Name of the Student: _____   Subject: Information Technology (402)

Class: X & Div: A   Date: 08/10/2025

Roll No.: _____

Time: 90 Minutes

Marks Obtained	
Total Marks	40

_____   _____   _____
Invigilator   **Examiner**   **Moderator**

General Instructions:

1. Please read the instructions carefully.

2. This Question Paper consists of 10 Questions with two sections: Section A & Section B.

3. Section A Has Objective type questions whereas Section B contains Case-based questions.

4. All the questions are compulsory.

SECTION A: (OBJECTIVE TYPE QUESTIONS)

Q.1)	Answer any 4 out of the given 5 questions (1 x 4 = 4 marks)	
i)	Sarah, who dislikes public speaking, agrees to give a presentation at a conference. She agrees to do it primarily because her manager promised her a promotion and a significant bonus if the presentation is successful. What type of motivation is pushing Sarah to take on this difficult task? a) Intrinsic Motivation b) Extrinsic Motivation c) Both intrinsic and external d) Self-Awareness	1
ii)	Meena's handcrafted jewelry business received no orders for the first six months, despite her working late every night to perfect her designs and update her online shop. Instead of closing down, she used the lack of sales as feedback, refined her product line based on trends, and started attending local craft fairs every weekend. She _____. a) Is a poor planner b) Does not manage stress well c) Does not give up d) Thinks before making a decision	1
iii)	Sanjay checks his computer's storage space and sees that his main drive is nearly full, which is causing applications to launch slowly. He finds that his Downloads folder, Recycle Bin, and temporary file locations are filled with files he no longer needs. Which maintenance utility should Sanjay run to quickly free up disk space and improve launch times? a) System Restore b) Disk Cleanup Utility c) Defragmenting the hard disk d) Backing up the system files	1

iv)	An entrepreneur, Jack, identifies a lower-cost raw material supplier in a different region and opts to switch from his current, more expensive supplier. This action directly demonstrates which core function of entrepreneurship?" **a)** Makes decisions b) Divides income c) Takes risk d) Innovation	1
v)	Pranab has arranged multiple independent shapes to form a complex drawing within his document. To ensure these shapes maintain their relative positions and are treated as a single, movable, and scalable unit, which software feature should he use?" a) Ordering drawing objects b) Posterize c) Transparency d) Grouping drawing objects	1

Q.2)	Answer any 5 out of the given 6 questions- (1*5= 5 marks)	
i)	An employee repeatedly uses a poorly designed, non-adjustable office chair that forces them to sit in an awkward, hunched-over posture while typing for eight hours a day. Over time, they begin to develop chronic lower back and wrist pain. What is the source of this hazard? a) Biological Hazard b) Ergonomic Hazard c) Physical Hazard d) Chemical Hazard	1
ii)	An employee is creating a legal brief where all citations in the footnotes must be 9pt font and Justified alignment. Which type of style should be used to ensure every footnote text block is formatted identically? a) List Style b) Paragraph Style c) Page Style d) Character Style	1
iii)	A warehouse employee uses a forklift to stack pallets. They notice that the tires are bald and the brakes are soft. If an accident were to occur due to faulty equipment, which hazard type would be the primary source of the acute injury? a) Electrical Hazard b) Safety Hazard c) Psychological Hazard d) Ergonomic Hazard	1
iv)	A custodian fails to post a "Wet Floor" sign after mopping a marble hallway in an office building. A worker rushing to a meeting slips on the wet surface and falls, breaking their wrist. What type of hazard is the initial cause of this injury? a) Ergonomic Hazard b) Chemical Hazard c) Biological Hazard d) Safety/Slip Hazard	1
V)	An author is writing a manual and wants to insert an icon right next to a specific heading, treating the icon essentially like a single, large character within the line of text. If the text moves, the icon should move with it, maintaining its position on the baseline. Which Text Wrapping setting is required? a) Behind Text b) Wrap Through c) In Line with Text d) Tight	1
vi)	To create a softer, subtler effect, an image needs to be partially see-through so that some of the text underneath it remains visible. Which property must be adjusted for the image? a) Rotation b) Saturation c) Transparency d) Sharpening	1

Q.3)	Answer any 5 out of the given 6 questions-	(1*5= 5 marks)
i)	A book editor, David, has created several dedicated text boxes or Frames within his document to hold side notes and captions. He wants to insert an image that is tightly linked only to the specific text box containing its caption, ensuring the image and its caption box always travel together. Which anchoring option should he use for the image? a) To Page b) To Paragraph c) As Character d) To Frame	1
ii)	After failing a test, Maya felt discouraged. Instead of giving up, she created a detailed study plan, set a clear goal to score 90% on the next exam, and placed an inspirational quote on her desk. She began studying immediately without anyone telling her to. Which component of self-management is Maya demonstrating? a) Self-Motivation b) Self-Discipline c) Self-Awareness d) Self-Regulation	1
iii)	Maria studies hard for her IT exam primarily because her parents promised her a new tablet if she scores above 95%. Which type of motivation is driving Maria's study habits? a) Intrinsic Motivation b) Extrinsic Motivation c) Self-Awareness d) Self-Regulation	1
iv)	Priya, overwhelmed by a large assignment, breaks the task down into five smaller, manageable steps. She schedules these steps into her calendar over the next week and focuses only on completing the first step today. This action directly supports which two related self-management skills? a) Self-Motivation and Self-Discipline b) Self-Awareness and Self-Regulation c) Goal Setting and Time Management d) Interpersonal Skills and Communication	1
v)	Neeti uses her computer for all her schoolwork. She realizes that a hard drive failure or accidental deletion could lead to the permanent loss of all her data. To safeguard her work, she regularly copies all her important files to an external hard drive and a cloud storage service. Which key ICT skill is Neeti demonstrating? a) Software Installation and Removal b) Data Backup and Restoration c) Network Troubleshooting d) Using an Antivirus Program	1
vi)	During editing, Akash needs to highlight every instance of a technical term in his document by making it bold, italic, and red, without changing the font size or line spacing of the surrounding text. Which type of style should he create and apply to only the selected words? a) Character Style b) Paragraph Style c) Page Style d) List Style	1

Q.4)	Answer the following questions	(1 x 5 = 5 marks)
i)	While setting up her new email account, Kavya uses her date of birth as the password. Her friend advises her to change it immediately to a mix of upper and lower-case letters, numbers, and special characters (!@#). Which crucial aspect of ICT security and online safety is Kavya's friend helping her with? a) Data Compression b) Browser History Clearance c) Creating Strong and Secure Passwords d) Managing Hardware Drivers	1
ii)	A university blocks all incoming and outgoing network traffic that doesn't belong to a list of pre-approved applications or services, ensuring that only necessary and safe data exchanges occur between the campus network and the external internet. Which essential ICT safety practice is the university utilizing?	1

	a) Physical Access Control b) Data Archiving c) Firewall Configuration/Usage d) Data Compression	
iii)	Maria finds that her computer takes an unusually long time to boot up and open large files. A technician explains that the files on her hard drive are scattered in non-contiguous blocks, requiring the disk head to travel excessively. What utility software should Maria run to reorganize file pieces into continuous blocks and improve performance? a) Disk Defragmenter b) Antivirus Scanner c) System Monitor d) File Compressor	1
iv)	An HR manager wants to create a new "Employee Review" document, ensuring that certain sections (like 'Performance Goals' and 'Areas for Improvement') are always present and are consistently styled with specific fonts and spacing. Which feature, when created, contains the necessary text, formatting, and layout structure that can be reused countless times? a) A Macro b) A Cross-Reference c) A Master Document d) A Template	1
v)	When his delivery truck breaks down, potentially causing him to miss several critical deliveries, an independent logistics provider immediately contacts a competitor to rent a spare truck, pays the necessary fee, and manages to complete all deliveries on time. Which entrepreneurial quality is demonstrated in this moment? a) Self-Motivation b) Initiative c) Record Keeping d) Efficiency	1

Q.5)	Answer the following questions (1 x 5 = 5 marks)	
i)	A restaurant owner's chief supplier unexpectedly cancels their contract just before a busy holiday season. The owner immediately starts calling various distant farms and brokers, working through the night to secure alternative, high-quality ingredients from multiple new sources. Which entrepreneurial quality is the owner demonstrating? a) Goal-Setting b) Networking c) Problem Solving d) Risk Aversion	1
ii)	Using the EMPLOYEE table (columns: EmpID, Name, Department, Salary), the IT manager wants to display the Name and Salary of every employee, but with the results sorted in ascending order based on their Salary. Which clause is needed to sort the result set? a) GROUP BY Salary b) WHERE Salary ASC c) ORDER BY Salary ASC d) SORT BY Salary	1
iii)	A table named Contacts contains a column MobileNumber. The company's policy dictates that every contact record *must* have a value entered for the mobile number; it is not optional. Which constraint is necessary to enforce this requirement? a) Unique b) Default c) Not Null d) Primary Key	1
iv)	In a student attendance system, the ATTENDANCE table has a column StudentID. This column links to the StudentID (Primary Key) in the master STUDENTS table. This relationship prevents logging attendance for a student ID that is not registered. What term is used to describe the key in the ATTENDANCE table? a) Primary Key b) Candidate Key c) Foreign Key d) Unique Key	1
v)	A library database has two tables: 'ISSUED_BOOKS' with a column 'AccessionNo', and 'MASTER_BOOKS' where 'AccessionNo' is the Primary Key. To prevent a librarian from issuing a book whose 'AccessionNo' does not exist in the 'MASTER_BOOKS' table, which constraint must be placed on the 'AccessionNo' column in the	1

| | 'ISSUED_BOOKS' table?
 a) Entity Integrity   b) Check Constraint <br> c) Domain Integrity   d) Referential Integrity | |

SECTION B: (CASE BASED QUESTIONS)

Answer any 4 out of the given 5 questions.   **(4*4= 16 marks)**

Q.6)	Ms. Preeti is designing the new monthly school e-newsletter using LibreOffice Writer. The newsletter is eight pages long and features articles written by different students. She wants to ensure that all article headings look identical, and the main body text is formatted uniformly. To make navigation easy, she wants a clickable index at the beginning that lists all articles and automatically updates if she adds or removes a page. She also wants to include a motivational quote image on page 3 that remains fixed relative to the page margin, even if the surrounding text is edited. **i)** Which feature should Ms. Preeti use to apply the uniform look (font, size, color) to all the main article headings throughout the eight-page document quickly and consistently? Mention the issue and justify the reason in few lines. Ans- _____ _____ _____ **ii)** The clickable index Ms. Preeti wants to create is called the Table of Contents (TOC). For the TOC to function correctly and update automatically, what must she first apply to all her article headings?? Mention the issue and justify your answer in few lines. Ans- _____ _____ _____	**2+2**
Q.7)	Aarav is a Class 10 student who noticed a problem in his neighborhood: people often struggle to find reliable, local service providers like electricians, plumbers, and home tutors quickly. He decided to create a mobile application called **'LocateIT'**. Aarav spent three months learning to code and developing a basic, working version of the app. He then approached 10 local service providers, convinced them of the app's potential, and signed them up by promising the first month free. His initial investment was zero, relying solely on his IT skills and perseverance. His goal is to eventually charge a small commission on every successful booking. **i)** Aarav identified a problem (difficulty finding local services) and developed a solution. Which core Entrepreneurial Skill does this ability to see an opportunity and act upon it represent? Justify your answer. a) Risk Management b) Initiative and Opportunity Seeking c) Financial Literacy d) Leadership Ans- _____	**2+2**

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ii) Developing the app over three months with no initial funding shows Aarav's commitment. If the app fails in the first year, Aarav's IT skills and knowledge gained from this project are still valuable. This demonstrates which characteristic of an entrepreneur? Justify your answer.

Ans- _____

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| Q.8) | Anjali is a developer creating a new mobile application for managing school attendance. She has to decide between two approaches for managing the application's data storage on the school's server:

1. **Approach A (Inefficient):** Write code that constantly polls the server every few seconds, even when no new data is available, and uses complex, unoptimized algorithms that take a long time to process data.

2. Approach B (Efficient): Write optimized code that uses event-driven updates (only checks when a change is notified) and employs efficient algorithms, which significantly reduces the server's CPU usage and time it spends running. Anjali realizes that while Approach A is quicker to code initially, Approach B will result in lower energy bills and less heat generation from the server over the long term.

i) Anjali's choice of **Approach B** over Approach A is an application of which key Green Skill concept in the field of IT? Justify your answer

a) E-Waste Management   b) Green Procurement
c) Green Coding/Software Efficiency   d) Renewable Energy Integration

Ans- _____

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ii) If the software she develops is eventually used by 1,000 schools, which of the following is the most significant environmental benefit of choosing Approach B? Justify your answer.

a) Less screen time for students   b) Lower cost of mobile phones for users
c) Reduced overall electricity consumption for running servers across all schools
d) More job opportunities for developers.

Ans- _____

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_____ | **2+2** |
| Q.9) | Ms. Sharma, the IT teacher at Greenwoods High, notices that the school consumes thousands of sheets of paper weekly for assignments, notices, and tests. She proposes a | **2+2** |

"Paperless Classroom Initiative" using technology. Instead of printing, all assignments will be submitted via the school's Learning Management System (LMS). Teachers will use digital annotation tools to grade, and all student records will be digitized and stored on a cloud server. This shift requires teachers and students to develop new digital habits. The school expects a significant reduction in waste and printing costs.

i) The school's initiative of shifting from paper-based work to digital storage and submission directly contributes to which primary aspect of a Green Economy? Justify your answer.

a) Renewable Energy Generation   b) Resource Efficiency and Waste Reduction

c) Green Building Construction   d) Water Pollution Control

Ans-_____

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ii) The digitized student records are stored on a cloud server. This is an example of Cloud Computing. From an environmental perspective, how is using cloud services often considered 'Greener' than every user having their own local server? Justify your answer.

a) Cloud servers use less internet bandwidth.   b) Cloud servers are always free of cost.

c) Cloud providers can optimize energy use and cooling for thousands of users efficiently in one location.   d) Data on the cloud never gets corrupted.

Ans-_____

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Q.10)	Vikram is presenting a new IT solution to a panel of school principals. He starts his presentation by maintaining eye contact with the audience and speaking clearly. However, halfway through, he notices that two principals have folded their arms and are frowning slightly. Vikram immediately pauses, asks, "Is everything clear, or should I go over the previous point again?", and then briefly summarizes the previous point before continuing. This action helped re-engage the audience and allowed him to complete the presentation successfully. **i)** The folded arms and slight frowns observed by Vikram are examples of _____, which is a form of non-verbal communication. Justify your answer. a) Tone b) Body Language c) Written Signal d) Noise Ans _____ _____ _____ **ii)** Vikram's decision to pause, ask a question, and re-summarize based on the audience's non-verbal cues demonstrates his ability to_____. Justify your answer. a) Receive and adapt to non-verbal feedback b) Ignore the audience c) Change the subject entirely d) Read minds.	**2+2**

Ans_____

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