MATH LOVE INSTITUTE

Annual Examination 2025-26

Class: VII | Subject: Computer Science (SET - 5)

Time: 3 Hours | Maximum Marks: 80

Student Name:	_____
Roll Number:	_____
Date:	_____

General Instructions:

1. All questions are compulsory.
2. The question paper is divided into 5 sections: A, B, C, D, and E.
3. Section A: Multiple Choice Questions (1 mark each) - 15 marks
4. Section B: Fill in the Blanks / True-False (1 mark each) - 15 marks
5. Section C: Short Answer Questions (2 marks each) - 20 marks
6. Section D: Long Answer Questions (3 marks each) - 15 marks
7. Section E: Practical/Programming Questions (5 marks each) - 15 marks
8. Write neatly and legibly.
9. For programming questions, write complete code with proper syntax.

SECTION A - Multiple Choice Questions (15 Marks)

Q1. Which Python function is used to find the data type of a variable? **[1]**

(a) print()

(b) input()

(c) type()

(d) int()

Q2. Which HTML tag is used to make text italic? **[1]**

(a) <b>

(b) <u>

(c) <i>

(d)

Q3. What does FTP stand for? **[1]**

(a) File Transfer Protocol

(b) File Type Program

(c) Fast Transfer Process

(d) Free Text Protocol

Q4. In Python, which function converts a text input into an integer? **[1]**

(a) str()

(b) float()

(c) input()

(d) int()

Q5. Which HTML tag is used to display text in bold? **[1]**

(a) <i>

(b) <b>

(c) <u>

(d) <s>

Q6. What is Cloud Computing? **[1]**

(a) Computing using weather forecasts

(b) Storing and accessing data over the internet using remote servers

(c) A type of computer hardware

(d) A programming language

Q7. In Python, what is the output of: print(type(3.14))? **[1]**

(a) <class 'int'>

(b) <class 'str'>

(c) <class 'float'>

(d) <class 'bool'>

Q8. Which HTML attribute is used to underline text using the <font> tag style? **[1]**

(a) color

(b) size

(c) face

(d) style

Q9. Which of the following is an example of a Robot that uses AI? **[1]**

(a) A calculator

(b) A fan

(c) Sophia (the humanoid robot)

(d) A lightbulb

Q10. In Python, what will be the output of: print(7 % 2)? **[1]**

(a) 3

(b) 0

(c) 1

(d) 2

Q11. Which HTML tag is used to create a dropdown list (select box)? **[1]**

(a) <input>

(b) <dropdown>

(c) <select>

(d) <list>

Q12. What does DNS stand for in networking? **[1]**

(a) Data Network System

(b) Domain Name System

(c) Digital Name Server

(d) Direct Name Service

Q13. In Python, which function converts a number into a text (string)? **[1]**

(a) int()

(b) float()

(c) str()

(d) type()

Q14. What is a Wiki? **[1]**

(a) A type of video streaming platform

(b) A website where anyone can read and write information collaboratively

(c) An email service provider

(d) A social media app

Q15. Which of the following is NOT a cloud storage service? **[1]**

(a) Google Drive

(b) OneDrive

(c) Pendrive

(d) Dropbox

SECTION B - Fill in the Blanks / True-False (15 Marks)

Q16. Fill in the Blank: The _____ function in Python is used to display output on the screen. **[1]**

Q17. Fill in the Blank: FTP is used to _____ files from one computer to another over the internet. **[1]**

Q18. True or False: The <select> tag in HTML is used to create a dropdown list. _____ **[1]**

Q19. Fill in the Blank: _____ is a website where users can collaboratively create and edit information, like an encyclopedia. **[1]**

Q20. True or False: Google Drive is an example of cloud storage. _____ **[1]**

Q21. Fill in the Blank: In Python, the _____ function converts a value into a decimal number (floating point). **[1]**

Q22. True or False: The <i> tag in HTML is used to display text in bold. **[1]**

_____

Q23. Fill in the Blank: _____ is a system that converts website names (like www.google.com) into IP addresses. **[1]**

Q24. True or False: Robotics is a field of AI where machines are designed to perform physical tasks automatically. _____ **[1]**

Q25. Fill in the Blank: In Python, _____ is used to store text data (words and sentences). **[1]**

Q26. True or False: A Blog is an online diary or journal where a person can regularly write and share their thoughts. _____ **[1]**

Q27. Fill in the Blank: The <option> tag in HTML is used inside the _____ tag to define the choices in a dropdown list. **[1]**

Q28. True or False: In Python, int() function can convert a decimal number like 3.9 into 3. _____ **[1]**

Q29. Fill in the Blank: _____ computing allows users to store and access data and software on remote servers instead of their own computer. **[1]**

Q30. True or False: Speech Recognition is an AI technology that converts spoken words into written text. _____ **[1]**

SECTION C - Short Answer Questions (20 Marks)

Q31. What is the difference between int(), float(), and str() functions in Python? Give one example of each. **[2]**

Q32. What is the purpose of the <select> and <option> tags in HTML? Write the code to create a dropdown with three choices: Red, Green, Blue. **[2]**

Q33. What is Cloud Computing? Name two examples of cloud services. **[2]**

Q34. What is the difference between WWW and the Internet? Explain in your own words. **[2]**

Q35. What is Robotics in Artificial Intelligence? Give two real-life examples of robots. **[2]**

Q36. Write a Python program to check if a number entered by the user is even or odd. **[2]**

Q37. What is a Blog? What is the difference between a Blog and a Wiki? **[2]**

Q38. What is Speech Recognition in AI? Name two devices or applications that use speech recognition. **[2]**

Q39. Explain the purpose of the <font> tag in HTML. Write an example to display text in red color with font size 5. **[2]**

Q40. What is FTP? How is FTP different from browsing a website? **[2]**

SECTION D - Long Answer Questions (15 Marks)

Q41. Write a Python program to calculate the BMI (Body Mass Index) of a person and display the health category. The program should: **[3]**

- Take the person's name, weight (in kg), and height (in cm) as input
- Calculate BMI using the formula: BMI = weight / (height in meters)²
  (Height in meters = height in cm / 100)
- Display the category based on BMI value:
  BMI < 18.5 → Underweight
  BMI between 18.5 and 24.9 → Normal
  BMI between 25 and 29.9 → Overweight
  BMI ≥ 30 → Obese

Q42. Write complete HTML code to create a "Contact Us" form for a school website. The form must include: **[3]**

- A heading "Contact Us"
- A text input field for "Your Name"
- An email input field for "Your Email"
- A dropdown (select) list for "Subject" with options: Admission, Fee, Result, Other
- A textarea for "Your Message"
- A submit button

Q43. Explain the following three internet services in detail with examples: **[3]**

- Cloud Computing
- FTP (File Transfer Protocol)
- Blogging

For each service, explain what it is, how it is used, and give one real-life example.

Q44. Explain the following three domains of Artificial Intelligence with real-life examples: **[3]**

- Robotics
- Speech Recognition
- Expert Systems

Q45. Explain the following HTML formatting tags with their purpose and one example each: **[3]**

- <b> tag
- <i> tag
- <u> tag
- <font> tag (with color and size attributes)
- <marquee> tag

SECTION E - Practical/Programming Questions (15 Marks)

Q46. Write a Python program that checks properties of a number entered by the user. The program should: **[5]**

- Take a number as input from the user
- Check and display whether the number is: Positive or Negative or Zero
- Check and display whether the number is: Even or Odd
- Check and display whether the number is: a Perfect Square or Not
- Display all results in a formatted output
- Use if-elif-else for each check

Q47. Write a Python program that acts as a simple "Number Guessing Game" (without random — use a fixed secret number). The program should: **[5]**

- Set a secret number (e.g., 42)
- Ask the user to guess the number
- If the guess is correct — print "Correct! Well done!"
- If the guess is too high — print "Too high! Try a smaller number."
- If the guess is too low — print "Too low! Try a bigger number."
- Ask the user if they want to guess again (Yes/No)
- If No — print a goodbye message with the correct number

Q48. Create a complete HTML webpage for "School Contact Form" that includes: **[5]**

- Page title: "School Contact Form"
- A centered main heading with a colored background
- A student information section with a table (using colspan for the header) showing: Name, Class, Roll Number
- A contact form section with: Name input, Email input, a <select> dropdown for "Reason" (with at least 4 options), a <textarea> for message, and a Submit button
- A horizontal line between the student info table and the form
- A footer with school name and a hyperlink
- A background color for the entire page

ANSWER KEY AND MARKING SCHEME

Class 7 Computer Science - Annual Examination 2025-26 (Set 5)

Section A - Multiple Choice Questions Answers

Q1. Answer: (c) type()

Explanation: The type() function in Python returns the data type of a variable or value. For example: type(10) returns <class 'int'>, type("hello") returns <class 'str'>, and type(3.14) returns <class 'float'>.

> *Marking: 1 mark for correct answer*

Q2. Answer: (c)

Explanation: The tag in HTML is used to display text in italic style. Example: This is italic. Note: <b> is for bold, <u> is for underline. The tag also creates italic text but is meant for "emphasis" (semantic meaning).

> *Marking: 1 mark for correct answer*

Q3. Answer: (a) File Transfer Protocol

Explanation: FTP stands for File Transfer Protocol. It is a network protocol used to transfer files between computers over the internet. It allows users to upload files to a server or download files from a server.

> *Marking: 1 mark for correct answer*

Q4. Answer: (d) int()

Explanation: The int() function in Python converts a value into an integer (whole number). It is commonly used with input() to convert user input (which is always text) into a number. Example: age = int(input("Enter age: "))

> *Marking: 1 mark for correct answer*

Q5. Answer: (b)

Explanation: The tag in HTML makes text bold. Example: Important displays the word "Important" in bold. Other tags: <i> = italic, <u> = underline, <s> = strikethrough.

> *Marking: 1 mark for correct answer*

Q6. Answer: (b) Storing and accessing data over the internet using remote servers

Explanation: Cloud Computing is a technology that allows users to store data, run software, and access services over the internet using powerful remote servers (called "the cloud") instead of installing everything on their own computer. Examples: Google Drive, AWS, Microsoft Azure.

> *Marking: 1 mark for correct answer*

Q7. Answer: (c) <class 'float'>

Explanation: 3.14 is a decimal number, so its data type is 'float' (floating-point number). The type() function returns <class 'float'>. In Python: integers (like 10) are 'int', decimals (like 3.14) are 'float', text (like "hello") is 'str'.

> *Marking: 1 mark for correct answer*

Q8. Answer: (d) style

Explanation: The 'style' attribute in HTML is used to apply inline CSS formatting to any element, including underlining text. Example: Text . The <font> tag itself uses 'color', 'size', and 'face' as its own attributes.

> *Marking: 1 mark for correct answer*

Q9. Answer: (c) Sophia (the humanoid robot)

Explanation: Sophia is a famous humanoid robot created by Hanson Robotics that uses AI to understand and respond to human conversations, recognize faces, and express emotions. A calculator, fan, and lightbulb are simple machines/devices — they do NOT use AI.

> *Marking: 1 mark for correct answer*

Q10. Answer: (c) 1

Explanation: The modulus operator (%) returns the remainder after division. 7 ÷ 2 = 3 with a remainder of 1. So 7 % 2 = 1. This is also used to check if a number is even or odd: if number % 2 == 0, the number is even.

> *Marking: 1 mark for correct answer*

Q11. Answer: (c) <select>

Explanation: The <select> tag in HTML creates a dropdown list (also called a select box or combo box). Each option in the dropdown is defined using the <option> tag inside the <select> tag. It is commonly used in web forms.

> *Marking: 1 mark for correct answer*

Q12. Answer: (b) Domain Name System

Explanation: DNS stands for Domain Name System. It acts like the internet's "phone book" — it converts human-friendly website names (like www.google.com) into machine-friendly IP addresses (like 142.250.80.46) so that computers can find and connect to websites.

> *Marking: 1 mark for correct answer*

Q13. Answer: (c) str()

Explanation: The str() function in Python converts any value (numbers, booleans, etc.) into a string (text). Example: str(42) converts the number 42 into the text "42". This is useful when you need to join a number with other text.

> *Marking: 1 mark for correct answer*

Q14. Answer: (b) A website where anyone can read and write information collaboratively

Explanation: A Wiki is a type of website that allows multiple users to collaboratively create, edit, and share information. The most famous example is

Wikipedia, where anyone can write and edit articles about any topic. The word "Wiki" comes from the Hawaiian word meaning "quick".

> *Marking: 1 mark for correct answer*

Q15. Answer: (c) Pendrive

Explanation: A Pendrive (USB flash drive) is a physical hardware device used for offline file storage — it is NOT a cloud storage service. Google Drive (by Google), OneDrive (by Microsoft), and Dropbox are all cloud storage services that store files on remote internet servers.

> *Marking: 1 mark for correct answer*

Section B - Fill in the Blanks / True-False Answers

Q16. Answer: print

Explanation: The print() function in Python is used to display text, numbers, or any output on the screen. Example: print("Hello World") displays "Hello World" on the screen.

> *Marking: 1 mark for correct answer*

Q17. Answer: transfer / send and receive

Explanation: FTP (File Transfer Protocol) is specifically designed to transfer (upload or download) files between computers over the internet. It was one of the earliest internet protocols created for this purpose.

> *Marking: 1 mark for correct answer*

Q18. Answer: True

Explanation: The <select> tag creates a dropdown list in HTML forms. Inside it, each choice is defined using <option> tags. Example: <select><option>Choice 1</option></select>

> *Marking: 1 mark for correct answer*

Q19. Answer: Wiki (Wikipedia)

Explanation: A Wiki is a collaborative website where multiple users can create and edit articles together. Wikipedia is the most well-known example — it is a free online encyclopedia with millions of articles written by volunteers around the world.

> *Marking: 1 mark for correct answer*

Q20. Answer: True

Explanation: Google Drive is one of the most popular cloud storage services. It allows users to store files (documents, photos, videos) on Google's remote servers and access them from any device with an internet connection. Free storage limit is 15 GB.

> *Marking: 1 mark for correct answer*

Q21. Answer: float

Explanation: The float() function converts a value into a floating-point (decimal) number. Example: float("3.14") converts the text "3.14" into the number 3.14. float(5) converts the integer 5 into 5.0.

> *Marking: 1 mark for correct answer*

Q22. Answer: False

Explanation: The <i> tag is used to display text in ITALIC, not bold. The <b> tag is used for bold text. Common confusion: <b> = Bold, <i> = Italic, <u> = Underline.

> *Marking: 1 mark for correct answer*

Q23. Answer: DNS (Domain Name System)

Explanation: DNS (Domain Name System) converts domain names (like www.google.com) into IP addresses (like 142.250.80.46). Without DNS, users would have to remember the IP address of every website they want to visit.

> *Marking: 1 mark for correct answer*

Q24. Answer: True

Explanation: Robotics is a branch of AI and engineering that deals with designing, building, and programming machines (robots) that can perform physical tasks automatically. Robots use sensors, motors, and AI to interact with the real world.

> *Marking: 1 mark for correct answer*

Q25. Answer: String (str)

Explanation: In Python, a String (str) is used to store text data — words, sentences, or any sequence of characters. Strings are written inside quotes: "Hello" or 'World'. Example: name = "Rahul" stores the text "Rahul" as a string.

> *Marking: 1 mark for correct answer*

Q26. Answer: True

Explanation: A Blog (short for "weblog") is an online journal or diary where a person regularly writes and publishes posts about any topic — personal experiences, news, opinions, or tutorials. Popular blogging platforms include WordPress, Blogger, and Medium.

> *Marking: 1 mark for correct answer*

Q27. Answer: <select>

Explanation: The <option> tag is always used INSIDE a <select> tag to define the individual choices in a dropdown list. Each <option> represents one item that the user can select from the dropdown.

> *Marking: 1 mark for correct answer*

Q28. Answer: True

Explanation: The int() function in Python truncates (removes) the decimal part and converts the number to the nearest whole number towards zero. So int(3.9) becomes 3, int(7.1) becomes 7, and int(-2.8) becomes -2.

> *Marking: 1 mark for correct answer*

Q29. Answer: Cloud

Explanation: Cloud Computing allows users to store files, run applications, and access services on remote servers over the internet instead of on their own

local computer. The term "cloud" refers to the internet infrastructure that provides these services.

> *Marking: 1 mark for correct answer*

Q30. Answer: True

Explanation: Speech Recognition is an AI technology that converts spoken words (audio) into written text. It is used in virtual assistants like Siri, Google Assistant, and Alexa, as well as in speech-to-text apps and voice-controlled devices.

> *Marking: 1 mark for correct answer*

Section C - Short Answer Questions Answers

Q31. Answer: Difference between int(), float(), and str() functions

Function	Purpose	Example	Output
int()	Converts a value into a whole number (integer)	int("25") int(3.9)	25 3
float()	Converts a value into a decimal number (floating point)	float("3.14") float(5)	3.14 5.0
str()	Converts a value into text (string)	str(42) str(3.14)	"42" "3.14"

Key Point: These functions are called "type conversion" or "type casting" functions because they change the data type of a value from one type to another.

> *Marking: 0.5 marks for each function's correct explanation and example (2 marks total)*

Q32. Answer: Purpose of <select> and <option> tags with code

Purpose: The <select> tag creates a dropdown list (also called a combo box or select box) in HTML forms. It allows users to select one option from a list of predefined choices. Each choice is defined using the <option> tag inside <select>.

HTML Code:

```
<select>
    <option value="red">Red</option>
    <option value="green">Green</option>
    <option value="blue">Blue</option>
</select>
```

Output: This displays a dropdown box. When clicked, the user sees three choices: Red, Green, Blue — and can select one.

> *Marking: 1 mark for explanation, 1 mark for correct code*

Q33. Answer: Cloud Computing and examples

Definition: Cloud Computing is a modern technology that allows users to store data, run software applications, and access computing resources over the internet using powerful remote servers — instead of relying on their own local computer's hardware. The "cloud" refers to the internet-based infrastructure that provides these services on demand.

Two Examples of Cloud Services:

1. **Google Drive:** A cloud storage service by Google that allows users to store documents, photos, and videos online and access them from any device.
2. **Microsoft Azure:** A cloud computing platform by Microsoft used by businesses to run applications, store data, and manage IT services remotely.

Marking: 1 mark for definition, 1 mark for two examples

Q34. Answer: Difference between WWW and the Internet

Feature	Internet	WWW (World Wide Web)
What is it?	A global network that connects millions of computers around the world	A system of web pages and websites that are accessed using the Internet
Started	Started in 1969 (as ARPANET)	Invented in 1989 by Tim Berners-Lee
Relationship	The Internet is the larger network — the "highway"	WWW is one service that runs ON the Internet — like "cars on the highway"
Example	Email, FTP, video streaming all use the Internet	Websites like google.com, facebook.com are part of the WWW

Simple way to remember: The Internet is the network; WWW is a service that uses that network to share web pages.

Marking: 1 mark for Internet explanation, 1 mark for WWW explanation and difference

Q35. Answer: Robotics in AI and examples

Definition: Robotics is a branch of Artificial Intelligence combined with engineering that deals with the design, creation, and programming of robots — machines that can perform physical tasks automatically. AI-powered robots can sense their environment, make decisions, and interact with the physical world.

Two Real-Life Examples of Robots:

1. **Industrial Robots:** Robots used in car manufacturing factories (like those by Toyota or Tesla) that can automatically weld, paint, and assemble car parts with high precision — much faster and more accurately than humans.
2. **Sophia (Humanoid Robot):** A robot created by Hanson Robotics that can hold conversations, recognize faces, and express facial emotions using AI and Natural Language Processing.

> *Marking: 1 mark for definition, 0.5 marks each for two examples (2 marks total)*

Q36. Answer: Python program to check even or odd

```
# Program to check if a number is even or odd

number = int(input("Enter a number: "))

if number % 2 == 0:
    print(number, "is an EVEN number")
else:
    print(number, "is an ODD number")
```

Sample Output:

```
Enter a number: 14
14 is an EVEN number
```

```
Enter a number: 7
7 is an ODD number
```

Explanation: The modulus operator (%) divides the number by 2. If the remainder is 0, the number is even (divisible by 2). If the remainder is 1, the number is odd (not divisible by 2).

> *Marking: 1 mark for correct logic with modulus operator, 1 mark for proper code structure and output*

Q37. Answer: Blog vs Wiki

Feature	Blog	Wiki
Full Form	Web Log	A collaborative website
Definition	An online diary/journal where a person writes and shares posts regularly	A website where multiple users can collaboratively create and edit information
Author	Usually written by one person (the blogger)	Written and edited by many people together
Purpose	Sharing personal opinions, experiences, or information on a topic	Providing factual, encyclopedic knowledge on various topics
Example	WordPress, Blogger, Medium	Wikipedia

> *Marking: 1 mark for Blog definition, 1 mark for Wiki definition and difference*

Q38. Answer: Speech Recognition in AI

Definition: Speech Recognition is an AI technology that enables computers to listen to spoken words (audio) and convert them into written text. It understands human speech and processes it so that machines can respond or take action based on what was said.

Two Devices/Applications that use Speech Recognition:

1. **Virtual Assistants:** Siri (Apple), Google Assistant, and Amazon Alexa use speech recognition to listen to voice commands and perform tasks like playing music, setting alarms, or answering questions.
2. **Speech-to-Text Apps:** Applications like Google's Live Transcribe convert spoken words into written text in real-time — useful for people with hearing difficulties and for transcribing lectures or meetings.

> *Marking: 1 mark for definition, 0.5 marks for each example (2 marks total)*

Q39. Answer: The <font> tag in HTML

Purpose: The <font> tag in HTML is used to change the appearance of text by specifying the font color, size, and typeface (font family). It was widely used in older versions of HTML to style text directly.

Attributes:

- **color** — Changes the text color
- **size** — Changes the font size (values 1 to 7; default is 3)
- **face** — Changes the font typeface/family

Example (Red text, size 5):

```
<font color="red" size="5">This is red and big
text</font>
```

Output: Displays "This is red and big text" in red color with a large font size.

Marking: 1 mark for explanation of purpose and attributes, 1 mark for correct example

Q40. Answer: FTP and its difference from web browsing

FTP (File Transfer Protocol): FTP is a network protocol specifically designed to transfer (upload or download) files between computers over the internet. It creates a connection between two computers so that files can be moved from one to the other.

Feature	FTP	Web Browsing
Purpose	Transferring (uploading/downloading) files between computers	Viewing and reading web pages and online content
Protocol Used	FTP Protocol	HTTP / HTTPS Protocol
What happens	Files are copied from one computer to another	Web pages are displayed on the screen for reading
Example	Uploading a website's files to a web server	Opening www.google.com to search for information

Marking: 1 mark for FTP definition, 1 mark for difference with browsing

Section D - Long Answer Questions Answers

Q41. Answer: Python BMI Calculator Program

```
# BMI Calculator Program

print("=" * 45)
```

```
print("         BMI CALCULATOR")
print("=" * 45)
print()

# Input details
name = input("Enter your name: ")
weight = float(input("Enter your weight (in kg): "))
height_cm = float(input("Enter your height (in cm): "))

# Convert height from cm to meters
height_m = height_cm / 100

# Calculate BMI
# Formula: BMI = weight / (height in meters)²
bmi = weight / (height_m ** 2)

# Display results
print()
print("=" * 45)
print("RESULTS FOR:", name)
print("=" * 45)
print(f"Weight      : {weight} kg")
print(f"Height      : {height_cm} cm ({height_m} m)")
print(f"Your BMI    : {bmi:.2f}")
print()

# Determine health category using if-elif-else
if bmi < 18.5:
    category = "Underweight"
    advice = "You need to eat more healthy foods and
exercise regularly."
elif bmi < 25:
    category = "Normal"
```

```
    advice = "Your weight is healthy! Keep up the good
work!"
elif bmi < 30:
    category = "Overweight"
    advice = "Try to eat balanced meals and increase
physical activity."
else:
    category = "Obese"
    advice = "Please consult a doctor for a proper
health plan."

print(f"Category    : {category}")
print(f"Advice      : {advice}")
print("=" * 45)
```

Sample Output:

```
=============================================
         BMI CALCULATOR
=============================================

Enter your name: Priya
Enter your weight (in kg): 55
Enter your height (in cm): 165

=============================================
RESULTS FOR: Priya
=============================================
Weight      : 55.0 kg
Height      : 165.0 cm (1.65 m)
Your BMI    : 20.20

Category    : Normal
```

```
Advice      : Your weight is healthy! Keep up the good
work!
==============================================
```

Key Points:

- Height is converted from cm to meters by dividing by 100
- BMI formula: weight / (height_m)² — the ** operator calculates the square
- Uses if-elif-else ladder to classify BMI into 4 categories
- :.2f formats the BMI to 2 decimal places
- Provides personalized advice for each category

> *Marking: 1 mark for correct input and BMI formula, 1 mark for correct if-elif-else classification, 1 mark for formatted output and advice (3 marks total)*

Q42. Answer: HTML "Contact Us" Form

```
<!DOCTYPE html>
<html>
<head>
    <title>Contact Us</title>
</head>
<body bgcolor="#f0f8ff">

    <h1 align="center" style="background-color:
#1e5a96; color: white; padding: 15px;">
        Contact Us
    </h1>

    <h2 style="color: #1e5a96;">Fill in the form below:
</h2>

    <form action="#" method="post">
```

```
        <!-- Name Field -->
        <b>Your Name:</b><br>
        <input type="text" name="name" size="40"
placeholder="Enter your name">
        <br><br>

        <!-- Email Field -->
        <b>Your Email:</b><br>
        <input type="email" name="email" size="40"
placeholder="Enter your email">
        <br><br>

        <!-- Subject Dropdown -->
        <b>Subject:</b><br>
        <select name="subject">
            <option value="">-- Select a Subject --
</option>
            <option
value="admission">Admission</option>
            <option value="fee">Fee</option>
            <option value="result">Result</option>
            <option value="other">Other</option>
        </select>
        <br><br>

        <!-- Message Textarea -->
        <b>Your Message:</b><br>
        <textarea name="message" rows="6" cols="45"
                  placeholder="Write your message
here..."></textarea>
        <br><br>
```

```
        <!-- Submit Button -->
        <input type="submit" value="Send Message">

    </form>

</body>
</html>
```

Explanation of Each Component:

Element	Tag Used	Purpose
Heading	<h1>	Displays "Contact Us" as main heading with blue background
Name Input	<input type="text">	Text field for user to type their name
Email Input	<input type="email">	Email field that validates email format
Subject Dropdown	<select> + <option>	Dropdown with 4 subject choices
Message Area	<textarea>	Multi-line text box for writing a longer message
Submit Button	<input type="submit">	Button to submit the form

Marking: 0.5 marks for heading, 0.5 marks for text and email inputs, 1 mark for select dropdown with 4 options, 0.5 marks for textarea, 0.5 marks for submit button (3 marks total)

Q43. Answer: Three Internet Services – Cloud Computing, FTP, Blogging

1. Cloud Computing:

What is it? Cloud Computing is a technology that allows users to store data, run software, and access computing services over the internet using powerful remote servers (called "the cloud") — without needing expensive local hardware.

How is it used? Students and professionals can save documents, photos, and files to the cloud and access them from any device (phone, tablet, laptop) anywhere in the world as long as they have an internet connection.

Real-Life Example: Google Drive — students save their school assignments, notes, and presentations on Google Drive and can open them on any device.

2. FTP (File Transfer Protocol):

What is it? FTP is a network protocol designed specifically for transferring files between two computers over the internet. It creates a dedicated connection for uploading or downloading files.

How is it used? Web developers use FTP to upload their website files (HTML, CSS, images) from their computer to a web server so that the website becomes available on the internet for everyone to see.

Real-Life Example: A blogger uploads new articles and images to their website's server using FTP software like FileZilla.

3. Blogging:

What is it? A Blog (Web Log) is an online journal or diary where a person regularly writes and publishes posts on any topic — personal experiences, news, tutorials, reviews, or opinions.

How is it used? Bloggers create posts on platforms like WordPress or Blogger, and readers from around the world can read, comment, and share these posts. Blogging can also earn money through advertisements.

Real-Life Example: A student creates a blog on WordPress to share tips about studying and exam preparation — other students read and follow the blog.

> *Marking: 1 mark for each internet service with definition, usage, and example (3 marks total)*

Q44. Answer: Three AI Domains – Robotics, Speech Recognition, Expert Systems

1. Robotics:

Definition: Robotics is a field of AI combined with engineering that focuses on designing, building, and programming machines (robots) that can perform physical tasks automatically. AI-powered robots use sensors to perceive their environment and make intelligent decisions.

Real-Life Examples:

- **Manufacturing Robots:** Robots in car factories (like Tesla's Gigafactory) that automatically weld, paint, and assemble car parts with extreme precision.
- **Medical Robots:** Surgical robots like the da Vinci system help surgeons perform delicate operations with greater accuracy and smaller incisions.
- **Sophia:** A humanoid robot that can hold conversations and recognize human emotions.

2. Speech Recognition:

Definition: Speech Recognition is an AI technology that enables computers to listen to and understand spoken human language, converting audio speech into written text. It uses machine learning algorithms to identify patterns in speech.

Real-Life Examples:

- **Siri (Apple):** Understands voice commands on iPhones and iPads to perform tasks like setting alarms, sending messages, and searching the

web.

- **Google Assistant:** Listens to voice commands on Android phones and Google Home devices to answer questions and control smart home appliances.
- **Dictation Apps:** Apps that convert spoken words into text for writing emails or documents hands-free.

3. Expert Systems:

Definition: Expert Systems are AI programs that are designed to solve complex problems in a specific domain by using knowledge and rules programmed by human experts. They mimic the reasoning process of a human expert in a particular field.

Real-Life Examples:

- **Medical Diagnosis Systems:** AI programs that help doctors diagnose diseases by analyzing patient symptoms and comparing them with medical knowledge databases.
- **Chess Programs:** AI chess engines like Stockfish use expert-level knowledge and rules to play chess at a superhuman level.
- **Credit Scoring Systems:** Banking AI programs that evaluate loan applications by analyzing financial data to decide whether to approve or reject a loan.

> *Marking: 1 mark for each AI domain with proper definition and real-life examples (3 marks total)*

Q45. Answer: HTML Formatting Tags

1. <b> Tag (Bold):

Purpose: Makes text appear in bold weight, making it stand out from surrounding text.

```
<b>This text is bold</b>
```

Output: This text is bold

2. <i> Tag (Italic):

Purpose: Makes text appear in italic (slanted) style, often used for book titles, foreign words, or emphasis.

```
<i>This text is italic</i>
```

Output: *This text is italic*

3. <u> Tag (Underline):

Purpose: Adds an underline below the text. Often used to highlight important information.

```
<u>This text is underlined</u>
```

Output: This text is underlined

4. <font> Tag (Font Styling):

Purpose: Changes the color, size, and typeface of text using its attributes: color, size, and face.

```
<font color="blue" size="4" face="Arial">Styled Text</font>
```

Output: Displays "Styled Text" in blue color, size 4, using Arial font.

5. <marquee> Tag (Scrolling Text):

Purpose: Creates scrolling (moving) text or images on a webpage. The text moves from right to left by default.

```
<marquee>Welcome to our school website!</marquee>
```

Output: Displays "Welcome to our school website!" scrolling across the screen from right to left.

Summary Table:

Tag	Effect	Quick Example
	Bold	Bold
	Italic	Italic
<u>	Underline	<u>Underline</u>
	Color, Size, Face	Red
<marquee>	Scrolling text	<marquee>Scroll</marquee>

Marking: 0.5 marks for each tag with correct purpose and example (total: 2.5 marks); 0.5 marks for overall presentation (3 marks total)

Section E - Practical/Programming Questions Answers

Q46. Answer: Python Number Properties Checker

```
# Number Properties Checker Program
import math
```

```
print("=" * 45)
print("      NUMBER PROPERTIES CHECKER")
print("=" * 45)
print()

# Input
number = int(input("Enter a number: "))

print()
print("=" * 45)
print(f"  Properties of the number: {number}")
print("=" * 45)

# Check 1: Positive, Negative, or Zero
print()
print("1. SIGN CHECK:")
if number > 0:
    print(f"   {number} is a POSITIVE number")
elif number < 0:
    print(f"   {number} is a NEGATIVE number")
else:
    print(f"   {number} is ZERO")

# Check 2: Even or Odd
print()
print("2. EVEN/ODD CHECK:")
if number % 2 == 0:
    print(f"   {number} is an EVEN number")
else:
    print(f"   {number} is an ODD number")

# Check 3: Perfect Square or Not
print()
```

```
print("3. PERFECT SQUARE CHECK:")
if number >= 0:
    root = int(math.sqrt(number))
    if root * root == number:
        print(f"   {number} IS a perfect square
(√{number} = {root})")
    else:
        print(f"   {number} is NOT a perfect square")
else:
    print(f"   Negative numbers cannot be perfect
squares")

print()
print("=" * 45)
print("Thank you for using Number Properties Checker!")
```

Sample Output 1 (number = 16):

```
=============================================
      NUMBER PROPERTIES CHECKER
=============================================

Enter a number: 16

=============================================
  Properties of the number: 16
=============================================

1. SIGN CHECK:
   16 is a POSITIVE number

2. EVEN/ODD CHECK:
   16 is an EVEN number
```

```
3. PERFECT SQUARE CHECK:
   16 IS a perfect square (√16 = 4)

==============================================
```

Sample Output 2 (number = -7):

```
Enter a number: -7

1. SIGN CHECK:
   -7 is a NEGATIVE number

2. EVEN/ODD CHECK:
   -7 is an ODD number

3. PERFECT SQUARE CHECK:
   Negative numbers cannot be perfect squares
```

Sample Output 3 (number = 0):

```
Enter a number: 0

1. SIGN CHECK:
   0 is ZERO

2. EVEN/ODD CHECK:
   0 is an EVEN number

3. PERFECT SQUARE CHECK:
   0 IS a perfect square (√0 = 0)
```

Key Points:

- Three separate if-elif-else blocks handle each independent property check
- Sign check uses > 0, < 0, and else (for zero)
- Even/Odd uses modulus operator: number % 2 == 0
- Perfect square check: finds the integer square root using math.sqrt(), then verifies by squaring it back
- Handles edge cases: zero (is even AND a perfect square), negative numbers (cannot be perfect squares)

> *Marking: 1 mark for positive/negative/zero check, 1 mark for even/odd check, 1.5 marks for perfect square logic, 1 mark for proper formatting and edge cases, 0.5 marks for comments (5 marks total)*

Q47. Answer: Python Number Guessing Game

```
# Number Guessing Game Program

print("=" * 45)
print("       WELCOME TO NUMBER GUESSING GAME!")
print("=" * 45)
print()
print("I have a secret number between 1 and 100.")
print("Try to guess it!")
print()

# Set the secret number (fixed — no random)
secret_number = 42
attempts = 0

# Game loop using while
playing = True

while playing:
    # Get user's guess
```

```
    guess = int(input("Your guess: "))
    attempts = attempts + 1
    print()

    # Check the guess
    if guess == secret_number:
        print("🎉 CORRECT! Well done!")
        print(f"You guessed the number {secret_number}
in {attempts} attempt(s)!")
    elif guess > secret_number:
        print("Too high! Try a smaller number.")
    else:
        print("Too low! Try a bigger number.")

    print()

    # Ask if user wants to play again
    if guess == secret_number:
        again = input("Do you want to guess again?
(Yes/No): ")
        print()
        if again.lower() == "yes":
            # Reset for new game
            attempts = 0
            print("Starting a new game!")
            print("I have a new secret number. Good
luck!")
            print()
        else:
            playing = False
            print("Thanks for playing! Goodbye!")
            print(f"(The secret number was:
{secret_number})")
```

```
print()
print("=" * 45)
print("       GAME OVER — See you next time!")
print("=" * 45)
```

Sample Output:

```
=============================================
       WELCOME TO NUMBER GUESSING GAME!
=============================================

I have a secret number between 1 and 100.
Try to guess it!

Your guess: 50

Too high! Try a smaller number.

Your guess: 25

Too low! Try a bigger number.

Your guess: 42

🎉 CORRECT! Well done!
You guessed the number 42 in 3 attempt(s)!

Do you want to guess again? (Yes/No): No

Thanks for playing! Goodbye!
(The secret number was: 42)
```

```
==========================================
       GAME OVER — See you next time!
==========================================
```

Key Features:

- Uses a while loop to keep the game running until the user guesses correctly
- Three conditions checked using if-elif-else: correct, too high, too low
- Counts the number of attempts taken to guess correctly
- Asks user if they want to play again after a correct guess
- Resets attempts counter when a new game starts
- Displays the secret number in the goodbye message

> *Marking: 1 mark for while loop structure, 1.5 marks for correct if-elif-else guess logic, 1 mark for attempt counter, 1 mark for play again logic, 0.5 marks for formatted output (5 marks total)*

Q48. Answer: Complete HTML – School Contact Form Page

```
<!DOCTYPE html>
<html>
<head>
    <title>School Contact Form</title>
</head>
<body bgcolor="#f5f0ff">

    <!-- Main Heading (Centered with colored
background) -->
    <h1 align="center" style="background-color:
#1e5a96; color: white; padding: 15px;">
        SCHOOL CONTACT FORM
    </h1>
```

```
    <!-- Student Information Section -->
    <h2 style="color: #1e5a96;">Student
Information</h2>

    <table border="2" cellpadding="10" cellspacing="0"
width="65%">
        <!-- Merged header using colspan -->
        <tr>
            <th colspan="2" style="background-color:
#4caf50; color: white;">
                STUDENT DETAILS
            </th>
        </tr>
        <tr>
            <td><b>Student Name:</b></td>
            <td>Vikram Patel</td>
        </tr>
        <tr>
            <td><b>Class:</b></td>
            <td>VII - B</td>
        </tr>
        <tr>
            <td><b>Roll Number:</b></td>
            <td>2025-07-0258</td>
        </tr>
    </table>

    <!-- Horizontal Line Separator -->
    <hr>

    <!-- Contact Form Section -->
    <h2 style="color: #1e5a96;">Send Us a Message</h2>
```

```
    <form action="#" method="post">

        <!-- Name Input -->
        <b>Your Name:</b><br>
        <input type="text" name="name" size="40"
               placeholder="Enter your full name">
        <br><br>

        <!-- Email Input -->
        <b>Your Email:</b><br>
        <input type="email" name="email" size="40"
               placeholder="Enter your email address">
        <br><br>

        <!-- Reason Dropdown (Select with 4+ options) -
->
        <b>Reason for Contact:</b><br>
        <select name="reason">
            <option value="">-- Select a Reason --
</option>
            <option value="admission">Admission
Query</option>
            <option value="fee">Fee Related</option>
            <option value="result">Result /
Marks</option>
            <option value="activity">School
Activity</option>
            <option value="other">Other</option>
        </select>
        <br><br>

        <!-- Message Textarea -->
```

```
        <b>Your Message:</b><br>
        <textarea name="message" rows="5" cols="42"
                  placeholder="Write your message
here..."></textarea>
        <br><br>

        <!-- Submit Button -->
        <input type="submit" value="Send Message"
               style="padding: 8px 20px; background-
color: #1e5a96; color: white; border: none; font-size:
16px;">

    </form>

    <!-- Footer -->
    <hr>
    <p align="center">
        <b>© 2025 ABC School</b> — All Rights
Reserved<br>
        Visit our website:
        <a href="https://www.abcschool.edu"
target="_blank">www.abcschool.edu</a>
    </p>

</body>
</html>
```

Checklist — All Requirements Fulfilled:

✓ Requirement	How Implemented
Page Title	<title>School Contact Form</title>

Centered Heading with Color	<h1 align="center"> with blue background, white text, padding
Student Info Table with colspan	<th colspan="2"> merges "STUDENT DETAILS" across 2 columns
Name, Class, Roll Number	Three rows in the student info table
Name Input	<input type="text"> with placeholder
Email Input	<input type="email"> with placeholder
Select Dropdown (4+ options)	<select> with 5 <option> choices
Textarea for Message	<textarea> with rows, cols, placeholder
Submit Button	<input type="submit"> with styled appearance
Horizontal Line (separator)	<hr> between table and form
Footer with School + Hyperlink	Footer with "ABC School" and <a href> with target="_blank"
Background Color	<body bgcolor="#f5f0ff"> — light purple background

Marking: 1 mark for student info table with colspan, 1.5 marks for form with all input types (text, email, select, textarea, submit), 1 mark for <hr> separator and footer with hyperlink, 1.5 marks for proper structure, background, and styling (5 marks total)

Marking Summary

Section	Question Type	Total Marks
Section A	Multiple Choice Questions (15 × 1)	15 marks
Section B	Fill in the Blanks / True-False (15 × 1)	15 marks
Section C	Short Answer Questions (10 × 2)	20 marks
Section D	Long Answer Questions (5 × 3)	15 marks
Section E	Practical/Programming (3 × 5)	15 marks
TOTAL		80 marks

END OF ANSWER KEY

Total Marks: 80

This is a solved practice paper for Class 7 Computer Science Annual Examination.

Study thoroughly and understand all concepts.

For doubts and queries, contact: **Math Love Institute**

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Education is the Foundation of Life | शिक्षा ही जीवन का आधार है

This paper covers: Python Type Conversion & Number Properties | HTML Forms (select, textarea, input types) | HTML Formatting Tags | Internet Services (Cloud, FTP, DNS, Wiki, Blog) | AI Domains (Robotics, Speech Recognition, Expert Systems)