q=100;
		for(P=10;P<=12;P++)
		{ Q+=P;
		}
		JOptionPane.showMessageDialog(this, "P:" + P + "Q:" + Q + "");
			2

	A.	P:13 Q:133	
(f)	**Q.**	Differentiate between XML and HTML.	**2**
	A.	XML : (1) XML is used to define the structure of document for transportation purpose. (2) Tags are not predefined. (3) Tags must container tag i.e. must be closing tag. (4) XML is case sensitive. HTML: (1) HTML is used to format the document so that it can be displayed well. (2) Tags are predefined. (3) Tags may be empty or container type. (4) HTML is not case sensitive.	
(g)	**Q.**	Write java code that takes the cost of a pencil from jTextField1 and number of pencil from jTextField2 and calculate total amount as cost*number to be displayed in jTextField3 and 20% service tax out of total amount in jTextField4.	**2**

	A.	double cost=Double.parseDouble(jTextField1.getText());
		int n = Integer.parseInt(jTextField2.getText());
		double amount=cost * n;
		jTextField4.setText(Double.toString(amount));
		jTextField5.setText (Double.toString(amount * 0.20));	

		Year - 2012	**M**

(a)	**Q.**	While making a Form in Netbeans, Mr. Harihar Jha wants to display a list of countries to allow the users to select their own country. Suggest him to choose most appropriate control out of ListBox and ComboBox.	**1**
	A.	ComboBox.	
(b)	**Q.**	What is the purpose of break keyword while using Switch Case Statement? Illustrate with the help of an example.	**1**
	A.	The purpose of Break statement is used to terminate the switch block statement. It prevents 'fall through' problem. switch(grade) { case 'A' : System.out.println("Excellent!"); break; case 'B' : System.out.println("Well done"); break; case 'C' : System.out.println("You passed"); break; default : System.out.println("Invalid grade"); }	
(c)	**Q.**	Write the name of HTML tag used to include numbered list in a HTML Web Page.	**1**
	A.	<OL>	
(d)	**Q.**	Write HTML code for the following: To provide hyperlink to a website :http://www.cbse.nic.in"	**1**
	A.	<a href="http://www.cbse.nic.in">Click Here to visit CBSE site </a>	

(e)	**Q.**	What will be the content of the jTextArea1 after executing the following code (Assuming that the jTextArea1 had no content before executing this code)?
		for(int c=1; c=4; c++)
		{ jTextArea1.setText(jTextArea1.getText()+""+Integer.toString(c*c));
		}
			2

	A.	This code will give error because in for loop in place of relation operator (==), assignment operator (=) is used. If you replace the assignment operator (=) with relational operator(==) then output will be blank text area because condition c==4 will be false.	
(f)	**Q.**	Which of the following units measures the speed with which data can be transmitted from one node to another node of a network? Also give the expansion of the suggested unit. (i) KMph (ii) KMpl (iii) Mbps	**2**
	A.	(iii) Mbps	
(g)	**Q.**	Write java code that takes value for a number (n) in jTextField1 and cube (n*n*n) of it to be displayed in jTextField2.	**2**

	A.	int n=Integer.parseInt(jTextField1.getText());
		int m=n*n*n;
		jTextField2.setText(""+m);	

Year - 2013			**M**

(a)	**Q.**	Which property of palette ListBox is used to enter the list of items while working in NetBeans?	**1**
	A.	model property	
(b)	**Q.**	What is the difference between the use of **JTeaxtField** and **JPasswordField** in a form?	**1**
	A.	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 pupose.	
(c)	**Q.**	"The variable/expression in the switch statement should either evaluate to an integer value or String value." State True or False.	**1**
	A.	True	
(d)	**Q.**	Name two attributes of FONT tag of HTML.	**1**
	A.	Size, Face and Color etc.	
(e)	**Q.**	How many times will the following loops execute? Which one of them is Entry Control and which one is Exit Control?	**2**
	A.	Following loops will execute 3 times. Loop 1 is Entry control loop and Loop 2 is Exit control loop.	

(f)	**Q.**	What will be displayed in jTextField1 and jTextField2 after the execution of the following loop?
		int Sum=0,Last=10;
		for (int C=1; C<=Last; C+=2)
		Sum++;
		jTextField1.setText(Integer.toString(Sum));
		jTextField2.setText(Integer.toString(C));
			2

	A.	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)	**Q.**	Differentiate between the <TR> and <TD> tags of HTML with the help of an appropriate example.	**2**
	A.	<TR> defines table row Whereas, <TD> defines table data (cell). Example:	

Loop 1

```
int   i=10,  sum=0;
while (i>1)
{   sum+=i;
    i-=3;
}
```

Loop 2

```
int   i=10,  sum=0;
do
{   sum+=i;
    i-=3;
} while (i>1);
```

```
<HTML>
<BODY>
<TABLE >
<TR>
    <TD>1</TD>
    <TD>2</TD>
</TR>
<TR>
    <TD>3</TD>
    <TD>4</TD>
</TR>
</TABLE>
</BODY>
</HTML>
```

1	2
3	4

		Year - 2014	**M**
(a)	**Q.**	Is a string containing a single character same as a character?	**1**
	A.	No	
(b)	**Q.**	Write a statement in Java to declare a String type variable with a name City.	**1**
	A.	String City;	
(c)	**Q.**	Distinguesh between '/' and '%' operators.	**1**
	A.	'/' divides first numbers with second number and returns the quotient. '%' divides first number with second number and returns the remainder.	
(d)	**Q.**	Which tag/attributes of HTML are used to- (i) Insert a picture in a web page. (ii) Insert an empty line in the web page.	**1**
	A.	(i) <IMG> (ii) OR <P>	
(e)	**Q.**	What will be the values of variable agg and agg1 after the execution of the following loops?	**2**

Loop1	**Loop2**

int a=9,agg=9;
while (a>10)
{ agg+=a;
a-=2;
}
	int a=9,agg=9;
	do
	{ agg1+=b;
	b-=2;
	} while (b>10);

	A.	agg=9, agg1=9	

(f)	**Q.**	What will be displayed in jTextArea1 after the execution of the following loop?
		for (int i=5; i>=2; i- -)
		jTextArea1.setText (jTextArea1.getText()+ " "+ Integer.toString (i*i));
			2

	A.	25 16 9 4	
(g)	**Q.**	Give two attributes of Table element of HTML.	**2**
	A.	ALIGN, BGCOLOR, BORDER	
		Year - 2015	**M**
(a)	**Q.**	Write the value of variable 'c' after execution of the following code: `int d;`	**1**

		int c;
		d=7;
		c=(5*++d)%3;	

	A.	1	
(b)	**Q.**	What is the difference between jTextField and jPasswordField components?	**1**
	A.	jTextField are used to input text which is shown during typing whereas jPasswordField is used to enter password in the application. The Text entered in password field will be replaced by echo character.	
(c)	**Q.**	In a SWITCH statement, what is the purpose of 'default' section?	**1**
	A.	The 'Default' section in SWITCH statement is executed when no any matched case is found. Generally, it contains error message or any default action which to be executed when no any case is true.	
(d)	**Q.**	After typing the HTML code using text editor, how do you see how it would look as a web page?	**1**
	A.	A web page containing HTML code is seen on any browser program. So, after typing HTML code in text file can be executed on any web browser like Internet Explorer, Google Chrome or Mozilla fire fox etc.	
(e)	**Q.**	Write Java code to assign the value 500 to variable x. Increase the value of x by 50 and store it in variable y.	**2**

	A.	int x=500;
		x=x+50;
		int y= x;	

(f)	**Q.**	Write the output that will be generated by the code given below:
		int i;
		i=7;
		int r;
		r=8;
		While (i<=10)
		{System.out.println(r*i);
		i=i+2;
		}
			2

	A.	56 72	
(g)	**Q.**	"With XML there are no predefined tags"- explain in brief with the help of an example.	**2**
	A.	XML (eXtensible Markup Language) is general purpose markup language which allows to create structured document by allowing creation of new tags. XML is designed to describe and carry data not to display in formatted way like HTML. XML you have create your own tag set as per your data need i.e. tags are not predefined in XML like HTML. Example- <names> <name> Sameer </name> <name> Rohit </name> <name> Kavya </name> </names>	
Year - 2016			**M**
(a)	**Q.**	Identify the odd one out of the following Java statements. State reason for your choice	**1**

		(i) for (ii) do while (iii) switch (iv) while	
	A.	iii) switch switch is a selection statement but others are looping / iteration statements.	
(b)	**Q.**	Write the purpose of parseInt() method.	**1**
	A.	parseInt() converts a String value to Integer data type.	
(c)	**Q.**	Identify invalid variable names out of the following. State reason if invalid. (i) for (ii) –salary (iii) salary12 (iv) product	**1**
	A.	Invalid variable names : i) for and ii) -salary Reason : i) 'for' : is a keyword ii) '-salary' : variable name cannot start with special character	
(d)	**Q.**	What is the difference between statements (i) and (ii) **(i)** t = 2; **(ii)** if (t == 2) d = 3;	**1**
	A.	In (i) variable 't' is being assigned the value 2 whereas in (ii) 't' is being checked for equality with 2	
(e)	**Q.**	Write HTML tags to do the following : (i) Inserting a horizontal line in a web page. (ii) Inserting a line break	**2**
	A.	**(i)** <HR> **(ii)** 	
(f)	**Q.**	What does 'XML' stand for? How is the purpose of HTML different from XML?	**2**
	A.	XML stands for eXtensible Markup Language. HTML is used to create web pages / display data whereas XML is used to describe/ store/ transport data.	

(g)	**Q.**	Rewrite the following code using if else if statement:
		switch (depcode)
		{
		case 1 :
		allowance = 4000; break;
		case 2 :
		allowance = 3200; break;
		default :
		allowance = 1000;
		}
			2

	A.	if (depcode == 1)
		allowance = 4000;
		else if (depcode == 2)	

		allowance = 3200;
		else
		allowance =1000;	

Year - 2017			**M**
(a)	**Q.**	Write the value that will be assigned to variable x after executing the following statement: x = 20 -5 + 3 * 20/5;	**1**
	A.	27	
(b)	**Q.**	Consider the statement: choice = 'Y'; What is the data type of variable choice? Write Java statement to declare the variable 'choice'.	**1**
	A.	The data type of the variable choice is char. Declaration : char choice;	
(c)	**Q.**	While working in Netbeans IDE, Amit wants that the text in a Text area should move to the next line without breaking the word. Which properties would help him do that?	**1**
	A.	wrapStyleWord property , lineWrap property	
(d)	**Q.**	Write Java statement to: Append a string "ABC" to the text that is already in the text area named jTextArea1.	**1**
	A.	jTextArea1.append(""+"ABC"); OR jTextArea1.append("ABC"); OR jTextArea1.append("ABC"+"");	
(e)	**Q.**	Write the output of the following HTML code. <ol start="4"> <li>Bake the mixture in oven for an hour</li> <li>Remove from oven</li> <li>Allow the mixture to stand for ten minutes</li> <li>Serve</li> </ol></code>	**2**
	A.	4 Bake the mixture in the oven for an hour 5 Remove from oven 6 Allow the mixture to stand for ten minutes 7 Serve **Note:** You can also point out </code> is not HTML tag and mention 'Error'.	
(f)	**Q.**	Given below is a code. <message> <text>Hello, world!</text> </message> Which language is used to write the above code? What are <message>, </message>, <text> and </text>?	**2**

	A.	Language used is XML <message>, </message>,<text > and </text > are user defined tags OR tags OR container tags OR <message>, </message> is the root element and <text>, </text> is the child element.	

(g)	**Q.**	Rewrite the following code using if else if statement instead of switch :
		switch (success)
		{
		case -1: x1 = "No result" ; break;
		case 0 : x1 = "Final result- Not successful"; break;
		default: x1 = "result NOT known"; break;
		}
			2

	A.	if (success == -1)
		x1= “No result”;
		else if (success == 0)
		x1= “Final result -Not successful”;
		else
		x1= “result NOT known”;	

QUESTION NO.3 (10 MARKS)

<table>
<tr><th colspan="3">Year - 2011</th><th>M</th></tr>
<tr><td>(a)</td><td>Q.</td><td>Write MySql command that will be used to open an already existing database "CONTACTS".</td><td>1</td></tr>
<tr><td></td><td>A.</td><td>USE CONTACTS;</td><td></td></tr>
<tr><td>(b)</td><td>Q.</td><td>The Doc_name Column of a table Hospital is given below:
<table><tr><th>Doc_name</th></tr><tr><td>Avinash</td></tr><tr><td>Hariharan</td></tr><tr><td>Vinayak</td></tr><tr><td>Deepak</td></tr><tr><td>Sanjeev</td></tr></table>Based on the information, find the output of the following queries:
(i) Select doc_name from Hospital where doc_name like "%v";
(ii) Select doc_name from Hospital where doc_name like ":%e%";</td><td>2</td></tr>
<tr><td></td><td>A.</td><td>(i) Sanjeev
(ii) Deepak
Sanjeev</td><td></td></tr>
<tr><td>(c)</td><td>Q.</td><td>A table "Transport" in a database has degree 3 and cardinality 8. What is the number of rows and columns in it?</td><td>2</td></tr>
<tr><td></td><td>A.</td><td>Number of Rows: 8
Number of Columns : 3</td><td></td></tr>
<tr><td>(d)</td><td>Q.</td><td>Differentiate between Alternate key and Candidate key.</td><td>1</td></tr>
<tr><td></td><td>A.</td><td><table><tr><th>Alternate Key</th><th>Candidate Key</th></tr><tr><td>✓ A key that can act as a primary key but is not selected as primary key</td><td>✓ A key that can be set as Primary key is called a candidate key.</td></tr></table></td><td></td></tr>
<tr><td>(e)</td><td>Q.</td><td>Define a class with reference to Object Oriented Programming.</td><td>1</td></tr>
<tr><td></td><td>A.</td><td>A class is a logical unit – a user defined data type. It encapsulates and binds The data members and the methods.</td><td></td></tr>
<tr><td>(f)</td><td>Q.</td><td>A employee_Id consisting of 5 digits is stored in a string variable strEmpId. Now Mr. Deb wants to store this Id in integer type of variable IntEmpId. Write a java statement to do this.</td><td>1</td></tr>
<tr><td></td><td>A.</td><td>int IntEmpId = Integer.parseInt (strEmpId) ;</td><td></td></tr>
<tr><td>(g)</td><td>Q.</td><td>Sarthak, a student of class XII, created a table "Class". Grade is one of the columns of this table. To find the details of students whose Grades have not been entered, he wrote the following MySql query, which did not give the desired result.
SELECT * FROM Class WHERE Grade="Null";
Help Sarthak to run the query by removing the errors from the query and write the correct Query.</td><td>2</td></tr>
<tr><td></td><td>A.</td><td>SELECT * FROM Class WHERE Grade IS NULL;</td><td></td></tr>
</table>

Year - 2012			M
(a)	**Q.**	Write MySql command to open an existing database.	**1**
	A.	USE <database name>;	
(b)	**Q.**	Ms. Mirana wants to remove the entire content of a table "BACKUP" alongwith its structure to release the storage space. What MySql statement should she use?	**1**
	A.	DROP TABLE BACKUP;	
(c)	**Q.**	Give one difference between ROLLBACK and COMMIT commands used in MySql.	**1**
	A.	<table><tr><th>ROLLBACK</th><th>COMMIT</th></tr><tr><td>✓ ROLLBACK command is used to end the current transaction and undo all the changes we made since the current transaction began.</td><td>✓ COMMIT command is used to make all the changes permanent to the underlying database which we made during the current transaction.</td></tr><tr><td>✓ Rollback is used to revert the last transaction in the Sql.</td><td>✓ Commit is used to save all the recent transactions.</td></tr></table>	
(d)	**Q.**	A table STUDENT has 4 rows and 2 columns and another table TEACHER has 3 row and 4 columns. How many rows and columns will be there if we obtain the Cartesian product of these two tables?	**1**
	A.	12 rows and 6 columns	
(e)	**Q.**	Mr. Sanghi created two tables with CITY as Primary key in Table1 and Foreign Key in Table2. While inserting a row in Table2, Mr. Sanghi is not able to enter a value in the column CITY. What could be the possible reason for it?	**2**
	A.	Mr. Sanghi was trying to enter the name of CITY in Table2 which is not present in Table1 i.e. Referential Integrity ensures that value must exist in referred table.	
(f)	**Q.**	Item code consisting of 5 digits is stored in an integer type variable intItemCode. Mr. Srikant wants to store this Item code in a String type variable called strItemCode. Write appropriate java statement(s) to help her in performing the same.	**2**
	A.	String strItemCode=Integer.toString(intItemCode);	
(g)	**Q.**	Mr. Janak is using a table with following columns: Name, Class, Course_Id, Course_name He needs to display names of students, who have not been assigned any stream or have been assigned Course_name that ends with "economics". He wrote the following command, which did not give the desired result. SELECT Name, Class FROM Students WHREE Course_name=Null OR Course_name="%economics"; Help Mr.Janak to run the query by removing the error and write the correct query.	**2**
	A.	SELECT Name, Class FROM Students WHERE Course_name IS NULL OR Course_name LIKE '%economics';	
Year - 2013			**M**
(a)	**Q.**	Write a SQL command to view the constraints of EMP table.	**1**
	A.	SHOW TABLE EMP;	
(b)	**Q.**	Mr. Krishnaswami is working on a database and has doubt about the concept of SAVEPOINT in a transaction. Write down the meaning of SAVEPOINT and provide a simple example considering yourself as an online web support executive.	**1**

	A.	SAVEPOINT is a point or flag in a transaction, which facilitate partial rollback i.e. a rollback or cancel of transaction up to defined save points when required. **EXAMPLE:** mysql> START TRANSACTION; mysql> INSERT INTO Books VALUES (102, 'Omega', 1967); mysql> INSERT INTO Books VALUES (104, 'Windows', 1982); mysql> SAVEPOINT p1; mysql> UPDATE Books set BookCode = 107 Where Title='Omega'; mysql> ROLLBACK TO p1; In this example the effect of Update command will be cancelled.	
(c)	**Q.**	What is the difference between CURDATE () and DATE () functions?	**1**
	A.	CURDATE () returns the current date whereas, DATE () extracts the date part of a date or datetime expression.	
(d)	**Q.**	Table STUDENT has 4 rows and 2 columns. Table MARKS has 2 rows and 3 columns. How will be the cardinality and degree of the Cartesian product of STUDENT and MARKS?	**1**
	A.	The cardinality is 8 and degree is 5 of the Cartesian product of STUDENT and MARKS.	
(e)	**Q.**	There is a column Salary in a Table EMPLOYEE. The following two statements are giving different outputs. What may be the possible reason? SELECT COUNT(*) FROM EMPLOYEE; SELECT COUNT(SALARY) FROM EMPLOYEE;	**2**
	A.	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 7th employee's salary is not entered then output will be 10 and 9 for respective queries.	
(f)	**Q.**	Mr. Kapoor is a programmer at Ekansh Enterprises. He created 5 digit password and stored in a string variable called strPassword. He wants to store the same password in an Integer type variable called intPassword. Write an appropriate Java statement to transfer the content from strPassword to intPassword.	**2**
	A.	int intPassword=Integer.parseInt(strPassword);	
(g)	**Q.**	Mrs. Kumar is using table STUDENTS with the following columns: RNO, ADMNO, NAME, AGGREGATE She wants to display all information of students in descending order of name and within ascending order of aggregate. She wrote the following SQL query and she did not get the desired output: SELECT * FROM STUDENTS ORDER BY NAME, AGGREGATE DESC;	**2**
	A.	SELECT * FROM STUDENTS ORDER BY AGGREGATE, NAME DESC;	
Year - 2014			**M**
(a)	**Q.**	Distinguish between ALTER TABLE and UPDATE commands of MySQL.	**1**
	A.	ALTER TABLE command is used to modify the structure of a table. UPDATE command is used to make changes in the data stored in a table.	
(b)	**Q.**	Mentioned two categories in which MySQL commands are broadly classified?	**1**
	A.	DDL-Data Definition Language DML-Data Manipulation Language	
(c)	**Q.**	Give two characteristics of Primary key?	**1**

	A.	(i) It must contain a unique value for each row of data (ii) It can not contain null values.	
(d)	**Q.**	A table FUNFOOD has 13 rows and 17 columns. What is the cardinality and degree of this table?	**1**
	A.	Cardinality-13, Degree-17	
(e)	**Q.**	A numeric column MONEY contains 34567.7896. Write a command to truncate MONEY. (i) Up to 2 decimal places. (i.e. expected result 34567.78) (ii) Up to -3 places (i.e expected result 34000)	**2**
	A.	(I) SELECT TRUNCATE (34567.7896,2) (II) SELECT TRUNCATE (34567.7896,-3)	
(f)	**Q.**	What happens when ROLLBACK command is issued in a transaction process?	**2**
	A.	The Rollback command cancels transactions that have not already been saved to the database. It cancels transactions since the last Commit or Rollback command was issued.	
(g)	**Q.**	Shanya Khanna is using a table Employee. It has the following columns. Admno, Name, Agg, Stream [column Agg contains aggregate marks] Shewants to display highest Agg in each stream. She wrote the following statement: SELECT Stream, MAX(Agg) FROM Employee; But she did not get the desired result. Rewrite the above query with necessary changes to help her get the desired output.	**2**
	A.	SELECT Stream ,MAX(Agg) FROM Employee GROUP BY Stream;	
Year - 2015			**M**
(a)	**Q.**	What is MySQL?	**1**
	A.	MySQL is an open source Relational Database Management System (RDBMS) that uses Structured Query Language(SQL). It provides features that support a secure environment for storing, maintaining and accessing data. It is reliable, fast and portable and alternative to many of the commercial RDBMSs.	
(b)	**Q.**	Is NULL value the same as 0 (zero)? Write the reason for your answer.	**1**
	A.	Null value indicates nothing or empty value. It does not represent 0 or space character. The column having Null value is ignored while applying aggregate functions like MIN, MAX or COUNT etc.	
(c)	**Q.**	Write the UPDATE command to increase the commission (column name :COMM) by 500 of all the salesman who have achieved sales (Column name : SALES) more than 200000. The table's name is COMPANY.	**1**
	A.	Update COMPANY set COMM=COMM+500 where SALES>200000;	
(d)	**Q.**	While using SQL pattern matching, what is the difference between '_' (underscore) and '%' wildcard symbols?	**1**
	A.	The '_' and '%' are wild cards which represents unknown characters while making pattern. The difference between '_' and '%' is that '_' character matches any single character at position where it is used, but '%' matches any group of character or substring.	
(e)	**Q.**	How is primary key constraint different from Unique key constraints?	**2**

	A.	A table may have multiple Unique constraints but there can be only one Primary Key.	
(f)	**Q.**	Write one similarity and one difference between CHAR and VARCHAR data types.	**2**
	A.	Char and Varchar data types both have characters but there is a difference between them. Char data type offers fixed-length string and spaces are-write padded to the specified length when less characters are stored whereas Varchar data type offers variable-length string and no extra spaces are padded when length of string is less than defined size.	
(g)	**Q.**	What is a Transaction? Which command is used to make changes done by a transaction permanent on a database?	**2**
	A.	A transaction is logical unit of works that must be succeed or fail in it entirely. It refers any type of access to the database. A transaction may have multiple statements written to carry a specific action on the database. COMMIT command is used to make changes permanently in the database.	
Year - 2016			**M**
(a)	**Q.**	What is the meaning of 'Open source' in the term 'Open Source Database Management System'?	**1**
	A.	Open source means that the software can be studied, copied, redistributed freely and even modified according to one's need without seeking any kind of permission. In order to modify such software the developers also provide the source code to the users.	
(b)	**Q.**	In a table 'Employee', a column 'Occupation' contains many duplicate values. Which keyword would you use if you wish to list only different values?	**1**
	A.	The DISTINCT keyword can be used to return only distinct (different) values.	
(c)	**Q.**	How is ALTER TABLE statement different from UPDATE statement?	**1**
	A.	ALTER TABLE- DDL Command, Used to modify Table structure UPDATE – DML Command, Used to modify records.	
(d)	**Q.**	Charvi wants to delete the records where the "FirstName" is "Rama" in the 'Emp' Table. She has entered the following SQL statement. An error is being displayed. Rewrite the correct statement. **DELETE 'Rama' FirstName FROM Emp;**	**1**
	A.	**DELETE FROM Emp WHERE FirstName = 'Rama';** ***OR*** **DELETE FROM Emp WHERE FirstName like 'Rama';**	
(e)	**Q.**	(i) Name 2 Group (Aggregate) functions of SQL.	**1**
		(ii) Consider the table: **Table: Company** CompanyCode | Donations C101 | 13000 C102 | NULL C104 | 7000 C105 | 4000 What output will be displayed by the following SQL statement: **SELECT AVG(Donations) FROM Company;**	**1**
	A.	(i) SUM(), MAX(), MIN(), AVG(), COUNT(), COUNT(*)	

		(ii) 8000	
(f)	**Q.**	Given below is the 'Emp' table: **SET AUTOCOMMIT = 0;** **INSERT INTO Emp VALUES(5,'Farzia'); COMMIT;** **UPDATE Emp SET NAME ='Farzziya' WHERE Eno= 5; SAVEPOINT A;** **INSERT INTO Emp VALUES(6,'Richard'); SAVEPOINT B;** **INSERT INTO Emp VALUES(7,'Rajyalakshmi'); SAVEPOINT C;** **ROLLBACK TO B;** What will be the output of the following SQL query now: **SELECT * FROM Emp;**	**2**

ENO	NAME
1	Anita Khanna
2	Bishmeet Singh

	A.		

ENO	NAME
1	Anita Khanna
2	Bishmeet Singh
5	Farzziya
6	Richard

(g)	**Q.**	Consider the table below. Table: Company	**2**

EMPID	DEPARTMENT	SALARY
E101	PERSONNEL	60000
E102	ACCOUNTS	65000
E103	MARKETING	40000
E104	PERSONNEL	62000
E105	PERSONNEL	50000
E106	MARKETING	35000

		Identify error(s) in the following SQL statement. Rewrite the correct SQL statement. **SELECT Department, Salary FROM Company** **GROUP BY Department;**	
	A.	Some aggregate function like **AVG(),SUM(), MAX(), MIN()** etc. should be mentioned with **SELECT command** . **SELECT DEPARTMENT, AVG(SALARY) FROM COMPANY** **GROUP BY DEPARTMENT; OR** Instead of **GROUP BY, ORDER BY**may be used.	
		Year - 2017	**M**
(a)	**Q.**	How is a database related to a table ?	**1**
	A.	Database contains related tables and tables contain records.	

<table>
<tr><td>(b)</td><td>Q.</td><td>Ariya wants to add another column ‘Gender’ in the already existing table ‘CUSTOMERS’. She has written the following statement. However, it has errors. Rewrite the correct statement.
MODIFY TABLE CUSTOMERS GENDER char(1);</td><td>1</td></tr>
<tr><td></td><td>A.</td><td>ALTER TABLE CUSTOMERS ADD GENDER CHAR(1);
OR
ALTER TABLE CUSTOMERS ADD COLUMN GENDER CHAR(1);</td><td></td></tr>
<tr><td>(c)</td><td>Q.</td><td>In a hospital, the patients are allocated to wards. A database named ‘Hospital’ is created. One table in this database is: WARD with WardId, WardName, NumOfBeds as columns and WardId as the primary key.
Write another suitable table you could expect to see in the ‘Hospital’ database, with 3 suitable columns identifying Primary key and Foreign key in the table that you expect.</td><td>2</td></tr>
<tr><td></td><td>A.</td><td>Table - Patient
Columns - PatientId, PatientName, WardId
Patient Id - Primary Key and WardId - Foreign Key
(You can also mention other appropriate table with suitable columns)</td><td></td></tr>
<tr><td>(d)</td><td>Q.</td><td>Explain the following statement with the help of example:
“In a transaction either all the SQL statements be committed or all rolled back.”</td><td>2</td></tr>
<tr><td></td><td>A.</td><td>This statement refers the property of database transaction.
A transaction is a logical unit of work which must be executed entirely to maintain the consistency of the database i.e. no partial execution of a transaction is allowed.
Any MySQL code example showing DML commands, COMMIT, ROLLBACK, AUTOCOMMIT can be given as a transaction.</td><td></td></tr>
<tr><td>(e)</td><td>Q.</td><td>Given below is the ‘Department’ table:
<table><tr><th>DEPCODE</th><th>DEPNAME</th></tr><tr><td>101</td><td>ADMIN</td></tr><tr><td>102</td><td>RECEPTION</td></tr><tr><td>103</td><td>PERSONNEL</td></tr></table>SET AUTOCOMMIT = 0;
UPDATE DEPARTMENT SET DEPNAME = ‘OFFICE’ WHERE DEPNAME = ‘ADMIN’;
INSERT INTO DEPARTMENT VALUES (104, ’HRD’);
UPDATE DEPARTMENT SET DEPNAME = ‘FRONT OFFICE’
WHERE DEPNAME = ‘RECEPTION’;
COMMIT;
DELETE FROM DEPARTMENT WHERE DEPNAME = ‘FRONT OFFICE’;
ROLLBACK;
SELECT * FROM DEPARTMENT;
What will be the output of the above given SELECT statement?</td><td>2</td></tr>
</table>

	A.	<table><tr><th>DEPCODE</th><th>DEPNAME</th></tr><tr><td>101</td><td>OFFICE</td></tr><tr><td>102</td><td>FRONT OFFICE</td></tr><tr><td>103</td><td>PERSONNEL</td></tr><tr><td>104</td><td>HRD</td></tr></table>	
(f)	**Q.**	How is HAVING clause similar to WHERE clause? How is HAVING clause different from WHEREclause? Explain with the help of examples of each.	**2**
	A.	Similarity: Both HAVING and WHERE clause are used for checking condition(s). Difference: WHEREclause is used for simple condition(s). HAVINGclause is used for conditions with group of values. e.g. WHERE clause: SELECT * FROM EMP WHERE DEPT = “PHYSICS “ ; HAVING clause : SELECT SUM(SALARY), DEPT FROM EMP GROUP BY DEPT HAVING COUNT(*) > 3;	

QUESTION NO. 4 (15 MARKS)

Year - 2011			M

(a)	**Q.**	What will be displaced in of jTextField1 after executing the following code?
		int m=16;
		m=m+1;
		if(m<15)
		jTextField1.setText(Integer.toString(m));
		else
		jTextField1.setText(Integer.toString(m+15));
			2

	A.	32	

(b)	**Q.**	Rewrite the following program code using a Switch statement.
		if(code==1)
		Month="January";
		else if(code==2)
		Month="February";
		else if(code==3)
		Month="March";
		else if(code==4)
		Month="April";
		else
		Month="No Match";
			2

	A.	switch(code) { case 1: Month="January"; break; case 2: Month="February"; break; case 3: Month="March"; break; case 4: Month="April"; break; default: Month="No Match"; }	
(c)	**Q.**	What will be displayed in jTextArea1 after executing the following statement: **jTextArea1.setText("cbse\n Final_Exam\t IP");**	**1**
	A.	Cbse Final_Exam IP	
(d)	**Q.**	The following code has some error(s). Rewrite the correct code underlining all the correction made: Int K=2; sum=0; //Declaring K and sum as Integer	**2**

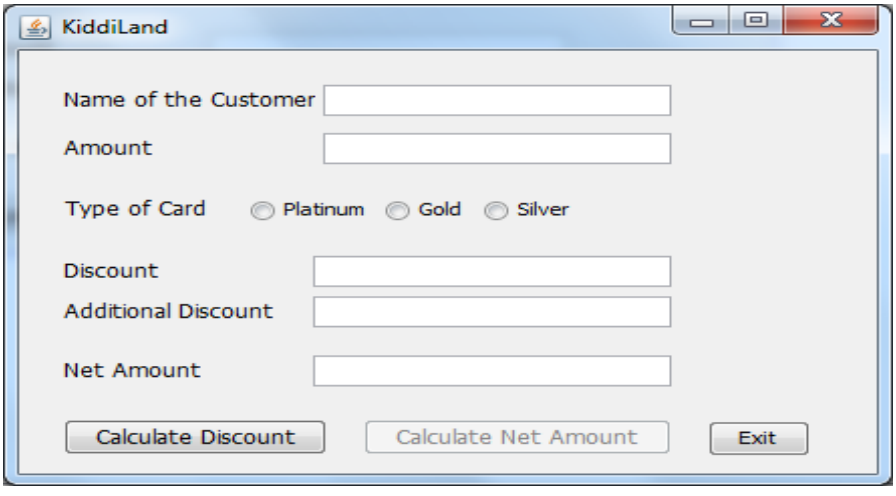
		do {
		sum=K;
		K+=2;
		} while (K=<20)
		jTextField1(Integer.toString(sum));	

	A.	int K=2 , sum=0;
		do {
		sum= K;
		K + = 2 ;
		} while (K<= 20);
		jTextField1.setText(Integer.toString(sum)) ;	

(e)	**Q.**	Given a string object namely 'subject', having value as "123" stored in it. What will be result of the following: JOptionpane.showMessageDialoge(null,""+(subject.length()+Integer.parseInt(subject)));	**1**
	A.	126	

(f)	**Q.**	The following code has some error(s). Rewrite the correct code underlining all the correction made:
		int Sum=0, Step=5;
		Int I;
		for(i=0, i=<5; i++)
		{ Step += 5;
		Sum += Step;
		}
		jTextArea1.showText(""+Sum);
			2

	A.	int Sum = 0, Step = 5;
		int I;
		for (i=0 ; i <= 5 ; i++)
		{ Step += 5;
		Sum += Step;
		}
		jTextArea1.setText ("" + Sum);	

(g)	**Q.**	Mr. Radhey Shyam Bansal the owner of the Kiddi Land Enterprise has asked his programmer Ekta to devlop the following GUI in Netbeans.  	**5**

Mr. Bansal accepts payment through three types of credit cards. The discount is given according to the following scheme:

Type of Card	Discount
Platinum	20% of Amount
Gold	15% of Amount
Silver	10% of Amount

If the bill amount is more than Rs. 25,000/- then the customer gets an additional offer of 5%. Write java code for the following:

(i) To assign Additional Discount as 0 and Net amount as 0. Also set them as un-editable. **(1)**

(ii) To calculate discount as per the given criteria and display the same in jTextField3 To assign Additional Discount (jTextField4) as 5% of amount (jTextField2) as per the above condition. Also enable "Calculate Net Amount" button, when 'Calculate Discount' button is clicked. **(2)**

(iii) To calculate net amount as Bill Amount- (Discount+Additional Discount) and display the net amount in corresponding TextField, when "Calculate Net Amount" button is clicked. **(2)**

A.

(i)
```
jTextField4.setText("0");
jTextField5.setText("0");
jTextField4.setEditable(false);
jTextField5. setEditable(false);
```

(ii)
```
double discount = 0.0 ;
double billAmount=Double.parseDouble(jTextField2.getText());
if(jRadioButton1.isSelected())
        discount = 0.20;
if(jRadioButton2.isSelected())
       discount = 0.15;
if (jRadioButton3.isSelected())
      discount = 0 .10;
jTextField3.setText(""+(billAmount * discount)) ;
 if (billAmount > 25000)
    jTextField4.setText (""+ (billAmount*0.05));
jButton2.setEnabled(true) ;
```

(iii)
```
doube netAmount = Double.parseDouble(jTextField2.getText()) –
(Double.parseDouble(jTextField3.getText())
+Double.parseDouble(jTextField4.getText()));
jTextField5.setText(""+ netAmount );
```

Year - 2012

M

(a) **Q.** What message will be displayed after the execution of the following code? **2**

```
 int  Age=64, Relaxation=4;
int ModiAge=Age – Relaxation;
if (ModiAge<60)
      jOptionPane.showMessageDialog(Null,"NOT Eligible");
else
     jOptionPane.showMessageDialog(Null,"Eligible");
```

	A.	Eligible	

(b)	**Q.**	Rewrite the following program code using a If statement.
		int c = jComboBox1.getSelectedIndex() ;
		switch(c)
		{ case 0 : Amount = Bill; break;
		case 1 : Amount=0.9*Bill; break;
		case 2 : Amount=0.8*Bill; break;
		default : Amount=Bill;
		}
			2

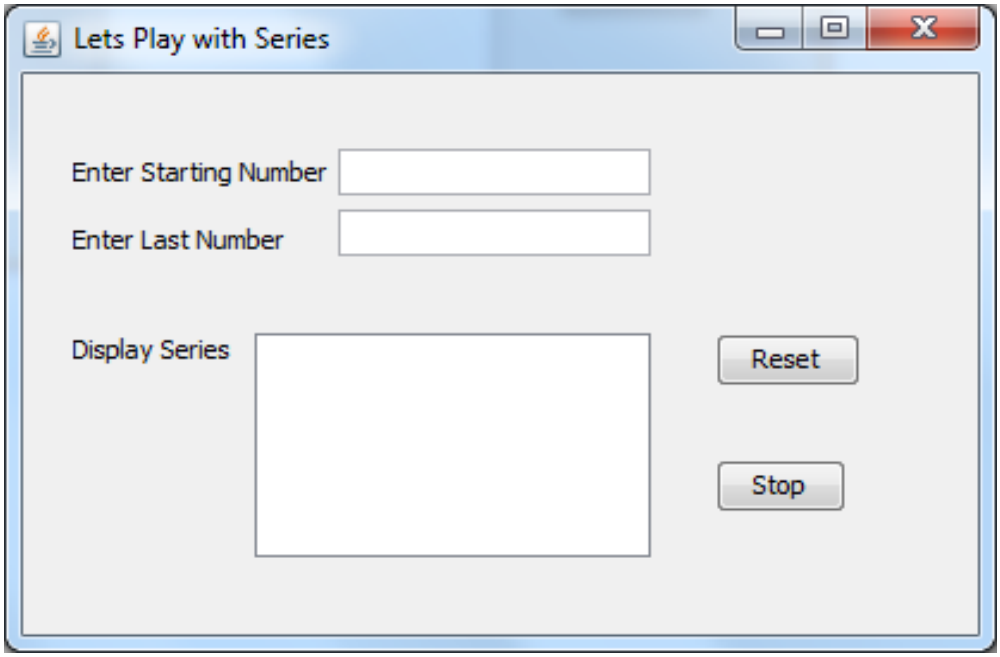
	A.	int c=jComboBox1.getSelectedIndex();
		if(c==0)
		Amount=Bill;
		else if(c==1)
		Amount=0.9*Bill;
		else if(c==2)
		Amount=0.8*Bill;
		else
		Amount=Bill;	

(c)	**Q.**	How many times does the following while loop get executed?
		int K=5;
		int L=36;
		while(K<=L)
		{
		K+=6;
		}
			1

	A.	6	
(d)	**Q.**	What will be displayed in jTextArea1 after executing the following statement? jTextArea1,setText("GREAT\n COUNTRY\tINDIA");	1
	A.	GREAT COUNTRY INDIA Note: You may also mention error because (.) to be used in place of (,) with setText(). jTextArea1,setText("GREAT\n COUNTRY\tINDIA");	

(e)	**Q.**	What will be the values of variables 'm' and 'n' after the execution of the following code?
		int P,Q = 0;
		for(P=1; P<=4; P++)
		{
		Q += P;
		Q - -;
		}
			2

	A.	Note: This will produce error and no output will be obtained since variable m and n is not defined and used. if we consider the 'P' and 'Q' in place of 'm' and 'n' then output will be P = 5 Q = 6 You may also mention Error in Question /No output.	

(f)	**Q.**	Given a string object named Pay having value as “68000” stored in it. Obtain the output of the following: JOptionPane.showMessageDialog(null, ” “+Salary.length()+Integer.parseInt(Salary));	2
	A.	568000	
g)	**Q.**	Janav Raj is a programmer at Path Educo Enterprises. He created the following GUI in NetBeans. Help him to write code for the following:  (i) To display series of odd or even number (depending on Starting Number-jTextField1 is even or odd) in the jTextArea on the click of command button [Display The Series]. For example: If the Start Number is 5 and Last Number is 11 Text Area Content will be 5 7 9 11 If the Start Number is 2 and Last Number is 10 Text Area Content will be 2 4 6 8 10 (ii) To clear both the text fields and text area, on clicking [Reset] button. (iii) To terminate the application on the click of [stop] button. (Assume suitable names for the various controls on the Form)	

	A.	**(i)**
		int num1=Integer.parseInt(jTextField1.getText());
		int num2=Integer.parseInt(jTextField2.getText());
		while (num1<=num2)
		{ jTextArea1.append(“”+num1 +" ");
		num1=num1+2;
		}
		(ii)
		jTextField1.setText(“”);
		jTextField2.setText(“”);
		jTextArea1.setText(“”);	

		(iii) System.exit(0);	
Year - 2013			**M**
(a)	**Q.**	What will be the context of jTextArea1 and jTextField1 after the execution of the following statements? (i) jTextArea1.setText("Just\tAnother\nDay"); (ii) string Subject="Informatics Practices"; jTextField1.setText((Subject.length()+10)+" ");	**2**
	A.	(i) Just Another Day (ii) 31	

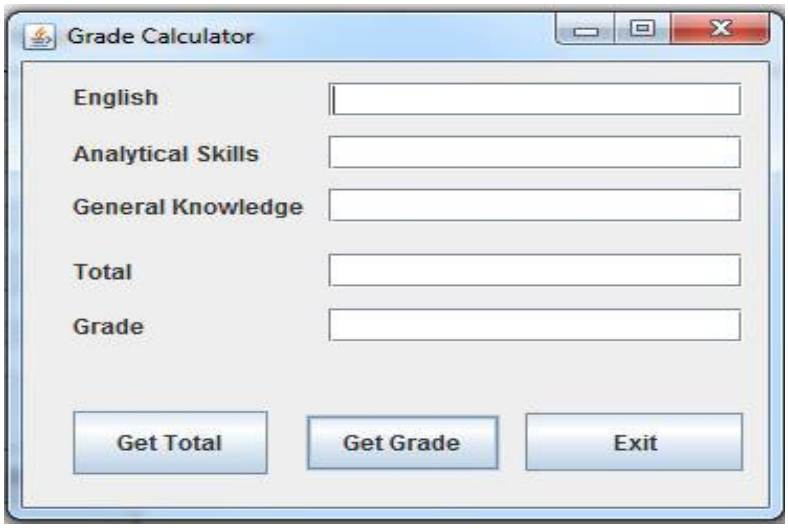
(b)	**Q.**	Rewrite the following program code using a if statement.
		String Remarks;
		int Code=Integer.parseInt(jTextField1.getText());
		switch(Code)
		{ case 0 : Remarks="100% Tax Exemption";
		break;
		case 1 : Remarks="50% Tax Exemption";
		break;
		case 2 : Remarks="3% Tax Exemption";
		break;
		default: Remarks="! Invalid Entry";
		}
			2

	A.	String Remarks;
		int Code=Integer.parseInt(jTextField1.getText());
		if(Code ==0)
		Remarks="100% Tax Exemption";
		else if(Code ==1)
		Remarks="50% Tax Exemption";
		else if(Code ==2)
		Remarks="30% Tax Exemption";
		else
		Remarks="! Invalid Entry";	

(c)	**Q.**	Observe the following code carefully and find which statement will never get executed in the code?
		int t=1; //Statement 1
		do //Statement 2
		{ //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
			1

	A.	Statement 5	
(d)	**Q.**	Write a java statement to make the **jTextField1** non-editable.	**1**
	A.	jTextField1.setEditable(false);	

(e)	**Q.**	What will be the displayed in jTextField1 and jTextField2 after the execution of the following code?
		int Last,First=3,Second=5;
		Last=First + Second++;
		jTextField1.setText(Integer.toString(Last));
		jTextField2.setText(Integer.toString(Second));
			2

	A.	jTextField1 – 8 jTextField2 – 6	
(f)	**Q.**	What will be the contents of Str1 and Str2 after the following code is executed? String Str2,Str1; Str1="Dear Friend"; Str2="Hello"; Str1=Str2.concat(Str1);	**2**
	A.	Str1 - HelloDear Friend Str2 - Hello	
(g)	**Q.**	Aditya is a programmer at Edudel enterprises. He created the following GUI in NetBeans.  Help him to write code in java for the following: (i) To calculate Total marks obtained and display in jTextField4 on the click of command button "Get Total". **(2)** (ii) To calculate Grade obtained and display in jTextField5 on the click of command button "Get Grade". Criteria for Grade calculation is given below: **(2)** **Marks** / **Grade** Above 80 / A Above 65 and <=55 / B Above 50 and <=65 / C <=50 / D (iii) To stop execution and exit from the application on the click of command button "Exit". **(1)**	**5**

	A.	(i) private void jButton1ActionPerformed(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());
		if(t>=80)
		jTextField5.setText("A");
		else if(t>65 && t<=55)
		jTextField5.setText("B");
		else if(t>50 && t<=65)
		jTextField5.setText("C");
		else if(t<=50)
		jTextField5.setText("D");
		}
		(iii) System.exit(0);	

Year - 2014			**M**
(a)	**Q.**	Define Object Oriented Programming.	**2**
	A.	Object –Oriented programming (OOP) is a programming paradigm that lays emphasis on data. It represents instance of a class as objects. It has data members and associated methods.	

(b)	**Q.**	Rewrite the following Java code using switch case statement:
		Int option=Integer.parseInt (JTextField1.getText ());
		If (option ==1)
		JTextField2.setText (“Regular Employee”);
		else if (option ==2)
		JTextField2.setText (“On Probation”);
		else if (option ==3)
		JTextField2.setText(“Visiting Faculty ”);
		else if (option == 4)
		JTextField2.setText (“On Contract ”);
		else
		JTextField2.setText (“Invalid option”);
			2

	A.	Int option=Integer.parseInt (JTextField1.getText ()); Switch (option) { Case 1: JTextField2.setText (“Regular Employee”); break; Case 2: JTextField2.setText (“On Probation”); break; Case3: JTextField2.setText(“Visiting Faculty ”);	

		break; Case 4: JTextField2.setText (“On Contract ”); break; Default : JTextField2.setText (“Invalid option”); }	
(c)	**Q.**	What will be the value of X1 after executing of the following code: String X1= “Spread” , X2= “PEACE”; X1= X2.concat (X1);	**1**
	A.	PEACESpread	
(d)	**Q.**	Write Jave statement to make a jTextField1 disabled.	**1**
	A.	jTextField1.setEnabled (false);	

(e)	**Q.**	What will be displayed in jTextArea1 after the execution of the following code:
		int G=1;
		do {
		jTextArea1.setText(Integer.toString(G++));
		G=G+1;
		} While (G<=5);
			2

	A.	5	

(f)	**Q.**	Give the output of the following Java code:
		String name= “Chennai Express”;
		int TM= name.length(), TN;
		TN= 80-TM;
		jTextField2.setText(Integer.toString(TM));
		jTextField3.setText(Integer.toString(TN));
			2

	A.	JTextField2=15 JTextField3=65	
(g)	**Q.**	Mr. Rangaswami works at a Recreation Park as a system analyst. He has created the following GUI. When a group arrives at the Recreation Park, the number of people in the group and whether the group wants to enjoy the Water Park or not is entered. Entry fee is Rs. 500 per person. The person can choose to play at Water park by selecting the checkbox. Rides of Water Park will cost Rs. 250 extra per person. 	**5**

Help him to write code for the following:

(i) On the click of 'Calculate' button, textfield for 'Entry Fees' should display Entry Fees per person x number of people.
If 'Water Park' check box is selected, textfield for 'Water Park charges' should display Water Park Charges per Person x Number of People. textField for 'total Amount' should display sum of Entry Fees and Water Park charges for all the people in the group. (3)

(ii) Write java code to clear all Textboxes on the click of 'Clear' Button. (1)

(iii) Write java Code to close the application on the click of 'Exit' Button. (1)

A.

(i)
```
int wfee=0;
int tfee=0;
int nop=Integer.parseInt(JTextField1.getText());
int efee=nop*500;
if(JCheckBox1.isSelected())
    wfee=nop*250;
 tfee=efee+wfee;
jTextField2.setText("" +efee);
jTextField3.setText("" +wfee);
jTextField4.setText("" +tfee);
```

(ii)
```
JTextField1.setText("" );
JTextField2.setText("" );
JTextField3.setText("" );
JTextField4.setText("" );
```

(iii)
```
System.exit(0);
```

Year - 2015

M

(a) **Q.** The following code has some error(s). Rewrite the correct code underlining all the corrections made. **2**

```
int marks, temperature;
marks = jTextField1.getText());
temperature = Integer.parseInt(jTextField2.getText());
if (marks<80) and (temperature>=40)
{
 System.out.println("Not Good");
}
else;
{
System.out.println("OK");
}
```

A.

```
int marks, temperature;
marks = Integer.parseInt (jTextField1.getText());
temperature = Integer.parseInt(jTextField2.getText());
if ((marks<80) && (temperature>=40))
{
  System.out.println("Not Good");
}
else
```

		{
		System.out.println("OK");
		}	

(b)	**Q.**	How many times will the following WHILE loop execute?
		int y = 7, sum = 0;
		while (y<=15)
		{
		sum = sum +y;
		y=y+2;
		}
			2

	A.	5 Times	

(c)	**Q.**	Rewrite the following program code using IF ELSE IF instead of SWITCH statement:
		String tour;
		int c1 = Integer.parseInt(jTextField1.getText());
		switch (c1)
		{
		case 8 : tour = "\n You are going to camp Ramgarh";
		break;
		case 9 : tour = "\n You are going to Manali, Rohtang Pass";
		break;
		case 10: tour = "\n You are going to Chail";
		break;
		default : tour = " No School tour for you this time";
		}
			2

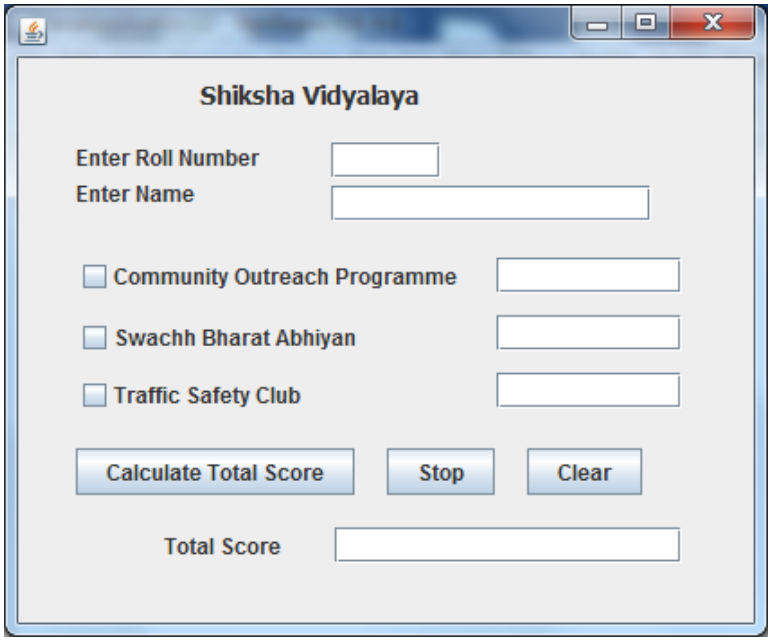
	A.	int c1 = Integer.parseInt(jTextField1.getText());
		if(c1==8)
		tour = "\n You are going to camp Ramgarh";
		else if (c1==9)
		tour = "\n You are going to Manali, Rohtang Pass";
		else if(c1==10)
		tour = "\n You are going to Chail";
		else
		tour = " No School tour for you this time";
		}	

(d)	**Q.**	Write the values of sum and x after executing of the following code:
		int sum , x;
		sum =7;
		x= 5;
		sum=sum+(x++);
			2

	A.	sum=12 and x=6	

(e)	**Q.**	What will be the contents of jTextField1 and jTextField2 after executing the following code
		String s= "Best";
		jTextField1.setText(s.length()+ "");
		jTextField2.setText(s.toUpperCase());
			2

	A.	4 BEST	
(f)	**Q.**	The students of "Shiksha Vidyalaya" work for different extracurricular activities like 'community Outreach Program', 'Swachh Bharat Abhiyan' and 'Traffic Safety Club'. The Programmer at the school has developed a GUI application as shown below:	**5**



- A student can participate in more than activities.
- Each student gets 10 points for each activity- namely Community Outreach Programme, Swachh Bharat ABhiyan and Traffic Safety Club.

Help the programmer to write code for the following: **(3+1+1)**

(i) When 'Calculate Total Score' button is clicked, the points for each activity (that is selected) should be displayed in the text field in from of that activity's checkbox and the Total score should be displayed in the appropriate Text field.

(ii) When Clear button is clicked, all the Textfields and Checkboxes should be cleared.

(iii) When Stop button is clicked, the application should close.

A.

(i)

```
Private void jButton1ActionPerformed(..)
{ int score=0;
  if(jCheckBox1.isSelected())
   { jTextField3.setText("" + 10);
     score=score+10;
   }
  if(jCheckBox2.isSelected())
   { jTextField4.setText("" + 10);
     score=score+10;
   }
  if(jCheckBox3.isSelected())
   { jTextField5.setText("" + 10);
     score=score+10;
   }
   jTextField6.setText(""+score);
}
```

(ii)

```
Private void jButton2ActionPerformed(..)
{ jTextField1.setText("");
  jTextField2.setText("");
  jTextField3.setText("");
  jTextField4.setText("");
```

```
  jTextField5.setText("");
  jTextField6.setText("");
  jCheckBox1.setSelected(false);
  jCheckBox2.setSelected(false);
  jCheckBox3.setSelected(false);
}
```

(iii)

```
Private void jButton3ActionPerformed(..)
{ System.exit(0);
}
```

		Year - 2016	**M**
(a)	**Q.**	Identify programming languages out of the following: HTML,C++, JAVA, MySQL	**1**
	A.	C++, Java	
(b)	**Q.**	Write Java statement to extract selected item from a given listbox named "jList1."	**1**
	A.	String X = (String) jList1.getSelectedValue(); OR String X= jList1.getSelectedValue().toString();	

(c)	**Q.**	What will be displayed in jTextField1 and jTextField2 after the following code is executed:
		int t; int x;
		x = 12;
		t = (3*x++)/3;
		jTextField1.setText(""+t);
		jTextField2.setText(""+x);
			1

	A.	jTextField1 = 12 jTextField2 = 13	

(d)	**Q.**	Write the output that will be displayed in the textfields by the following Java code:
		String x;
		String stream="Commerce"; jTextField1.setText((stream.length()+9)+"");
		x = stream.concat("Humanities");
		jTextField2.setText(x);
		jTextField3.setText(" "+ x.substring(2,5));
		jTextField4.setText(stream.toLowerCase());
			2

	A.	jTextField1 : 17 jTextField2 : CommerceHumanities jTextField3 : mme jTextField4 : commerce	

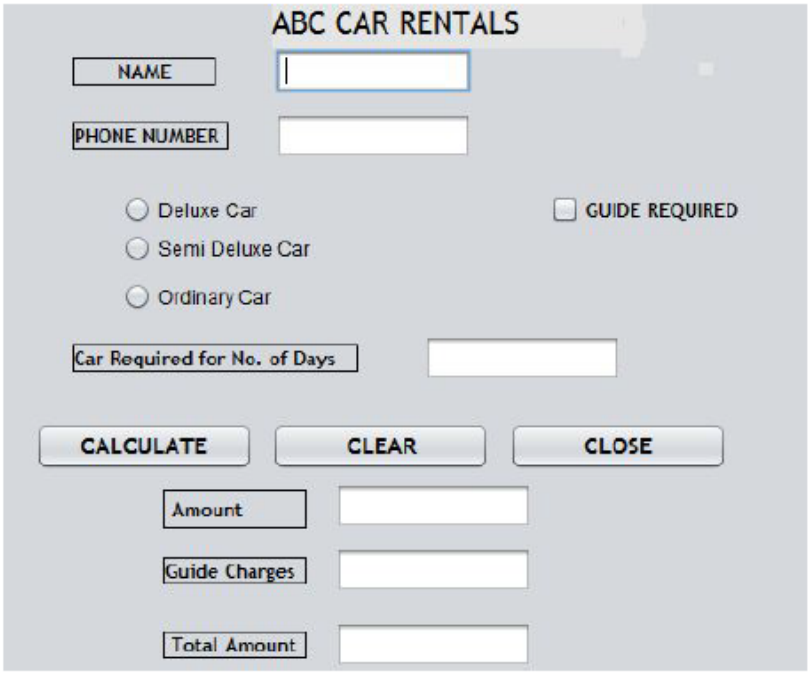
(e)	**Q.**	Write the value that will be stored in variable sum after execution of following code:
		int sum = 0, m=4;
		for(int i=9; i >= 6; i--)
		{ if(i%3==0)
		sum = sum + i;
			2

		else
		sum = sum - i;
		}	

	A.	sum = 0	

(f)	**Q.**	The following code has error(s). Rewrite the correct code underlining all the corrections made :
		int a = 0; int b = 15;
		do ;
		a= a+3;
		b = b-3;
		while a <= b ;
			2

	A.	int a = 0; int b = 15;
		do
		{
		a= a+3;
		b = b-3;
		}
		while (a <= b);	

(g)	**Q.**	Ms. Sharma works as a programmer in "ABC Car Rental Company" where she has designed a software to compute charges to be paid by the client. A screenshot of the same is shown below: A client can take any car out of Deluxe/ SemiDeluxe/ Ordinary for rent. A client can also opt for services of a guide. Charges vary depending on the type of car opted. Charges of services of Guide are extra.  Help Ms. Sharma in writing the code to do the following:	**6**

(i) After selecting appropriate Radio Button and checkbox (if required), when 'CALCULATE' button is clicked, Amount, Guide Charges and Total Amount should be calculated and displayed in the respective text fields **(2)**

Category of Car	Amount(in Rs.)
Deluxe Car	1000 per day
Semi Deluxe Car	800 per day
Ordinary Car	700 per day

Amount is obtained by multiplying per day charges of Car with number of days for which the car is taken.

If 'Guide Required' checkbox is selected, Guide charges per day are Rs.500.00.

Guide Charges is calculated as : Car required for No. of days * 500;

Total Amount = Amount + Guide Charges **(2)**

(ii) When 'CLEAR' button is clicked, all textfields and checkboxes should be cleared. **(1)**

(iii) When 'CLOSE' button is clicked, the application should close. **(1)**

A. **(i)**

```
// Calculation of Amount
  if (jRadioButton1.isSelected())
      jTextField3.setText("" + 1000* Integer.parseInt(jTextField2.getText()));
  if (jRadioButton2.isSelected())
      jTextField3.setText("" + 800*Integer.parseInt(jTextField2.getText()));
  if (jRadioButton3.isSelected())
      jTextField3.setText("" + 700* Integer.parseInt(jTextField2.getText()));
//Calculation of Guide Charges
  If (jCheckBox1.isSelected())
     jTextField4.setText("" + 500* Integer.parseInt(jTextField2.getText()));
//Total Amount
    jTextField5.setText(""+  (Integer.parseInt(jTextField3.getText())+
    Integer.parseInt(jTextField4.getText())));
```

(ii)

```
jTextField1.setText("");
jTextField2.setText("");
jTextField3.setText("");
jTextField4.setText("");
jTextField5.setText("");
jTextField6.setText("");
jCheckBox1.setSelected(false);
```

(iii)

```
System.exit(0);
```

Year - 2017

M

(a) **Q.** Write the values of r and s after execution of following code: **1**

```
int p = 11;
int q = 21;
```

		int r; int s;
		r = ++q;
		s = p++;
		r++;	

	A.	r = 23 s = 11	

(b)	**Q.**	What will be displayed in jTextField1 and jTextField2 after the following code is executed:
		int ndigits = 0;
		int N = 35;
		while (N > 12)
		{ ndigits = ndigits + 1;
		N = N-10;
		}
		jTextField1.setText(""+ndigits);
		jTextField2.setText(""+N);
			2

	A.	jTextField1 will display 3 jTextField2 will display 5	

(c)	**Q.**	Write the value of C after executing the following code:
		int P;
		int R = 8;
		int oddNum;
		int C = 0;
		for (P = 1; P < R; P=P+3)
		{ oddNum = P %2;
		if (oddNum == 1)
		{ C= C+1;
		}
		}
			2

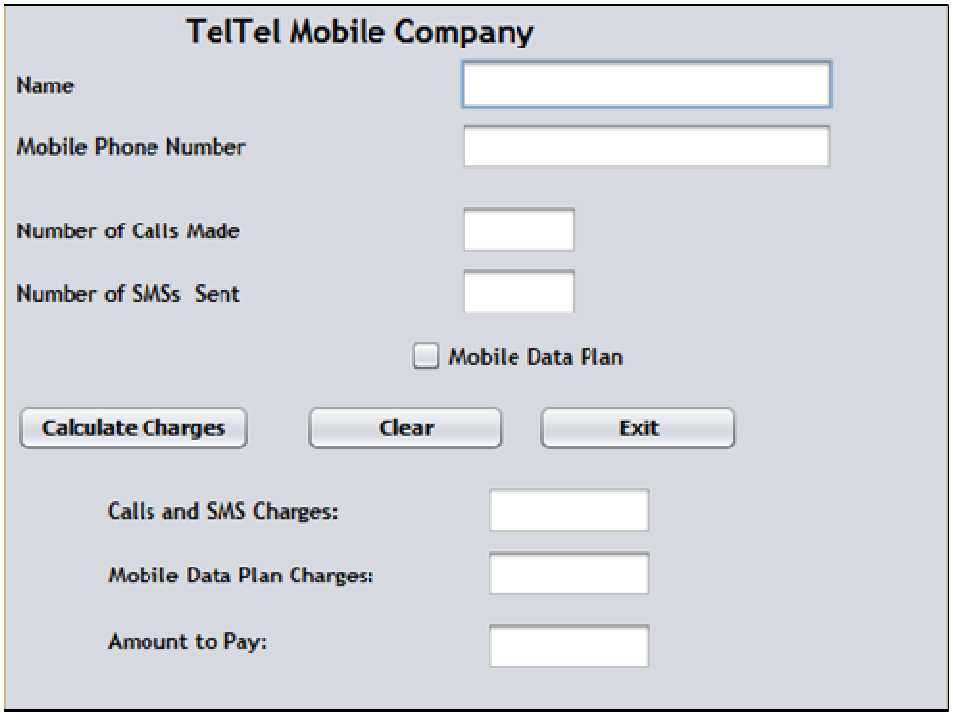
	A.	2	

(d)	**Q.**	Write the value that will be stored in variable **t** after the execution of the following code . How many times will the loop execute?
		int sum = 0;
		int score = 0;
		double t;
		do
		{ score = score +1;
		sum = sum + score;
		}
		while (score <=3);
		t = sum / 3;
			2

	A.	Value of t will be 3.0 Loop executes 4 times	

(e)	**Q.**	The following code has error(s). Rewrite the correct code underlining all the corrections made :
		int j;
		int i = 15;
		int flag = 1;
		while(j = 2 j < I ; j++)
		{
		  if(i % j = 0)
		  {
		  flag == 0;
		  break;
		  }
		}
			2

	A.	Corrected code :
		int j;
		int i = 15;
		int flag = 1;
		for (j = 2 ; j < i ; j++)
		{
		  if (i % j = = 0)
		  {
		  flag = 0;
		  break ;
		  }
		}	

(f)	**Q.**	Ms. Fauzia works as a programmer in "TelTel Mobile Company" where she has designed a software to compute charges to be paid by the mobile phone user. A screenshot of the same is shown below:  	**6**

Each Call is charged at Rs.1.00 . Each SMS is charged at Rs. 0.50.

Users can also opt for Mobile Data Plan. Charges for Mobile Data Plan are flat Rs.50.00.

Help Ms. Fauzia in writing the code to do the following:

(i) When the 'Calculate Charges' button is clicked, 'Calls and SMS Charges', 'Mobile Data Plan Charges' and 'Amount to Pay' should be calculated and displayed in the respective text fields. (4)

'Amount to Pay' is calculated as:

Calls and SMS Charges + Mobile Data Plan Charges(if any)

(ii) When 'Clear' button is clicked, all the textfields and checkbox should be cleared. (1)

(iii) When the 'Exit' button is clicked, the application should close. (1)

A.

(i)

```
int Calls, Sms;
double Total,dataAmt = 0, grandTot, callsChg ,smsChg;
Calls=Integer.parseInt(jTextField3.getText());
Sms=Integer.parseInt(jTextField4.getText());
callsChg = Calls * 1.00 ;
smsChg = Sms * 0.5 ;
Total=callsChg+smsChg;      //Total=(Calls*1.00)+(Sms*0.5);
if(jCheckBox1.isSelected())
    dataAmt = 50.00;
grandTot = Total + dataAmt;
jTextField5.setText(""+Total);
jTextField6.setText(""+dataAmt);
jTextField7.setText(""+grandTot);
```

(ii)

```
jTextField1.setText("");
jTextField2.setText("");
jTextField3.setText("");
jTextField4.setText("");
 jTextField5.setText("");
jTextField6.setText("");
jTextField7.setText("");
jCheckBox1.setSelected(false);
```

(iii)

```
System.exit(0);
```

QUESTION NO. 5 (10 MARKS)

Year - 2011

(a) Q. What is the purpose of ALTR TABLE command in MySql? How is it different from UPDATE command? **2**

A. ALTER TABLE command is used to modify the structure of a table.

ALTER TABLE	UPDATE
✓ It is a DDL command.	✓ It is a DML command
✓ Changes the underlying table	✓ Changes values of tuples in a
✓ Cannot be rolled back	✓ Can be rolled back

(b) Q. Table employee has 4 records and Table Dept has 3 records in it. Mr. Jain wants to display all information stored in both of these related tables. He forgot to specify equi-join condition in the query. How many rows will get displayed on execution of this query? **1**

A. 12

(c) Q. Consider the table EXAM given below. Write commands in MySql for(i) to (iv) and output for (v) to (vii) **7**

Table: EXAM

No	Name	Stipend	Subject	Average	Division
1	Karan	400	English	68	FIRST
2	Aman	680	Mathematics	72	FIRST
3	Javed	500	Accounts	67	FIRST
4	Bishakh	200	Informatics	55	SECOND
5	Sugandha	400	History	35	THIRD
6	Suparna	550	Geography	45	THIRD

(i) To list the names of those students, who have obtained Division as FIRST in the ascending order of NAME.

(ii) To display a report listing NAME, SUBJECT and Annual stipend received assuming that the stipend column has monthly stipend.

(iii) To count the number of students, who have either accounts or informatics as subject.

(iv) To insert a new row in the table EXAM: 6,"Mohan",500,"English",73,"Second"

(v) SELECT AVG(Stipend) FROM EXAM WHERE DIVISION="THIRD"

(vi) SELECT COUNT(DISTINCT Subject) FROM EXAM;

(vii) SELECT MIN(Average) FROM EXAM WHERE Subject="English";

A.

(i) SELECT Name FROM Exam WHERE Division = 'FIRST' ORDER BY Name;

(ii) SELECT NAME, SUBJECT, STIPEND * 12 AS "Annual Stipend" FROM EXAM;

(iii) SELECT COUNT(*) FROM EXAM WHERE SUBJECT IN ('Accounts', 'Informatics') ;

(iv) INSERT INTO EXAM VALUES (6, "Mohan", 500, "English", 73, "SECOND");

(v) 475

(vi) 6

(vii) 68

Year - 2012

M

(a) **Q.** What is the purpose of ORDER BY clause in MySql? How is it different from GROUP BY clause? **2**

A. Order by clause is used to sort the query result on a particular field in either ascending order or descending order.

Difference:

ORDER BY is used to sort the result in specified columns name whereas GROUP BY is used to group query result based on specified group attribute(s).

(b) **Q.** Table SCHOOL has 4 rows and 5 columns. What is the Cardinality and Degree of this table? **1**

A. Cardinality = 4 and Degree = 5

(c) **Q.** Consider the Table SHOPPE given below. Write command in MySql for (i) to (iv) and output for (v) to (vii) **7**

Table SHOPPE:

Code	Item	Company	Qty	City	Price
102	Biscuit	Hide & Seek	100	Delhi	10.00
103	Jam	Kissan	110	Kolkata	25.00
101	Coffee	Nestle	200	Kolkata	55.00
106	Sauce	Maggi	56	Mumbai	55.00
107	Cake	Britannia	72	Delhi	10.00
104	Maggi	Nestle	150	Mumbai	10.00
105	Chocolate	Cadbury	170	Delhi	25.00

(i) To display names of the items whose name starts with 'C' in ascending order of Price.

(ii) To display code, Item name and City of the products whose quantity is less than 100.

(iii) To count distinct Company from the table.

(iv) To insert a new row in the table Shoppe
'110','Pizza','Papa Jones', 120, "Kolkata", 50.0

(v) Select Item from Shoppe where Item IN ("Jam","Coffee");

(vi) Select Count(distinct(City)) from Shoppe;

(vii) Select MIN(Qty) from Shoppe where City="Mumbai";

A.

(i) SELECT Item FROM SHOPPE WHERE Item LIKE 'c%' ORDER BY Price;

(ii) SELECT Code,Item,City FROM SHOPPE WHERE Qty < 100;

(iii) SELECT COUNT (DISTINCT(Company)) FROM SHOPPE;

(iv) INSERT INTO SHOPPE VALUES (110,'Pizza' ,'Papa Jones',120,'kolkata' ,50.0);

(v) **Item**

Jam

Cofee

(vi) **Count(distinct(city))**

3

(vii) **Min(Qty)**

56

Year - 2013

M

(a) **Q.** What is the use of COMMIT statement in SQL? How is it different from ROLLBACK statement? **2**

A. The COMMIT statement is used to save all changes made to the database while ROLLBACK statement is used to UNDO changes made to the database.

(b) **Q.** Mr. James created a table **CLIENT** with 2 rows and 4 columns. He added 2 more rows to it and deleted one column. What is the Cardinality and Degree of the Table **CLIENT**? **1**

A. **Cardinality** – 4 and **Degree** – 3

(c) **Q.** Consider the following table **FITNESS** with details about fitness products being sold in the store. Write command of SQL for (i) to (iv) and output for (v) to (vii). **7**

Table: **FITNESS**

PCODE	PNAME	PRICE	MANUFACTURER
P1	Treadmill	21000	Coscore
P2	Bike	20000	Aone
P3	Cross Trainer	14000	Reliable
P4	Multi Gym	34000	Coscore
P5	Massage chair	5500	Regrosene
P6	Belly Vibrator Belt	6500	Ambaway

(i) To display the names of all the products with price more than 20000.

(ii) To display the names of all products by the manufacturer “Aone”.

(iii) To change the price data of all the products by applying 25% discount reduction.

(iv) To add a new row for product with the details:
“P7”, “Vibro Exerciser”, 28000, ”Aone”.

(v) SELECT * FROM FITNESS WHERE MANUFACTURER NAME LIKE “%e”;

(vi) SELECT COUNT (DISTINCT (MANUFACTURER)) FROM FITNESS;

(vii) SELECT MAX (PRICE) FROM FITNESS;

A.

(i) SELECT PNAME,PRICE FROM FITNESS WHERE PRICE>20000;

(ii) SELECT PNAME FROM FITNESS WHERE MANUFACTURER="Aone";

(iii) UPDATE FITNESS SET PRICE=PRICE-(PRICE*25/100);

(iv) INSERT INTO FITNESS VALUES("P7","Vibro Exerciser","28000","Aone");

(v) In this query, the column name is MANUFACTURER NAME instead of MANUFACTURE so it will generate an error.

The correct Query is SELECT * FROM FITNESS WHERE MANUFACTURER LIKE “%e”;

Output:

PCODE	PNAME	PRICE	MANUFACTURER
P1	Treadmill	21000	Coscore
P2	Bike	20000	Aone
P3	Cross Trainer	14000	Reliable
P4	Multi Gym	34000	Coscore
P5	Massage chair	5500	Regrosene

(vi) **COUNT(DISTINCT(MANUFACTURER))**

5

(vii) **MAX(PRICE)**

34000

Year - 2014

M

(a) Q. What is the difference between "%" and " _ " wild card character with reference to LIKE clause of MySQL? **2**

A. "%" is used to represent any sequence of Zero or more characters wheras "_" is used to represent a single character.

(b) Q. Name a function of MySQL used to give the first occurance of a string2 in string1. **1**

A. INSTR()

(C) Q. Consider the following table names EXAM with details of marks. Rite command of MySQl for (i) to (IV) and Output for (v) to (Vii). **7**

Table : EXAM

Adno	SName	Percentage	Clsection	Stream
R001	Sushant	90.2	12A	Science
R002	Vaidyanath	80.5	12B	Humanities
R003	Miara	68.9	12B	Science
R004	Niara	96.0	12A	Commerce
R005	Shinjini	88.9	12D	Commerce

(i) To display all information of the students of humanities in descending order of percentage.
(ii) To display Adno, Name, Percentage and Stream of those students whose name is less than 6 characters long.
(iii) To add another column Bus)Fees with datatype and size as decimal (8,2).
(iv) To increase percentage by 2% of all the humanities students.
(v) SELECT COUNT(*) FROM EXAM;
(vi) SELECT Sname, Percentage FROM EXAM WHERE Name LIKE "N%";
(vii) SELECT ROUND(Percentage,0) FROM EXAM WHERE Adno="R005";

A.

(i) SELECT * FROM EXAM WHERE Stream="Humanities" ORDER BY Percentage DESC;
(ii) SELECT Adno,SName,Percentage, Stream FROM EXAM WHERE LENGTH(SName)<6;
(iii) ALTER TABLE EXAM ADD (Bus_Fees DECIMAL (8,2));
(iv) UPDATE EXAM Set percentage =Percentage +(Percentage *0.02)
(v) Where Stream ='Humanities';
(vi) 5
(vii) Niara 96.0
(viii) 89

Year - 2015

M

(a) Q. Distinguish between Single Row and Aggregate functions of MySQL. Write one example of each. **2**

A. Single row functions are applied to each row of the table whereas Aggregate functions are applied on whole values of a column.

Example: Single Row function – left(), right () etc.

Aggregate function – Sum(), Min() etc.

(b) Q. Consider the following table named "SOFTDRINK". Write commands of SQL for (i) to (iv) and output for (v) to (vii). **7**

Table: SOFTDRINK

DRINKCODE	DNAME	PRICE	CALORIES
101	Lime and Lemon	20.00	120
102	Apple Drink	18.00	120
103	Nature Nectar	15.00	115
104	Green Mango	15.00	140
105	Aam Panna	20.00	135
106	Mango Juice Bahar	12.00	150

(i) To display names and drink codes of those drinks those have more than 120 calories.

(ii) To display drink codes, names and calories of all drinks, in descending order of calories.

(iii) To display names and price of drinks that have price in the range 12 to 18 (both 12 and 18 included)

(iv) Increase the price of all drinks in the given table by 10%.

(v) SELECT COUNT(DISTINCT(PRICE)) FROM SOFTDRINK;

(vi) SELECT MAX (CALORIES) FROM SOFTDRINK;

(vii) SELECT DNAME FROM SOFTDRINK WHERE DNAME LIKE "%Mango%";

A.

(i) Select DNAME, DRINKCODE from SOFTDRINK where CALORIES>120;
(ii) Select DRINKCODE,DNAME, CALORIES from SOFTDRINK order by CALORIES desc;
(iii) Select DNAME, PRICE from SOFTDRINK where CALORIES >= 12 and CALORIES<=18;
(iv) Update SOFTDRINK set PRICE=PRICE+ (PRICE*10/100);
(v) 4
(vi) 150
(vii) Green Mango
Mango Juice Bahar

(c) Q. What is the degree and cardinality of 'SOFTDRINK' Table ? **1**

A. Degree – 4 and cardinality - 6

Year - 2016 **M**

(a) Q. Srishti has created the following table with the name 'Veterinary'. **2**

Column Name	Constraint
AnimalId	Primary Key
VacinnationsDate	
AnimalName	Not Null
OwnerName	

One of the rows inserted is as follows :

AnimalId	VacinnationDate	AnimalName	OwnerName
A101	2015-02-12	Sheru	Amit Sharma

(i) What are the data type of columns **AnimalId** and **VacinnationDate** in the table Veterinary ?

(ii) Srishti is now trying to insert the following row

AnimalId	VacinnationDate	AnimalName	OwnerName
A102	2015-08-09	NULL	Abhimanyu Shah

Will she be able to successfully insert it? Give reason.

A. (i) Data type of AnimalId : Varchar/char
Data type of VaccinationDate : Date
(ii) No
Reason – Not Null Constraint applied on attribute AnimalName

(b) **Q.** Write the output of the following query. **2**

(i) SELECTMID('LearningIsFun',2,4);
(ii) SELECTROUND(76.384,2);
(iii) SELECTINSTR('INFORMATION FORM','RM');
(iv) SELECTDAYOFYEAR('2015-01-30');

A. (i) MID('LearningIsFun',2,4)
earn
(ii) ROUND(76.384,2)
76.38
(iii) INSTR('INFORMATION FORM','RM')
5
(iv) DAYOFYEAR('2015-01-30')
30

(c) **Q.** Table "Order" is shown below. Write commands in SQL for (i) to (iv) and output for (v) and (vi) **6**

Table: Order

OrderId	OrderDate	SalesPerson	OrderAmount
O101	2015-09-12	Ravi Kumar	34000
O102	2015-08-15	Rashmi Arora	50000
O103	2015-11-01	Ravi Kumar	55000
O104	2015-12-09	Manjeet Singh	60000
O105	2015-11-10	Rashmi Arora	50000

(i) To display names of Salespersons (without duplicates).
(ii) To list Orderid and respective Order amount in descending order of order amount.
(iii) To count the number of orders booked by Salespersons with names starting with 'R'
(iv) To list Order ids, order dates and order amounts that were booked after 1st September 2015.
(v) SELECTOrderId,OrderDate,OrderAmount FROM Order
WHERE OrderDate >'2015-09-01';
(vi) SELECT OrderId, OrderAmount FROM Order
where OrderAmount between 50000 and 60000;

A. (i) SELECT DISTINCT SalesPerson FROM Order;
(ii) SELECTOrderId,OrderAmount FROM Order ORDER BY OrderAmount desc;
(iii) SELECT COUNT(*) FROM Order WHERE SalesPerson LIKE "R%";
(iv) SELECTOrderId, OrderDate, OrderAmount FROM Order
WHERE OrderDate >'2015-09-01';

(v)

OrderId	OrderAmount
O102	50000
O103	55000
O104	60000
O105	50000

(vi)

concat(OrderId,SalesPerson)	length(SalesPerson)
O101Ravi Kumar	10
O102Rashmi Arora	12
O103Ravi Kumar	10
O104Manjeet Singh	13
O105Rashmi Arora	12

Year - 2017

M

(a) **Q.** Consider the Table "Infant" shown below. **10**

Table: Infant

ItemCode	Item	DatePurchase	UnitPrice	Discount
101	Frock	2016-01-23	700	10
102	Cot	2015-09-23	5000	25
103	Soft Toy	2016-06-17	800	10
104	Baby Socks	2014-10-16	100	7
105	Baby Suit	2015-09-20	500	5

NOTE : Discount column stores discount %.

Write the commands in SQL for (i) to (viii) and output for (ix) and (x)

(i) To display the details about the Cot.

(ii) To list the names of items and their unit price that have unit price less than 800 and discount more than 5%.

(iii) To list the names of items and their date of purchase that were purchased after 31st December , 2015.

(iv) To display the number of items that have more than 10% as discount

(v) To display Item code and unit price in decreasing order of unit price.

(vi) To increase the Unit price of each item by 10% of their unit price.

(vii) To display the highest unit price of items.

(viii) To display the names of items that have 'Baby' anywhere in their item names

(ix) SELECT MID(Item,1,2) FROM Infant;

(x) SELECT AVG(UnitPrice)FROM Infant WHERE DATEPURCHASE >'2015-01-01';

		NOTE : Discount column stores discount %. Write the commands in SQL for (i) to (viii) and output for (ix) and (x)	
	A.	(i) SELECT * FROM Infant WHERE Item='Cot'; (ii) SELECT Item, UnitPrice FROM Infant WHERE UnitPrice < 800 AND Discount > 5; (iii) SELECT Item, DatePurchase FROM Infant WHERE DatePurchase>'2015-12-31'; (iv) SELECT COUNT(Item) FROM Infant WHERE Discount > 10; (v) SELECT ItemCODE, UnitPrice FROM Infant ORDER BY UnitPrice DESC; (vi) UPDATE Infant SET UnitPrice = UnitPrice + (UnitPrice * 10/100); (vii) SELECT MAX(UnitPrice) FROM Infant; (viii) SELECT Item FROM Infant WHERE Item LIKE '%Baby%'; (ix) MID(Item,1,2) Fr Co So Ba Ba (x) AVG(UnitPrice) 1750.0	

QUESTION NO. 6 (10 MARKS)

Year - 2011 | **M**

(a) **Q.** Write a MySql command for creating a table "BANK" whose structure is given below: **2**

Table : BANK

Field Name	Datatype	Size	Constraint
Acct_number	Integer	4	Primary Key
Name	Varchar	3	
BirthDate	Date		
Balance	Integer	8	Not Null

A. CREATE TABLE BANK (Acct_number INTEGER (4) PRIMARY KEY, Name VARCHAR(3) , BirthDate DATE, Balance INTEGER (8) NOT NULL);

(b) **Q.** In a database there are two tables "ITEM" and "CUSTOMER" as shown below: **5**

Table : ITEM

ID	ItemName	Company	Price
1001	Moisturiser	XYZ	40
1002	Sanitizer	LAC	35
1003	Bath Soap	COP	25
1004	Shampoo	TAP	95
1005	Lens Solution	COP	350

Table : CUSTOMER

C_ID	CustomerName	City	ID
01	Samridhh Ltd	New Delhi	1002
05	Big Line Inc	Mumbai	1005
12	97.8	New Delhi	1001
15	Tom N Jerry	Bangalore	1003

Write the command in SQL queries for the following:

(i) To display the details of Items whose Price is in the range of 40 and 95(Both values included) **1**

(ii) To display the CustomerName, City from table Customer and ItemName and Price from table Item, with their corresponding matching ID. **2**

(iii) To increase the price of all the products by 50. **2**

A.

(i) SELECT * FROM ITEM WHERE PRICE >= 40 AND PRICE <= 95;

(ii) SELECT CUSTOMERNAME, CITY, ITEMNAME, PRICE FROM CUSTOMER CUST, ITEM WHERE CUST.ID = ITEM.ID;

(iii) UPDATE ITEM SET PRICE = PRICE + 50 ;

(c) **Q.** In a database School there are two tables Employee and Dept as show below. **2**

Table : Employee

EmpId	Name	Sal	Deptno
T001	Vishakha	34000	10
T001	Mridul	32000	50
T001	Manish	45000	20

Table : Dept

Deptno	DName	LocationId
10	Lights	HH02
20	Dance	FF02
30	Production	AB01

(i) Identify the foreign key in the table Employee.

(ii) What output, will you get, when an equi-join query is executed to get the NAME from Employee Table and corresponding DNAME from Dept table?

A.

(i) Deptno

(ii) Vishakha Lights
Manish Dance

Year - 2012 **M**

(a) **Q.** Write a MySql command to creat the Table STOCK including its Constraints. **2**

Table STOCK:

Name of Column	Type	Size	Contraint
Id	Decimal	4	Primary Key
Name	Varchar	20	
Company	Varchar	20	
Price	Decimal	8	Not Null

A.

```
CREATE TABLE STOCK
( Id Decimal(4) PRIMARY KEY ,
  Name VARCHAR(20) ,
  Company VARCHAR(20) ,
  Price Decimal(8) NOT NULL   ) ;
```

(b) **Q.** In a database there are two tables: **Table ITEM:** **6**

ICode	Iname	Price
101	Television	75000
202	Computer	42000
303	Refrigerator	90000
404	Washing Machine	27000

Table BRAND:

ICode	Brand
101	Sony
202	HP
303	LG
404	IFB

		Write MySql queries for the following: (i) To display ICode,IName and corresponding Brand of those Items, whose price is between 20000 and 45000 (both values inclusive). (ii) To display ICode, Price and BName of the item which has IName as "Television"? (iii) To increase the price of all the Items by 15%.	
	A.	(i) Select Item.ICode,IName,Brand from Item, Brand Where Item.icode= Brand.icode And Price Between 20000 AND 45000; (ii) Select Item.ICode,Price, Brand from Item, Brand Where item.icode= brand.icode and Iname = 'Television'; (iii) UPDATE ITEM SET Price=Price+(Price*15/100);	
(c)	**Q.**	Given below is a Table Patient. <table><tr><td>Name</td><td>P_No</td><td>Date_Adm</td><td>Doc_No</td></tr><tr><td>Vimal Jain</td><td>P0001</td><td>2011-10-11</td><td>D201</td></tr><tr><td>Ishita Kohli</td><td>P0012</td><td>2011-10-11</td><td>D506</td></tr><tr><td>Vijay Verma</td><td>P1002</td><td>2011-10-17</td><td>D201</td></tr><tr><td>Vijay Verma</td><td>P1567</td><td>2011-10-22</td><td>D233</td></tr></table>(i) Identify Primary Key in the table given above. (ii) Write MySql query to add a column Department with data type varchar and size 30 in the table Patient.	**2**
	A.	(i) P_No (ii) ALTER TABLE Patient ADD(Department varchar(30));	
		Year - 2013	**M**
(a)	**Q.**	Write SQL command to create the table VEHICLE with given constraint: Table : **VEHICLE** <table><tr><th>COLUMN_NAME</th><th>DATATYPE(SIZE)</th><th>CONSTRAINT</th></tr><tr><td>RegNo</td><td>CHAR(10)</td><td>Primary Key</td></tr><tr><td>Regdate</td><td>DATE</td><td></td></tr><tr><td>Owner</td><td>VARCHAR(30)</td><td></td></tr><tr><td>Address</td><td>VARCHAR(40)</td><td></td></tr></table>	**2**
	A.	CREATE TABLE VEHICLE (RegNo CHAR(10) PRIMARY KEY, Regdate DATE, Owner VARCHAR(30), Address VARCHAR(40));	
(b)	**Q.**	In a database BANK, there are two tables with a sample data given below: Table : **EMPLOYEE** <table><tr><th>ENO</th><th>ENAME</th><th>SALARY</th><th>ZONE</th><th>AGE</th><th>GRADE</th><th>DEPT</th></tr><tr><td>1</td><td>Mona</td><td>70000</td><td>East</td><td>40</td><td>A</td><td>10</td></tr><tr><td>2</td><td>Muktar</td><td>71000</td><td>West</td><td>45</td><td>B</td><td>20</td></tr><tr><td>3</td><td>Nalini</td><td>60000</td><td>East</td><td>26</td><td>A</td><td>10</td></tr><tr><td>4</td><td>Sanaj</td><td>65000</td><td>South</td><td>36</td><td>A</td><td>20</td></tr><tr><td>5</td><td>Surya</td><td>58000</td><td>North</td><td>30</td><td>B</td><td>30</td></tr></table>	**6**
		Table : **DEPARTMENT** <table><tr><th>DEPT</th><th>DNAME</th><th>HOD</th></tr><tr><td>10</td><td>Computers</td><td>1</td></tr><tr><td>20</td><td>Economics</td><td>2</td></tr><tr><td>30</td><td>English</td><td>5</td></tr></table>	

Note:

- ENAME refers to Employee Name
- DNAME refers to Department Name
- DEPT refers to Department Code
- HOD refers to Employee number (ENO) of the Head of the Department.

Write SQL queries for the following:

(i) To display ENO, ENAME, SALARY and corresponding DNAME of all the employees whose age is between 25 and 35 (both values inclusive).

(ii) To display DNAME and corresponding ENAME from the tables DEPARTMENT and EMPLOYEE.
Hint: HOD of the DEPARTMENT table should be matched with ENO of the EMPLOYEE table for getting the desired result.

(iii) To display ENAME, SALARY, ZONE and INCOME TAX (Note: Income Tax to be calculated as 30% of salary) of all the employees with appropriate column headings.

A.

(i) SELECT C.ENO,C.ENAME,C.SALARY,D.DNAME FROM EMPLOYEE C, DEPARTMENT D WHERE C.DEPT=D.DEPT AND C.AGE>=25 && C.AGE<=35;

(ii) SELECT D.DNAME,C.ENAME FROM EMPLOYEE C,DEPARTMENT D WHERE C.DEPT=D.DEPT AND C.ENO=D.HOD;

(iii) SELECT ENAME,SALARY,ZONE, (SALARY*30)/100 AS "INCOME TAX" FROM EMPLOYEE ;

(c) **Q.** In a database STUDENT, there is a Table RESULT with the following contents: **2**

Table :**RESULT**

REGNO	NAME	MARKS	SECTION	CLASSTEACHER	ADMNO
10004	Mohit	90	A	Ms Nathani	Z101
10211	Mukta	85	B	Mr. Gokhle	Z109
10923	Mohit	92	B	Mr. Gokhle	Z120
10313	Sana	80	A	Ms Nathani	Z234

(i) Identify the attributes, which can be chosen as Candidate Keys in the table RESULT.

(ii) Write SQL Query to change the Marks of Mukta to 95 in the table RESULT.

A.

(i) **REGNO** and **ADMNO** can be chosen as Candidate Keys in the table RESULT.

(ii) UPDATE RESULT SET MARKS=95 WHERE NAME="Mukta";

Year - 2014 **M**

(a) **Q.** Write MySQL command to create the table "Toyz" with the following structure and constraints. **2**

Table : TOYZ

Colun_Name	Datatype(Size)	Constraints
Toy_no	Int(10)	Primary Key
Tou_name	Varchar(20)	
Type	Char(10)	
Price	Decimal(8,2)	
Colour	Varchar(15)	

A.

```
CREATE TABLE TOYZ
(   Toy_no Int(10) Primary Key,
    Toy_name VARCHAR(20),
    Typer CHAR(10),
    Price DECIMAL (8,2),
    Colour VARCHAR(15) );
```

(b) **Q.** In the Database –SAMS and VENDOR are two tables with the following information. Write MySQL queries for (i) to (iii), based on the tables SAMS and VENDORS. **6**

Table: SAMS

ICode	IName	Price	Colour	VCode
S001	Refrigerator	20000	Blue	P01
S002	Mobile Phone	45000	Black	P02
S003	LCD	60000	Silver	P03
S004	Washing Machine	12500	Smoke	P01
S005	Air Conditioner	16000	White	P03

Table: VENDOR

VCode	VName
P01	Satish
P02	Manoj
P03	Subodh
P04	Jacob

(i) To display ICode, IName and VName of all the Vendors, who manufacture "Refrigerator"

(ii) To display IName, ICode, VName and Price of all the products whose price is more than 20000

(iii) To display vendor names and names of all items manufactured by vendor whose code is "P03"

A.

(i) SELECT ICode,IName,VName FROM SAMS S, VENDOR V
WHERE S.VCode=V.VCode AND IName='Refrigerator'

(ii) SELECT ICode,IName,VName,Price FROM SAMS S,VENDOR V
WHERE S.VCode=V.VCode AND Price>20000;

(iii) SELECT VName,IName FROM SAMS S,VENDOR V
WHERE S.VCode=V.VCode AND VCode='P03'

(c) **Q.** With reference to SAMS table, which column should be set as the Primary key? Which column is the foreign key? Give reasons. **2**

A. Primary Key-ICode
Reason: ICode is Unique to every row in the table SAMS
Foreign Key: Code
Reason: Code is the Primary key of the table VENDOR. It is used to link two tables SAMS and VENDORS and is enforcing referential integrity, hence VCode column can be considered as Foreign Key for the table SAMS.

Year - 2015 **M**

(a) **Q.** Write MySQL command to create the Table 'LIBRARY' with given constraints. **2**

Table: LIBRARY

COLIMN_NAME	DATATYPE(SIZE)	CONSTRAINT
BookId	Int(10)	Primary Key
BookName	Varchar(40)	Not Null
Type	Char(4)	
Author	Varchar(40)	
No_Copies	Int(6)	
Price	Decimal(8,2)	

A.

```
Create table LIBRARY
(BookID int(10) Primary Key Not Null,
 BookName varchar(40) Not Null,
 Type char (4),
 Author varchar(40),
 No_Copies int(6),
 Price Decimal(8,2));
```

(b) **Q.** In a database company, there are two tables given below:

Table: SALES

SALESMANID	NAME	SALES	LOCATIONID
S1	ANITA SINGH ARORA	250000	102
S2	Y.P.SINGH	1300000	101
S3	TINA JAISWAL	1400000	103
S4	GURDEEP SINGH	1250000	102
S5	SIMI FAIZAL	1450000	103

Table: LOCATION

LOCATIONID	LOCATIONNAME
101	Delhi
102	Mumbai
103	Kolkata
104	Chennai

Write SQL queries for the following:

(i) To display SalesmanID, names of salesmen, LocationID with corresponding location names. **2**

(ii) To display names of salesmen, sales and corresponding location names who have achieved Sales more than 1300000. **2**

(iii) To display names of those salesmen who have 'SINGH' in their names. **2**

(iv) Identify Primary key in the table SALES. Give reason for your choice. **1**

(v) Write SQL command to change the LocationID to 104 of the Salesman with ID as S3 in the table 'SALES'. **1**

A.

(i) Select SalesmanID, Name, LocationID, LocationName from SALES, LOCATION
Where SALES.LocationID= LOCATION.LocationID ;

(ii) Select Name, Sales, LocationName from SALES, LOCATION
Where SALES.LocationID= LOCATION.LocationID And Sales>1300000;

(iii) Select Name from SALES Where Name Like "%Singh%;

(iv) Primary Key – SALESMANID , because it is containing unique value.

(v) Update SALES set LocationID=104 Where SalesmanID='S3';

Year - 2016 **M**

(a) **Q.** Write SQL query to create a table 'Song' with the following structure: **2**

Field	Type	Constraint
Songid	Integer	Primary key
Title	Varchar(50)	
Duration	Integer	
ReleaseDate	Date	

A.

```
CREATE TABLE Song
( SongId Integer PRIMARY KEY,
 Title Varchar(50),
Duration Integer,
ReleaseDate Date );
```

(b) **Q.** Consider the tables given below. **2**

Table: Party

PartyId	Description	CostPerPerson
P101	Birthday	400
P102	Wedding	700
P103	Farewell	350
P104	Engagement	450

Table: Client

ClientId	ClientName	Address	Phone	NoOfGuests	PartyId
C101	A.K. Antony	A-151, Adarsh Nagar	99101956	80	P101
C102	Fauzia Aria	K-5/52, Vikas Vihar	893466448	500	P102
C103	Rashi Khanna	D-6, Hakikat Nagar	981166568	50	P101
C104	S.K. Chandra	76-A/2, MG Colony, Adarsh Avenue.	65877756	100	P104

(i) Name the Primary keys in both the tables

(ii) 'P101' data is present twice in column 'PartyId' in 'Client' table – Is there any discrepancy? Give reason for your answer.

A.

(i) Primary key (Table : Party) - PartyId
Primary key (Table : Client) - ClientId

(ii) There is no discrepancy. PartyId is not the Primary key in table Client, hence repetition is permissible.

(c) **Q.** With reference to the above given tables (in Q6 b), Write commands in SQL for (i) and (ii) and output for (iii) given below: **6**

(i) To display Client names of clients, their phone numbers,PartyId and party description who will have number of guests more than 50 for their parties.

(ii) To display Client Ids, their addresses, number of guests of those clients who have 'Adarsh' anywhere in their addresses.

ClientId	ClientName	Address	Phone	NoOfGuests	PartyId

(iii)
```
SELECTClientId, ClientName, NoOfGuests, description,Costperperson
 FROM Client, Party
 WHERE Client.Partyid= Party.Partyid  AND NOofGuests BETWEEN 50 AND 100;
```

A.

(i) SELECT CLIENTNAME, PHONE, PARTY.PARTYID, DESCRIPTION FROM PARTY, CLIENT WHERE PARTY.PARTYID = CLIENT.PARTYID AND NOOFGUESTS> 50;

(ii) SELECT CLIENTID, ADDRESS, NOOFGUESTS FROM CLIENT WHERE ADDRESS LIKE '%Adarsh%';

(iii)

ClientId	ClientName	NoOfGuests	Description	CostPerPerson
C101	A.K.Antony	80	Birthday	400
C103	Rashi Khanna	50	Birthday	400
C104	S.K.Chandra	100	Engangement	450

Year - 2017

M

(a) **Q.** "XYZ" Company conducts workshops for employees of organizations. The company requires data of workshops that are organized. Write SQL query to create a table 'Workshop' with the following structure: **2**

Field	Type	Constraint
WorkshopId	integer	Primary Key
Title	Varchar(50)	
DateWorkshop	Date	
NumSpeakers	Integer	

A.

```
CREATE TABLE WORKSHOP ( WorkshopId INTEGER PRIMARY KEY,
Title VARCHAR(50), DateWorkshop DATE, Numspeakers INTEGER );
```

(b) **Q.** Consider the tables given below and answer the questions that follow : **2**

Table: Event

EventId	Event	NumPerformers	CelebrityID
101	Birthday	10	C102
102	Promotion Party	20	C103
103	Engagement	12	C102
104	Wedding	15	C104

Table: Celebrity

CelebrityID	Name	Phone	FeeCharged
C101	Faiz Khan	99101956	200000
C102	Sanjay Kumar	893466448	250000
C103	Neera Khan Kapoor	981166568	300000
C104	Reena Bhatia	65877756	100000

(i) Name the Primary keys in both the tables and Foreign key in 'Event' table. Can NumPerformers (Number for performers) be set as the Primary key? Give reason.

(ii) How many rows will be present in the Cartesian join of the above mentioned 2 tables?

In the table 'Event', the CelebrityID 102 is present twice in the column "CelebrityId". Is there any discrepancy? Give reason.

A. **(i)**

Table: Event

PRIMARY KEY– EventId

Table: Celebrity

		PRIMARY KEY– CelebrityID Table : Event FOREIGN KEY– CelebrityID No, NumPerformers cannot be set as Primary key because It may not be unique in every row (when more rows are added to the table later) **(ii)** Number of rows in the Cartesian join = 16 No discrepancy. Because the same Celebrity may perform in more than one events.	
(c)	**Q.**	With reference to the above given tables (in Q6 b), Write commands in SQL for (i) to (iii) (i) To display EventId, Event name, Celebrity Id and Names of celebrities for only those events that have more than 10 performers. (ii) To display Event name, Celebrity Id and Names of celebrities who have "Khan" anywhere in their names. (iii) To display Event name, Names of celebrities and Fee charged for those celebrities who charge more than 200000 .	**6**
	A.	(i) SELECT EventId, Event, Event.CelebrityId, NAME FROM Event, Celebrity WHERE Event.CelebrityId = Celebrity.CelebrityId AND NumPerformers>10; (ii) SELECT Event, Event.CelebrityId, Name FROM Event, Celebrity WHERE Event.CelebrityId = Celebrity.CelebrityId AND Name LIKE '%Khan%'; (iii) SELECT Event, Name, FeeCharged FROM Event, Celebrity WHERE Event.CelebrityId = Celebrity.CelebrityId AND FeeCharged > 200000;	

QUESTION NO. 7 (5 MARKS)

		Year - 2011	M
(a)	**Q.**	Give one social impact of e-Business.	**1**
	A.	✓ Globalization of markets ✓ Economical and vide range of products	
(b)	**Q.**	Write three important features of e-Governance? Give URL of one of the commonly used e- Governance portal.	**2**
	A.	✓ Provides information to citizen about the processes and services. ✓ Facilitates a speedy, transparent, accountable and efficient process for performing government administrative activities. ✓ Uses modern information and telecommunication technologies such as internet, Local area networks to enhance efficiency. Commonly used e.Governance portals are : ✓ www.incometaxindia.gov.in ✓ supremecourtofindia. nic.in ✓ passport.gov. in ✓ https://www.irctc.co.in	
(c)	**Q.**	Anuja is creating a form for her practical file. Help her to choose most appropriate controls from List Box, Combo Box, TextField, TextArea, RadioButton, Checkbox, Label and Command button for the following entries from user. **(i)** A message "Enter Marks" in front of a TextField. **(ii)** An input to choose more than one subjects from a set of choices. **(iii)** An input for entering remarks. **(iv)** An input for accepting Gender.	**2**
	A.	(i) Label (ii) ListBox/Check Box (iii) TextArea [Most Appropriate answer] TextField [Also acceptable] (iv) RadioButton/ComboBox [Most Appropriate answer] TextField [Also	
		Year - 2012	**M**
(a)	**Q.**	What social impact does e-Governance have on society?	**1**
	A.	✓ 'E-governance' programs have improved the efficiency of administration and service delivery. ✓ People have also benefitted from e-governance in the form of reduced cost of availing the services. ✓ E-governance offers transparent service and has been proved a successful tool to minimize corruption to some extent.	
(b)	**Q.**	Write two important feature of e-Business. Give two most commonly used e-Business sites.	**2**
	A.	Feature of e-Business: (i) Offers opportunity to increase sales (ii) Offer opportunity to access new market across the globe (iii) Allows 24 x 7 access to the firm's products and services (iv) Improves speed of response. Few most commonly used e-Business sites are –	

www.licindia.com
www.statebankofindia.com
www.amazon.com
www.ebay.com

(c) **Q.** Mr. Anurag Das working as Manager in Vivian Enterprises wants to create a form in NetBeans to take various inputs from user. Choose appropriate controls from Label, TextBox, Radio Button, CheckBox, ListBox, ComboBox & Command Button and write them in the third column: **2**

SNO	Control used to	Control
1.	Enter Name, Address and Salary	
2.	Select Gender (Male / Female)	
3.	Select Department from available List	
4.	Choose Hobby of Employee (Singing/Dancing/Skating/Swimming)	

A.
1. TextBox
2. Radio Button
3. ListBox/ ComboBox
4. CheckBox/CheckBox/ListBox

Year - 2013 **M**

(a) **Q.** How has popularity of e-Business benefited a common man? Write domain name of one popular e-Business **2**

A. **Benefit** :
- ✓ New market to vendors, global market.
- ✓ Economical
- ✓ Improved efficiency and productivity
- ✓ Better transfer of best practices
- ✓ Improved customer service, 24x7 days support.

Domain name:
- ✓ yatra.com

(b) **Q.** Give domain names of two most commonly used e-Commerce site. **1**

A.
1. ebay.in
2. amazon.com

(c) **Q.** Shobhit is creating a form for his company. Help her to choose most appropriate controls from ListBox, ComboBox, TextField, TextArea, RadioButton, CheckBox, Label and Command Button for the following entries: **2**

SNo	**Function**
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

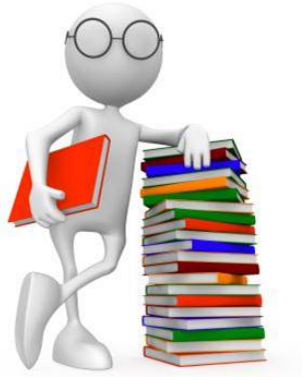
A.

SNo	**Function**	**Control**
1	To enter NATIONALITY from all the nationalities given as options	ComboBox
2	To enter AGE between a range 20 to 25	ComboBox
3	To allow to select one or more FAVORITE SPORTS out of the given 6 options	CheckBox
4	To enter SUGGESTION in the form of a paragraph	TextArea

Year - 2014 **M**

<table>
<tr><td>(a)</td><td>Q.</td><td>Define e-Business. Name one popularly used e-Business website.</td><td>1</td></tr>
<tr><td></td><td>A.</td><td>Using Technology to do business
www.ebay.in,www.flipkart.com,www.jabong.com</td><td></td></tr>
<tr><td>(b)</td><td>Q.</td><td>How does e-Governance help in reducing corruption? Write two points.</td><td>2</td></tr>
<tr><td></td><td>A.</td><td>(i) Improve transparency in governance
(ii) Speedy governance
(iii)Bring more accountability</td><td></td></tr>
<tr><td>(c)</td><td>Q.</td><td>Suruchi works for a Shopping Mart.She wants to create controls on a form for the following operations.
Choose most appropriate control out of Text box, Label, Radio Button, list box, combo box, Check Box and Command button.
<table>
<tr><th>S.No.</th><th>FUNCTIONS</th><th>CONTROL/S</th></tr>
<tr><td>1</td><td>Enter the Item Code</td><td></td></tr>
<tr><td>2</td><td>Select Item Size (from a list of sizes)</td><td></td></tr>
<tr><td>3</td><td>Enter Quantity</td><td></td></tr>
<tr><td>4</td><td>Submit the Form</td><td></td></tr>
</table></td><td>2</td></tr>
<tr><td></td><td>A.</td><td>
<table>
<tr><th>S.No.</th><th>FUNCTIONS</th><th>CONTROL/S</th></tr>
<tr><td>1</td><td>Enter the Item Code</td><td>Text box/Text Field</td></tr>
<tr><td>2</td><td>Select Item Size (from a list of sizes)</td><td>List Box /Combo box</td></tr>
<tr><td>3</td><td>Enter Quantity</td><td>Text Box/ Text Field</td></tr>
<tr><td>4</td><td>Submit the Form</td><td>Command Button</td></tr>
</table></td><td></td></tr>
<tr><td colspan="3">Year - 2015</td><td>M</td></tr>
<tr><td>(a)</td><td>Q.</td><td>How does e-learning allow students to study at their own pace?</td><td>2</td></tr>
<tr><td></td><td>A.</td><td>E-learning facilitate students to learn almost anytime, anywhere as per their pace of learning. Unlike classroom learning, student may repeat, forward and backward contents available with e-learning solutions.</td><td></td></tr>
<tr><td>(b)</td><td>Q.</td><td>How does e-governance empower citizens? Write one point.</td><td>1</td></tr>
<tr><td></td><td>A.</td><td>E-governance empowers citizen by providing faster, reliable services with 24x7 days accessibility.</td><td></td></tr>
<tr><td>(c)</td><td>Q.</td><td>Sabeena is creating a form for the hotel where she works. Help her to choose most appropriate controls from ListBox, ComboBox, TextField, TextArea, RadioButton, CheckBox, Label and Command Button for the following.
<table>
<tr><th>S.No.</th><th>Function</th></tr>
<tr><td>1</td><td>To input name</td></tr>
<tr><td>2</td><td>To allow enter gender out of M or F</td></tr>
<tr><td>3</td><td>To allow selecting type of room out of Delux, SemiDelux, General</td></tr>
<tr><td>4</td><td>To allow entries preferences of guest in the form of paragraph</td></tr>
</table></td><td>2</td></tr>
<tr><td></td><td>A.</td><td>1. Text Field
2. RadioButton
3. ListBox or ComboBox
4. TextArea</td><td></td></tr>
<tr><td colspan="3">Year - 2016</td><td>M</td></tr>
<tr><td>(a)</td><td>Q.</td><td>How is an e-commerce business more cost effective than traditional business? Write two points.</td><td>2</td></tr>
<tr><td></td><td>A.</td><td>● No infrastructure to be set up for shop.
● Faster buying and selling procedure</td><td></td></tr>
</table>

<table>
<tr><td>(b)</td><td>Q.</td><td>How is e-learning beneficial for old people? Write one point.</td><td>1</td></tr>
<tr><td></td><td>A.</td><td>● Learning from home
● Learning at own pace
● Learning any time
● Learning any topic</td><td></td></tr>
<tr><td>(c)</td><td>Q.</td><td>Ms. Ariya is creating a form for PAN CARD application. Help her to choose most appropriate controls from ListBox, ComboBox, TextField, TextArea, RadioButton, CheckBox, Label and Command Button for the following entries.
<table>
<tr><th>S.No.</th><th>Function</th></tr>
<tr><td>1</td><td>To enter NAME</td></tr>
<tr><td>2</td><td>To enter MOBILE NUMBER</td></tr>
<tr><td>3</td><td>To allow user to choose one CATEGORY out of the categories : Company,Trust,Individual.</td></tr>
<tr><td>4</td><td>To enter NATURE OF BUSINESS/PROFESSION in the form of a paragraph</td></tr>
</table></td><td>2</td></tr>
<tr><td></td><td>A.</td><td>1. TextField
2. TextField
3. RadioButton/ComboBox
4. TextArea</td><td></td></tr>
<tr><td colspan="3">Year - 2017</td><td>M</td></tr>
<tr><td>(a)</td><td>Q.</td><td>List two disadvantages of e-governance to a disabled person.</td><td>2</td></tr>
<tr><td></td><td>A.</td><td>1. There is usually a lack of internet/computer literacy among the disabled.
2. Personal interaction is limited in e-governance, so the human element bond is missing which disabled people need.</td><td></td></tr>
<tr><td>(b)</td><td>Q.</td><td>How can online retailers usually offer customers a wider range of products at prices that are lesser than those of traditional stores?</td><td>1</td></tr>
<tr><td></td><td>A.</td><td>Online retailers usually offer customers a wider range of products at prices that are lesser than those of traditional stores because they have fewer infrastructural and operational costs.</td><td></td></tr>
<tr><td>(c)</td><td>Q.</td><td>Ms. Cathy is creating a form for Vidya University Sports Council application. Help her to choose the most appropriate controls from ListBox, ComboBox, TextField, TextArea, RadioButton, CheckBox, Label and Command Button for the following entries.
<table>
<tr><th>S.NO.</th><th>FUNCTION</th></tr>
<tr><td>1.</td><td>To let the user enter NAME</td></tr>
<tr><td>2.</td><td>To let the user enter MOBILE NUMBER</td></tr>
<tr><td>3.</td><td>To let the user choose one PROFESSION out of the categories : Teaching / Non -Teaching/Research Scholar</td></tr>
<tr><td>4.</td><td>To let the user select facilities out of Gym, Yoga, Table Tennis, Badminton and Aerobics. More than one facility may be chosen</td></tr>
</table></td><td>2</td></tr>
<tr><td></td><td>A.</td><td>1. TextField 2. TextField
3. RadioBox/ComboBox 4. CheckBox/ListBox</td><td></td></tr>
</table>



CBSE QUESTION BANK (2011-2017)

WITH SOLUTIONS

Compiled By:

Rajesh Kumar Mishra
PGT (Comp.Sc.)
Kendriya Vidyalaya Khanapara,

Open Teaching & Learning Material

Visit www.ip4you.blogspot.com for more….