Further Programming – 2021 A2 9618

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

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

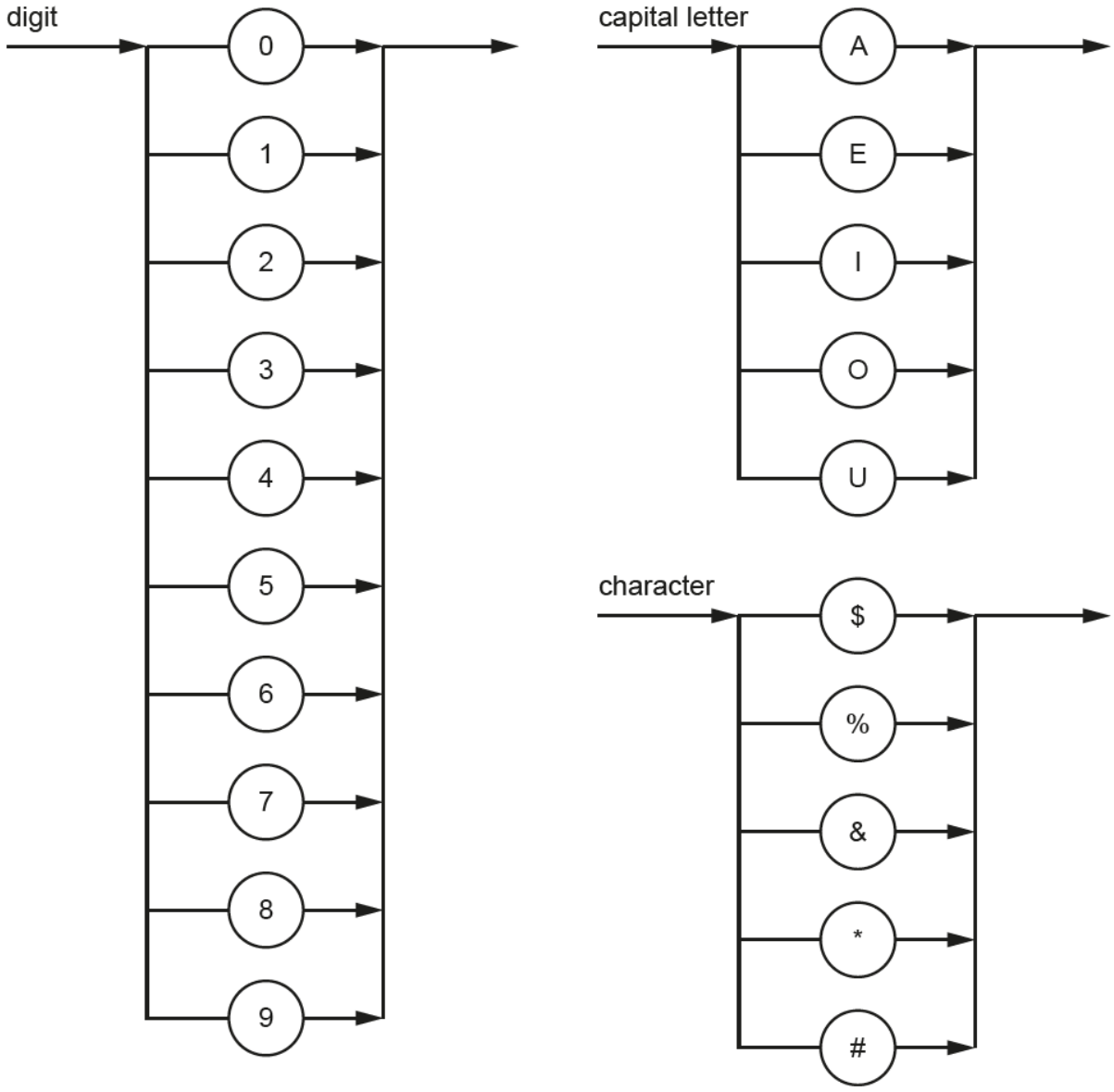
Programming paradigm	Description
Declarative	Programs using the instruction set of a processor
Imperative	Programs based on events such as user actions or sensor outputs
Low-level	Programs using the concepts of class, inheritance, encapsulation and polymorphism
Object-oriented	Programs with an explicit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

[4]

2. Nov/2021//Paper_31/No.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]

3. June/2021//Paper_31/No.9

(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]