

1. Nov/2021//Paper_31/No.2

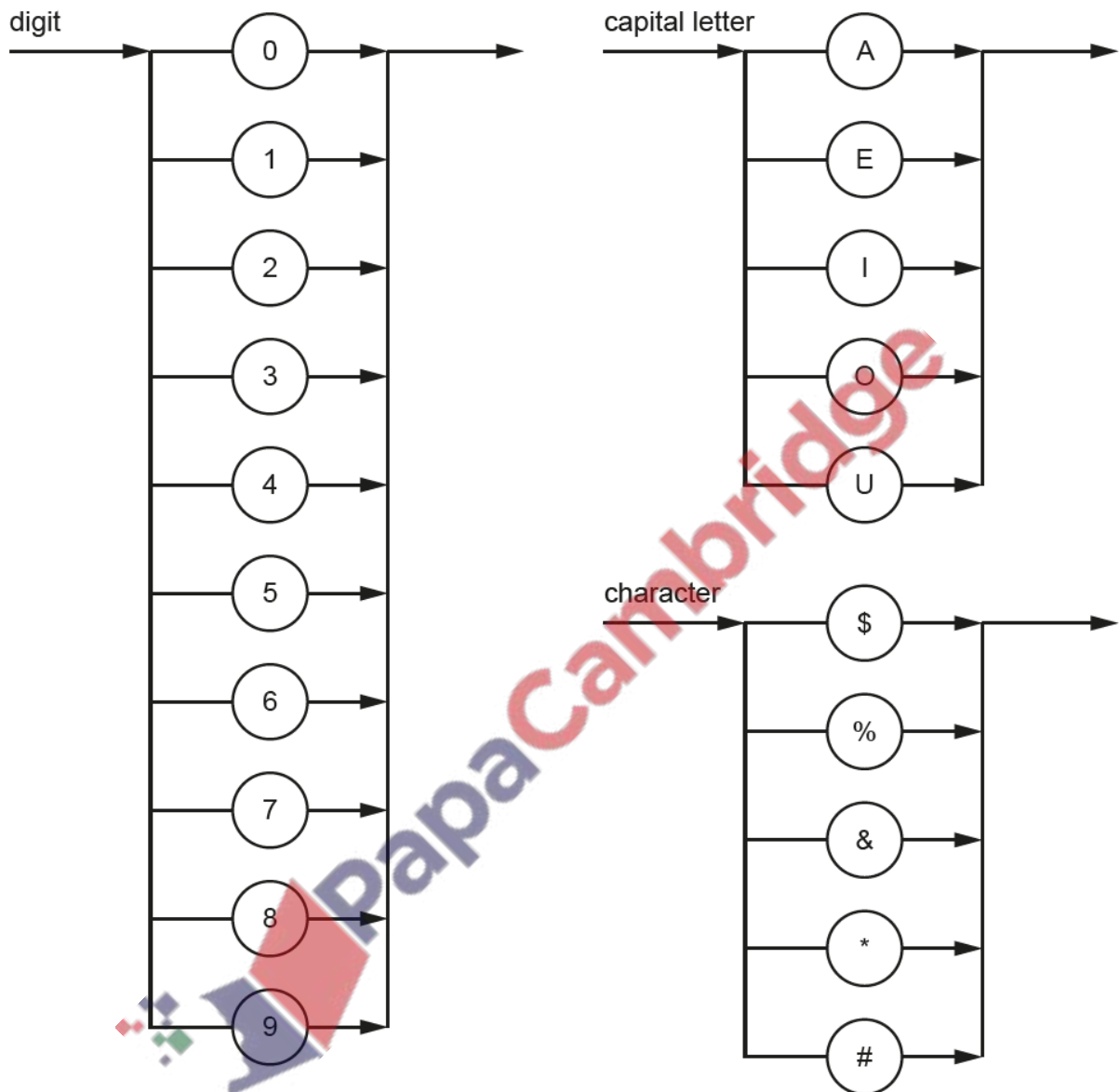
Draw **one** line from each programming paradigm to its **most appropriate** description.

Programming paradigm	Description
	Programs using the instruction set of a processor
Declarative	Programs based on events such as user actions or sensor outputs
Imperative	Programs using the concepts of class, inheritance, encapsulation and polymorphism
Low-level	Programs with an explicit sequence of commands that update the program state, with or without procedure calls
Object-oriented	Programs that specify the desired result rather than how to get to it

[4]

The following syntax diagrams for a particular programming language show the syntax of:

- a digit
- a capital letter
- a character.



(a) Write the Backus-Naur Form (BNF) notation of the syntax diagram for character.

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..... [2]

(a) Describe what is meant by an **imperative (procedural)** programming language.

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..... [2]

(b) Describe what is meant by a **declarative** programming language.

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..... [2]

(c) Identify the programming paradigm for each of these program code examples.

Program code example	Programming paradigm
male(john) . female(ethel) . parent(john, ethel) .	
FOR Counter = 1 TO 20 X = X * Counter NEXT Counter	
Start: LDD Counter INC ACC STO Counter	
public class Vehicle { private speed; public Vehicle() { speed = 0; } }	

[4]