

Marking Scheme Strictly Confidential (For Internal and Restricted use only) Senior School Certificate Examination, 2025 SUBJECT NAME INFORMATION TECHNOLOGY (Q.P. CODE 326) SUBJECT CODE – 802	
<u>General Instructions: -</u>	
1	You are aware that evaluation is the most important process in the actual and correct assessment of the candidates. A small mistake in evaluation may lead to serious problems which may affect the future of the candidates, education system and teaching profession. To avoid mistakes, it is requested that before starting evaluation, you must read and understand the spot evaluation guidelines carefully.
2	“Evaluation policy is a confidential policy as it is related to the confidentiality of the examinations conducted, Evaluation done and several other aspects. Its’ leakage to public in any manner could lead to derailment of the examination system and affect the life and future of millions of candidates. Sharing this policy/document to anyone, publishing in any magazine and printing in News Paper/Website etc. may invite action under various rules of the Board and IPC.”
3	Evaluation is to be done as per instructions provided in the Marking Scheme. It should not be done according to one’s own interpretation or any other consideration. Marking Scheme should be strictly adhered to and religiously followed. However, while evaluating, answers which are based on latest information or knowledge and/or are innovative, they may be assessed for their correctness otherwise and due marks be awarded to them. In class-X, while evaluating two competency-based questions, please try to understand given answer and even if reply is not from marking scheme but correct competency is enumerated by the candidate, due marks should be awarded.
4	The Marking Scheme carries only suggested value points for the answers. These are in the nature of Guidelines only and do not constitute the complete answer. The students can have their own expression and if the expression is correct, the due marks should be awarded accordingly.
5	The Head-Examiner must go through the first five answer books evaluated by each evaluator on the first day, to ensure that evaluation has been carried out as per the instructions given in the Marking Scheme. If there is any variation, the same should be zero after deliberation and discussion. The remaining answer books meant for evaluation shall be given only after ensuring that there is no significant variation in the marking of individual evaluators.

6	Evaluators will mark(✓) wherever answer is correct. For wrong answer CROSS "X" be marked. Evaluators will not put right (✓) while evaluating which gives an impression that answer is correct and no marks are awarded. This is most common mistake which evaluators are committing.
7	If a question has parts, please award marks on the right-hand side for each part. Marks awarded for different parts of the question should then be totaled up and written in the left-hand margin and encircled. This may be followed strictly.
8	If a question does not have any parts, marks must be awarded in the left-hand margin and encircled. This may also be followed strictly.
9	If a student has attempted an extra question, answer of the question deserving more marks should be retained and the other answer scored out with a note "Extra Question" .
10	No marks to be deducted for the cumulative effect of an error. It should be penalized only once.
11	A full scale of marks _____(example 0 to 80/70/60/50/40/30 marks as given in Question Paper) has to be used. Please do not hesitate to award full marks if the answer deserves it.
12	Every examiner has to necessarily do evaluation work for full working hours i.e., 8 hours every day and evaluate 20 answer books per day in main subjects and 25 answer books per day in other subjects (Details are given in Spot Guidelines).This is in view of the reduced syllabus and number of questions in question paper.
13	<p>Ensure that you do not make the following common types of errors committed by the Examiner in the past:-</p> <ul style="list-style-type: none"> • Leaving answer or part thereof unassessed in an answer book. • Giving more marks for an answer than assigned to it. • Wrong totaling of marks awarded on an answer. • Wrong transfer of marks from the inside pages of the answer book to the title page. • Wrong question wise totaling on the title page. • Wrong totaling of marks of the two columns on the title page. • Wrong grand total. • Marks in words and figures not tallying/not same. • Wrong transfer of marks from the answer book to online award list. • Answers marked as correct, but marks not awarded. (Ensure that the right tick mark is correctly and clearly indicated. It should merely be a line. Same is with the X for incorrect answer.) • Half or a part of answer marked correct and the rest as wrong, but no marks awarded.

14	While evaluating the answer books if the answer is found to be totally incorrect, it should be marked as cross (X) and awarded zero (0) Marks.
15	Any unassessed portion, non-carrying over of marks to the title page, or totaling error detected by the candidate shall damage the prestige of all the personnel engaged in the evaluation work as also of the Board. Hence, in order to uphold the prestige of all concerned, it is again reiterated that the instructions be followed meticulously and judiciously.
16	The Examiners should acquaint themselves with the guidelines given in the “ Guidelines for Spot Evaluation ” before starting the actual evaluation.
17	Every Examiner shall also ensure that all the answers are evaluated, marks carried over to the title page, correctly totaled and written in figures and words.
18	The candidates are entitled to obtain photocopy of the Answer Book on request on payment of the prescribed processing fee. All Examiners/Additional Head Examiners/Head Examiners are once again reminded that they must ensure that evaluation is carried out strictly as per value points for each answer as given in the Marking Scheme.

MARKING SCHEME
Senior Secondary School Examination, 2025
INFORMATION TECHNOLOGY (Subject Code-802)
[Paper Code:326]

Time allowed : 3 Hours

Maximum Marks: 60

General Instructions:

- (i) *Please read the instructions carefully.*
- (ii) *This Question Paper consists of **24** questions in **two** sections: **Section A** and **Section B**.*
- (iii) ***Section A** has Objective type questions whereas **Section B** contains Subjective type questions.*
- (iv) *Out of the given $(6 + 18) = 24$ questions, a candidate has to answer $(6 + 11) = 17$ questions in the allotted (maximum) time of 3 hours.*
- (v) *All questions of a particular section must be attempted in the correct order.*
- (vi) **Section A: Objective Type Questions (30 Marks):**
 - (a) *This section has **6** questions.*
 - (b) *There is no negative marking.*
 - (c) *Do as per the instructions given.*
 - (d) *Marks allotted are mentioned against each question/part.*
- (vii) **Section B: Subjective Type Questions (30 Marks):**
 - (a) *This section has **18** questions.*
 - (b) *A candidate has to do **11** questions.*
 - (c) *Do as per the instructions given.*
 - (d) *Marks allotted are mentioned against each question/part.*

Note: Ignore semicolon (;) in SQL related commands and ignore case in Java related codes written by students.

Section A
(Objective Type Questions)

(30 Marks)

1.		Answer any 4 out of the given 6 questions on Employability Skills.	4x1=4
	(i)	_____ is an element of communication which encodes and sends messages through a channel.	1
	Ans.	Sender (1 Mark for the correct answer)	
	(ii)	To maintain a positive attitude, which one of the following is not a good practice ? (A) Feed the mind with positivity (B) Don't learn from failures. (C) Move towards your goals and dreams (D) Start the day with a morning routine	1
	Ans	(B) OR Don't learn from failures. (1 Mark for the correct answer)	
	(iii)	State True or False : "Personality disorders involve long-term patterns of thoughts and behaviours that are unhealthy and rigid".	1
	Ans	True/T (1 Mark for any correct answer)	
	(iv)	In the spreadsheet software, a _____ is an arrangement of cells in a vertical (standing) manner.	1
	Ans	Column (1 Mark for the correct answer)	

	(v)	_____ is one of the most important attitudes of an entrepreneur, which is defined as the ability to continue to do something, even when it is difficult. (A) Decisiveness (B) Interpersonal skills (C) Perseverance (D) Taking initiative	1
	Ans	(C) OR Perseverance <i>(1 Mark for the correct answer)</i>	
	(vi)	CNG stands for _____ .	1
	Ans	Compressed Natural Gas <i>(1 Mark for the correct answer)</i> OR <i>(½ Mark for writing any two correct words)</i>	
2.		Answer any 5 out of the given 7 questions.	5 x 1=5
	(i)	DBMS stands for _____ .	1
	Ans	Database Management Software/System <i>(1 Mark for the correct answer)</i> OR <i>(½ Mark for writing any two correct words)</i>	
	(ii)	All Java statements must end with a/an _____ .	1
	Ans	Semicolon OR (;) <i>(1 Mark for the correct answer)</i>	

	(iii)	_____ is a language that is used to manage data stored in an RDBMS.	1
	Ans	SQL / MYSQL (1 Mark for the correct answer)	
	(iv)	In relational models, a _____ is called a relation.	1
	Ans	Table (1 Mark for the correct answer)	
	(v)	IRCTC online portal for booking train tickets stands for : (A) International Railway Catering and Tourism Corporation (B) Indian Railway Controlling and Transport Corporation (C) Indian Railway Catering and Tourism Corporation (D) International Railway Controlling and Transport Corporation	1
	Ans	(C) OR Indian Railway Catering and Tourism Corporation (1 Mark for the correct answer)	
	(vi)	Which of the following is not a valid data type of SQL ? (A) CHAR(n) (B) VARCHAR(n) (C) STR(n) (D) DATE	1
	Ans	(C) OR STR(n) (1 Mark for the correct answer)	
	(vii)	A web application is a program that is stored on a _____ server. (A) Remote (B) Voice (C) Local (D) Data	1

	Ans	(A) OR Remote <i>(1 Mark for the correct answer)</i>	
3.		Answer any 6 out of the given 7 questions.	6x1 = 6
	(i)	Name any two popular e-learning websites.	1
	Ans	Coursera, Udemy, Unacademy, Khanacademy, W3Schools, ncert.nic.in, edx.org, physicswallah, gcfllearnfree etc. <i>(1 Mark for any two correct answers / relevant e-learning websites)</i> OR <i>(½ Mark for any one correct answer / relevant e-learning website)</i>	
	(ii)	A computer can understand only its own language called _____ .	1
	Ans	Machine Language / Binary Language / 0,1 language <i>(1 Mark for any correct answer)</i>	
	(iii)	Kritika did not use ASC or DESC keyword with ORDER BY clause. By default in which order will the result of the query be displayed ?	1
	Ans	Ascending Order / ASC <i>(1 Mark for any correct answer)</i>	
	(iv)	_____ is the national web portal of India, which provides a single window access to information and services being provided by the various Indian government entities.	1
	Ans	india.gov.in <i>(1 Mark for the correct answer)</i>	

	(v)	Rahul forgot to add a column in the existing table. Which one of the following SQL commands can he use to add the desired column in the table ? (A) INSERT (B) UPDATE (C) MODIFY (D) ALTER	1
	Ans	(D) OR ALTER <i>(1 Mark for the correct answer)</i>	
	(vi)	_____ makes the password safer for online transactions. (A) Combination of alphabets, special symbols and numbers (B) Use of personal mobile number (C) Use of name of near and dear ones (D) Use of date of birth of mother	1
	Ans	(A) OR Combination of alphabets, special symbols and numbers <i>(1 Mark for the correct answer)</i>	
	(vii)	“ Variables in Java need not be declared and initialized before they are used”. State True or False.	1
	Ans	False/F <i>(1 Mark for any correct answer)</i>	
4.		Answer any 5 out of the given 6 questions.	5x1=5
	(i)	Connectivity between Frontend and Backend project will be done in _____ phase of a web application project.	1
	Ans	Implementation <i>(1 Mark for the correct answer)</i>	

	(ii)	If the value of an attribute in a tuple is not known or not applicable or not available, a special value called _____ is used to represent them. (A) EMPTY (B) BLANK (C) NULL (D) VOID	1
	Ans	(C) OR NULL <i>(1 Mark for the correct answer)</i>	
	(iii)	In India the main thrust for e-governance was provided by the launching of _____, the national satellite-based computer network in 1987. (A) NICNET (B) DEITY (C) NEGP (D) NEGD	1
	Ans	(A) OR NICNET <i>(1 Mark for the correct answer)</i>	
	(iv)	What is a variable in Java programming language ?	1
	Ans	A variable is a placeholder for data that can change its value during program execution. <i>(1 Mark for the correct definition)</i> OR <i>int a = 10;</i> <i>(½ Mark for any correct example)</i>	
	(v)	_____ keyword is used in SELECT statement along with column name to display duplicate values once in the result of an SQL query.	1
	Ans	Distinct <i>(1 Mark for the correct answer)</i>	

	(vi)	Select the valid statement to declare and initialize an array in Java : (A) <code>int[] marks;</code> (B) <code>int[] marks = {60, 70, 90};</code> (C) <code>int[] marks = (60, 70, 90);</code> (D) <code>int[] marks = [60, 70, 90];</code>	1
	Ans	(B) OR <code>int[] marks = {60, 70, 90};</code> (1 Mark for the correct answer)	
5.		Answer any 5 out of the given 6 questions.	5 x 1=5
	(i)	Which of the following statements is incorrect related to database application used in the domains? (A) Education Database Application is used to store data of students and staff. (B) Hospital Database Application is used to record data of patients. (C) Banking Database Application is used to record details of stock of medicines. (D) Government Database Application is used to store details of electoral roll.	1
	Ans	(C) OR Banking Database Application is used to record details of stock of medicines. (1 Mark for the correct answer)	
	(ii)	Out of many types of DBMS users, _____ is responsible to determine the requirements of the end users and then develop specifications to meet the requirements. (A) DBA (B) Application Programmers (C) System Analyst (D) Tester	1

	Ans.	(C) OR System Analyst <i>(1 Mark for the correct answer)</i>	
	(iii)	Exception thrown by any statement in try block in a Java program is handled in _____ block. (A) final (B) throw (C) catch (D) except	1
	Ans	(C) OR catch <i>(1 Mark for the correct answer)</i>	
	(iv)	Rashmi is not able to leave a blank in the Salary column of the Employee table. Which constraint is applied on the field Salary ? (A) NOT NULL (B) DEFAULT (C) CHECK (D) NOT BLANK	1
	Ans	(A) OR NOT NULL <i>(1 Mark for the correct answer)</i>	
	(v)	Which is the correct way to write multiline comments in a Java program ? (A) Beginning a comment line with two consecutive forward slashes(//). (B) Writing a comment between the symbols /* and */ . (C) Beginning a comment line with # symbol. (D) Writing the comment between the symbols /# and #/ .	1

	Ans	(B) OR Writing a comment between the symbols /* and */. <i>(1 Mark for the correct answer)</i>	
	(vi)	Name the Java interpreter that translates the byte code into machine code and then executes it.	1
	Ans	JVM OR Java Virtual Machine <i>(1 Mark for any correct answer)</i> OR <i>(½ Mark for writing any two correct words)</i>	
6.		Answer any 5 out of the given 6 questions.	5x1=5
	(i)	Which access modifier in Java is used to make a data member or a method member of a class visible only within the class ? (A) public (B) protected (C) default (D) private	1
	Ans	(D) OR private <i>(1 Mark for the correct answer)</i>	
	(ii)	Flipkart and eBay are examples of _____ shopping stores.	1
	Ans	Online OR E/e OR e-Commerce <i>(1 Mark for any correct answer)</i>	

	(iii)	Write the names of any two web browsers which help us to browse various websites over the Internet.	1
	Ans	Internet Explorer / Google Chrome / Mozilla Firefox / Opera / Brave / Vivaldi / Maxthon etc. (1 Mark for any two correct answers/relevant web browsers) OR (½ Mark for any one correct answer/relevant web browser)	
	(iv)	A/An _____ in Java is a block of statements grouped together to perform a specific task. (A) Array (B) Object (C) Class (D) Method	1
	Ans	(D) OR Method (1 Mark for the correct answer)	
	(v)	In Java, _____ statement is used to execute a block of code matching one value out of many possible values.	1
	Ans	switch OR switch .. case (1 Mark for the correct answer)	
	(vi)	In which Java package is the scanner class available ? (A) java.util (B) java.applet (C) java.net (D) java.lang	1
	Ans	(A) OR java.util (1 Mark for the correct answer)	

Section B
(Subjective Type Questions)

(30 Marks)

		Answer any 3 out of the given 5 questions on Employability Skills. Answer each question in 20-30 words.	3x2=6
7.		What is a Green Job ?	
	Ans	<p>A green job is defined as one that helps bring about and maintain transition to environmentally sustainable forms of production and consumptions. It cuts across all sectors energy material, water conservation, waste management and pollution control.</p> <p>OR</p> <p>Green jobs are the jobs that help protect the environment and support sustainable development.</p> <p>(2 Marks for any correct/relevant answer)</p> <p>OR</p> <p>Organic Farmers/Solar Panel Installers/Waste Management Engineers/Green Building Architects/Environmental Consultants/Green Vehicle Engineers</p> <p>(1 Mark for the any correct example/relevant example)</p>	2
8.		To create a digital presentation, suggest the names of any two popular presentation softwares.	2
	Ans	<ul style="list-style-type: none"> ● LibreOffice Impress ● MS PowerPoint ● OpenOffice Impress ● Google slides ● Prezi ● Apple Keynote 	

		<ul style="list-style-type: none"> ● Lotus Freelance <p>(2 Marks for any two correct answers /relevant answers)</p> <p>OR</p> <p>(1 Mark for any one correct answer /relevant answer)</p>	
9.		Briefly explain the following terms :	2
	Ans (a)	<p>Personality</p> <p>Personality: It is a cluster of thoughts, feelings and behaviours that make a person unique and different from others.</p> <p>Personality is a stable collection of characteristics - emotional, behavioral and mental traits.</p> <p>(1 Mark for the correct definition /relevant definition)</p>	
	(b)	<p>Personality traits</p> <p>Personality traits : These are defined as relatively lasting patterns of thoughts, feelings and behaviours that distinguish individuals from one another.</p> <p>According to trait theory , the five traits are - Extraversion(sociable,quiet), Agreeableness(Cooperative , warm) , Conscientiousness (hard working, organized), Emotional Stability(calm, self confident) and Openness(creative,curious) .</p> <p>(1 Mark for the correct definition /relevant definition)</p>	
10		Mention any four most common environmental barriers which an entrepreneur may face while running his/her venture.	2
	Ans	<ul style="list-style-type: none"> ● Lack of adequate resources or raw material ● Non-availability of skilled labour ● Lack of requisite machinery and other infrastructure ● Unavailability of monetary resources on time ● Natural disasters 	

		<ul style="list-style-type: none"> ● Climate change ● Pollution ● Global Warming <p>(½ Mark each for any correct environmental barrier /relevant answer)</p>	
11		Briefly explain any two factors that affect active listening.	2
	Ans	<p>The various factors that affect active listening are as follows:</p> <p>Eye contact : It is a form of body language. It is one of the most important aspects in the communication process. Maintaining eye contact with the person you are talking to sends a signal to the speaker that “Yes, I am talking to you or listening to you”. Avoiding eye contact could mean that you do not want to listen to the person speaking to you.</p> <p>Gestures : These indicate to the speaker if you are listening or not. Keep your hands and feet still while talking to someone.</p> <p>Avoiding distractions : You need to identify the things that distract you. You must physically remove the distractions in order to listen attentively. For example, reducing the ringtone of your mobile phone or switching it off while attending a meeting or listening to someone will avoid distraction. Another example is that you should avoid glancing at the wristwatch frequently.</p> <p>Giving feedback : Feedback can be positive or negative. But in both the cases, one needs to be polite so that the person to whom the feedback is being given is not hurt or offended.</p> <p>(2 Marks for any two correct factors /relevant factors)</p> <p>OR</p> <p>(1 Mark for any one correct factor /relevant factor)</p>	
		Answer any 3 out of the given 5 questions in 20-30 words each.	3x2=6

12		What will be the output of the following Java statements :	2
	Ans	(a) System.out.println ("30 + 20"); <u>Output:</u> 30 + 20 (1 Mark for any correct output)	
		(b) System.out.println ("Information Technology" + 802); <u>Output:</u> Information Technology802 (1 Marks for correct output)	
13		Write any two characteristics of Database Management System.	2
	Ans	<ul style="list-style-type: none"> • Self describing nature of database system. • Insulation between program & data. • Sharing of data. (2 Marks for any two correct / relevant characteristics) OR (1 Mark for any one correct / relevant characteristic)	
14		What is the purpose of % and _ (underscore) characters used with LIKE operator in SQL?	2
	Ans	% (percent) replaces zero or more number of characters. _ (underscore) replaces a single character OR Select * from teachers where name like "S%"; Select * from teachers where name like "S_____"; (2 Marks for both correct explanation) OR	

		(1 Mark for any one correct explanation) OR (½ Mark each for two correct examples using % or _)	
15		What is Java IDE ? Name any one commonly used Java IDE.	1+1
	Ans	<p>Java Integrated Development Environment (IDE) is software that comes equipped with a text editor and java compiler which simplify writing, compiling and executing java programs.</p> <p>Commonly used IDE are Netbeans, Blue J, Eclipse, etc.</p> <p>(1 Mark for the correct definition) (1 Mark for any one of the IDE's)</p>	
16		List any two ways in which database application is used in the Banking Sector.	2
	Ans	<p>Use of Database Application in Banking sector :</p> <ul style="list-style-type: none"> • To store information about customer, • For storing employees details, • To check and make banking transaction records. <p>(2 Marks for any two correct uses / relevant uses) OR (1 Mark for any one correct use / relevant use)</p>	
		Answer any 2 out of the given 3 questions in 30-50 words each.	3x2=6
17		Write a Java program to calculate and display the factorial of a number 5 using for loop.	3
	Ans	<pre>int f = 1; for(int i = 1; i <= 5; i++) { f = f * i; } System.out.println("Factorial is : " + f);</pre> <p>OR</p> <pre>int f = 1;</pre>	

		<pre>for(int i = 5; i >= 1; i--)</pre> <pre> {</pre> <pre> f = f * i;</pre> <pre> }</pre> <pre>System.out.println("Factorial is : " + f);</pre> <p><i>(½ Mark for initialization of f with 1)</i></p> <p><i>(1 mark for correct usage of for loop- initialization,condition and increment/decrement)</i></p> <p><i>(½ marks for the expression)</i></p> <p><i>(1 mark for output statement)</i></p>	
18		Explain the use of any three aggregate functions in SQL.	3
	Ans	<p>(i) SUM () : It finds the sum of all the values for a selected attribute which have numeric datatype.</p> <p>(ii) COUNT () : It is used to count the number of tuples.</p> <p>(iii) MAX () : It finds the maximum value out of the selected attribute which has a numeric datatype.</p> <p>(iv) MIN () : It finds the minimum value out of the selected attribute which has a numeric datatype.</p> <p>(v) AVG () : It finds the average value out of the selected attribute which has numeric datatype.</p> <p>OR</p> <ul style="list-style-type: none"> ● Select SUM(salary) from teachers; ● Select MAX(salary) from teachers; ● Select MIN(salary) from teachers; ● Select AVG(salary) from teachers; ● Select COUNT(name) from teachers; <p><i>(1 Mark each for any three correct functions)</i></p> <p>OR</p>	

		<i>(½ Mark each for any three correct examples without explanation)</i>	
19		Varun is the owner of New Trends Fashion Company that deals in garments. He wants to make a Database Application for his company. Suggest any six possible entities that can be used in the database for his website.	3
	Ans	<ul style="list-style-type: none"> ● Customer ● Stock ● Order ● Product ● Shipment ● Seller ● Employees ● Wishlist ● Suppliers ● Payroll <i>(½ Mark each for any six correct entities / relevant entities)</i>	
		Answer any 3 out of the given 5 questions in 50-80 words each.	3x4=12
20		<p>Consider the following string variables :</p> <p>String str1 = "Hello";</p> <p>String str2 = "Java Programming";</p> <p>Write the code statements for the following in Java :</p>	1+1+1+1
	(a)	<p>To display the string str1 into upper case.</p> <p>System.out.println(str1.toUpperCase());</p> <p><i>(1 Mark each for correct java code statement)</i></p> <p>OR</p> <p><i>(½ Mark each for mentioning the correct method name)</i></p> <p>OR</p>	

		<i>(½ Mark each for mentioning <code>System.out.println</code>)</i>	
	(b)	<p>To display the character at the index 6 in string str2.</p> <p><code>System.out.println(str2.charAt(6));</code></p> <p><i>(1 Mark each for correct java code statement)</i></p> <p>OR</p> <p><i>(½ Mark each for mentioning the correct method name)</i></p> <p>OR</p> <p><i>(½ Mark each for mentioning <code>System.out.println</code>)</i></p>	
	(c)	<p>To display the index of the first occurrence of letter 'l' in the string str1.</p> <p><code>System.out.println(str1.indexOf('l'));</code></p> <p><i>(1 Mark each for correct java code statement)</i></p> <p>OR</p> <p><i>(½ Mark each for mentioning the correct method name)</i></p> <p>OR</p> <p><i>(½ Mark each for mentioning <code>System.out.println</code>)</i></p>	
	(d)	<p>To display the string str1 after replacing letter 'l' with '*'.</p> <p><code>System.out.println(str1.replace('l','*'));</code></p> <p><i>(1 Mark each for correct java code statement)</i></p> <p>OR</p> <p><i>(½ Mark each for mentioning the correct method name)</i></p> <p>OR</p> <p><i>(½ Mark each for mentioning <code>System.out.println</code>)</i></p>	
21		Differentiate between Entry controlled loop and Exit controlled loop.	4
	Ans		

		<table><tr><th>Entry controlled loop</th><th>Exit controlled loop</th></tr><tr><td>Test condition is checked first and then loop body will be executed</td><td>Loop body will be executed first and the test condition is checked.</td></tr><tr><td>If the test condition is false, the loop body will not be executed.</td><td>If the test condition is false, the loop body will be executed at least once.</td></tr><tr><td>This loop is used when checking of test condition is mandatory before executing the loop body</td><td>This loop is used when checking the test condition is mandatory after executing the loop body.</td></tr><tr><td>Example - for loop and while loop.</td><td>Example is do..while loop.</td></tr></table> <p><i>(1 Mark for each correct comparison)</i></p>	Entry controlled loop	Exit controlled loop	Test condition is checked first and then loop body will be executed	Loop body will be executed first and the test condition is checked.	If the test condition is false, the loop body will not be executed.	If the test condition is false, the loop body will be executed at least once.	This loop is used when checking of test condition is mandatory before executing the loop body	This loop is used when checking the test condition is mandatory after executing the loop body.	Example - for loop and while loop.	Example is do..while loop.	
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22		Explain any four advantages of online learning.	4										
	Ans	<p>Advantages :</p> <ul style="list-style-type: none">● Easy to access as per convenience.● Reduced cost● Build confidence● Huge variety of options available● Better Time Management● Global Access & certification● Economical● Repetitive access● Advancement in career● Opportunity to learn new skills at any age & time● No discrimination of caste, gender and background● Customizable learning environment.● Multilingual Communication● Self-Paced											

		(4 Marks for any four correct / relevant advantages)																										
23		(a) What are the different ways to create threads in Java programming ? (b) With reference to Java programming language, define assertion. State any one way to write an assertion.	2 + 2																									
	Ans	(a) There are two ways to create threads in Java. 1. By extending the Thread class 2. By implementing the runnable interface (1 Mark each for mentioning the correct way)																										
		(b) An assertion is a useful mechanism for effectively identifying or detecting and correcting the logical errors in a program. There are two ways to write an assertion : assert expression; OR Assert expression1 : expression2 (1 Mark for correct definition) (1 Mark for writing any one assertion statement correctly)																										
24		Consider the given table GARMENT : <table><tr><td>GCODE</td><td>GNAME</td><td>SIZE</td><td>COLOUR</td><td>PRICE</td></tr><tr><td>111</td><td>TShirt</td><td>XL</td><td>Red</td><td>1400</td></tr><tr><td>112</td><td>Jeans</td><td>L</td><td>Blue</td><td>1600</td></tr><tr><td>113</td><td>Skirt</td><td>M</td><td>Black</td><td>1100</td></tr><tr><td>114</td><td>Ladies Jacket</td><td>XL</td><td>Blue</td><td>4000</td></tr></table>	GCODE	GNAME	SIZE	COLOUR	PRICE	111	TShirt	XL	Red	1400	112	Jeans	L	Blue	1600	113	Skirt	M	Black	1100	114	Ladies Jacket	XL	Blue	4000	1+1+1+1
GCODE	GNAME	SIZE	COLOUR	PRICE																								
111	TShirt	XL	Red	1400																								
112	Jeans	L	Blue	1600																								
113	Skirt	M	Black	1100																								
114	Ladies Jacket	XL	Blue	4000																								

		<table><tr><td>115</td><td>Trousers</td><td>L</td><td>Brown</td><td>1500</td></tr><tr><td>116</td><td>Ladies Top</td><td>L</td><td>Pink</td><td>1200</td></tr></table> <p>Write SQL commands for the following:</p>	115	Trousers	L	Brown	1500	116	Ladies Top	L	Pink	1200	
115	Trousers	L	Brown	1500									
116	Ladies Top	L	Pink	1200									
	Ans	<p>(a) To display names of those garments that are available in ‘L’ size Select GNAME from GARMENT where SIZE = ‘L’; <i>(1 Mark for the correct Query)</i> OR <i>(1/2 Mark for correct Select and ½ Mark for correct Where clause)</i></p>											
		<p>(b) To change the colour of garments with code as 115 to ”Orange” . UPDATE GARMENT set COLOUR=‘Orange’ where GCODE=115; <i>(1 Mark for the correct Query)</i> OR <i>(1/2 Mark for correct Update .. Set and ½ Mark for correct Where clause)</i></p>											
		<p>(c) To add a new row with the following data : GCODE = 117 GNAME = Kurta SIZE = M COLOUR = White PRICE = 100 INSERT INTO GARMENT values (117, ‘Kurta’, ‘M’, ‘White’, 1000); <i>(1 Mark for the correct Query)</i> OR <i>(1/2 Mark for correct Insert and ½ Mark for correct values)</i></p>											
		<p>(d) To remove the column ‘COLOUR’ from the table ‘GARMENTS’ ALTER TABLE GARMENT DROP COLUMN COLOUR; OR ALTER TABLE GARMENT DROP COLOUR;</p>											

		<p><i>(1 Mark for the correct Query)</i></p> <p>OR</p> <p><i>(1/2 Mark for correct Alter and ½ mark for correct drop)</i></p> <p>OR</p> <p><i>(1 mark, if written as error because of wrong table name)</i></p>	
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