Logical Thinking

Compare & Contrast

Directions: Read the two sentences in each problem. If the sentences mean the same thing, choose **Same** else choose **Different**.

Mathew refuses to drive when the fog is thick.
Until the fog is thick, Mathew refuses to drive.

A. Same
B. Different

The length of the child's foot showed she would be a tall adult.
The child's foot was as long as an adults.

A. Same
B. Different
Do not turn the dial higher than 4 unless the temperature gauge in the refrigerator reads warmer than 40 degrees.
If the temperature gauge in the refrigerator reads 41 degrees or more, turn the dial up past 4.

A. Same
B. Different

Coding- Decoding

Find the rule with which the code is formed and solve the questions given to you.

If in a certain code, CHICKEN is written as 1231567, how can HCIKCNE be written as?

A. 2135176
B. 2153176
C. 2135167
D. 2151376

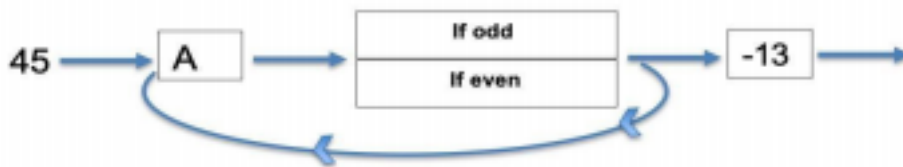If in a certain code, TIP is written as UJQ, what will FOUR be written as?

A. GPVS
B. GMWT
C. GPWS

D. GMVS

If in a certain code **D+E+F=15**, What is **U+V+W =?**

A. 56
B. 66
C. 45
D. 40

Algorithmic Thinking

If A is "adding" 7, what is the output

A. 39

B. 46

C. 65

D. 32

Instead A is "subtracting" 7, what is the output

A. 18

B. 25

C. 46

D. 39

If A is multiplying with 10, what is the output

A. 450

B. 4500

C. 45000

D. None of the above/uncertain

Inductive & Deductive Reasoning

My dog is black in color.

My neighbor's dog is brown in color.

My cousin's dog is white in color.

So, dogs come in different colors?
A. Probably true
B. Probably false
C. Definitely false
D. Definitely true

Not all the players in the football team are good.

Riya is a part of the football team.

Riya is a good player.

A. Yes
B. No
C. Uncertain

Read the following clues

The Tallest boy is a friend of Bharath and Keshav.

Tarun is shorter than the other three boys.

Bharath is taller than Tarun and Keshav.

Who is the shortest of all the boys?
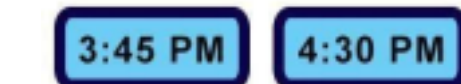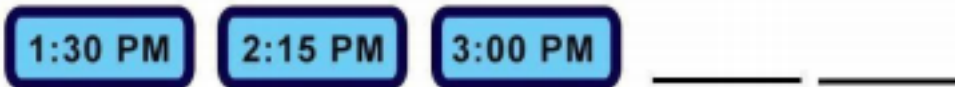
A. Bharath
B. Tarun
C. Keshav
D. Baldev

Identifying Pattern
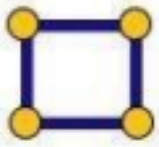
Continue the pattern by choosing the right option.

Identify the pattern and choose the 9th and 11th shapes.

A.

B.

C.
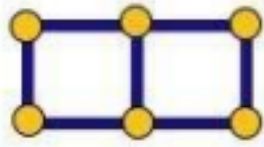

Continue the pattern by choosing the right option.

| 1:30 PM | 2:15 PM | 3:00 PM | _____ _____ |

A.
| 3:30 PM | 4:00 PM |

B.
| 3:45 PM | 4:30 PM |

C.
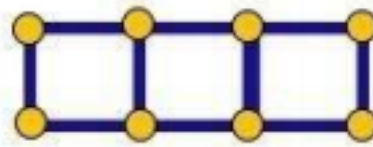| 4:15 PM | 5:30 PM |

D.
| 3:15 PM | 3:30 PM |

Observe the straight lines and dots as they form a pattern.

Stage 1   Stage 2   Stage 3

How many straight lines form stage 5?
A. 25
B. 15
C. 20
D. 16

Tech Awareness

IoT Basics

Below is the image of the seven-segment display. Using a single Seven-segment display what is the range of numbers that can be displayed.

A. 0-1
B. 0-9
C. 1-9
D. 1-8

Tricolor LED glows multiple colours. State true or false.
A. True
B. False

Do IoT devices require an internet connection?
A.   Yes
B.   No

Blockly

What does the above block do?

Block glows red colour on the tri-colour LED

Tri-Color Led Blue ▾ Switch Off ▾

A. Glows blue colour
B. Glows red colour
C. Turn off the LED
D. None of the above

Observe the below code. I will repeat the same sequence three times. What will be the 7th colour that is glowing on the Tri_Colour LED?

Tri-Color Led Red ▾ Switch On ▾
Tri-Color Led Green ▾ Switch On ▾
Tri-Color Led Blue ▾ Switch On ▾

A. Red
B. Green
C. Blue
D. None of the above

Web App

Identify the file extension of Cascading Style sheet.
A. Html
B. Py
C. Css
D. Java

Machine Learning

If you open up your chrome browser and start typing something, Google immediately provides recommendations for you to choose from. The logic behind the search engine is:
A. Artificial intelligence
B. Dictionary
C. Stored data on google
D. None of the above

If you open your photos app on mobile, all the photos are organized according to individuals/ objects. How does your mobile know its image of yours or your dog?
A. Using machine learning technique

B. Using folder
C. Using programming that you have done
D. None of the above

If the Bot is reacting to your emotions then the robot is considered as a:

A. Mobile robot
B. Artificial intelligent robot
C. Open-loop robot
D. All the above

Design

Which of the following tools is termed as a software used to assist the design process in mechanical industries?

A. Computer design software
B. Computer Aided Design
C. MS Paint
D. 3D paint

PCB stands for
A. Printed circuit board
B. Printable Circuit board
C. Printed cricket board
D. All the above

Conversational AI

Identify the wake word in the given statement that is used in Alexa interaction.
Alexa, Tell me a Joke
A. Alexa
B. Tell me
C. Joke
D. None of the above

Which of the following can be used as voice assistant?
A. Alexa
B. Siri
C. Google assistant
D. All of the above

Programming Fundamentals

Which of the following is used to convert the programs into machine language?
A. Editor
B. Operating system
C. Front-end code
D. Compiler

What is the list of steps you can follow to finish a task?

A. Algorithm
B. Bug
C. Program
D. code

What is the action of doing something over and over again?

A. Loop
B. Program
C. Persistence
D. Code

What is a one or zero called in coding?

A. Byte
B. Switch
C. Code
D. Bit

What is an algorithm?

A. Patterns and trends used to solve a problem
B. A programming language
C. A set of step-by-step instructions to resolve a problem
D. To test a solution to a problem

What is a way of representing information using only 2 numbers?

A. Programs
B. Conditionals
C. Loop
D. Binary

What are statements that only run under certain conditions?

A. Code
B. Loop
C. Conditionals
D. Binary

Which of the following will find and fix the errors in programs?

A. Bug
B. Program
C. Code
D. Debugging

A _____ is something that prevents the program from running as expected?

A. Algorithm
B. Bug
C. Program
D. Code

Algorithms are used for?

A. As a platform to program a solution
B. To test a solution to a problem
C. To plan out the solution to a problem
D. All the above

Which of the following would help the bird to crash the pig?

A.
```
when run
  move forward
  turn left ↺ ▼
  move forward
  move forward
```

B.
```
when run
  move forward
  move forward
  move forward
```
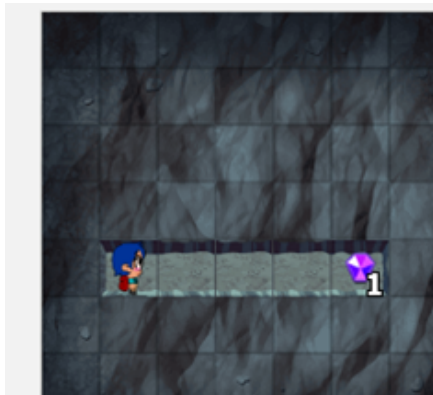
C.
```
when run
  move forward
  turn right ↻ ▼
  move forward
```

D.
```
when run
  move forward
  move forward
  turn right ↻ ▼
  move forward
```

Which of the following programs will help Laurel to reach the treasure?

A.
```
when run
move forward ▼
turn right ↻ ▼
move forward ▼
collect
```

B.
```
when run
move forward ▼
move forward ▼
collect
```
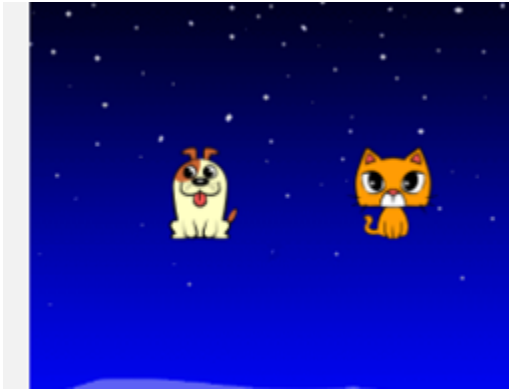
C.
```
when run
move forward ▼
move forward ▼
move forward ▼
move forward ▼
collect
```

D.
```
when run
move forward ▼
collect
```

Which of the following programs will help Jorge(actor 1) move towards the olive cat.

A.

A.

B.

C.

D.

Which of the following will help the girl to collect all of the treasure

A.

B.

C.

D.