

Roll No.

Total Pages : 03

MCAQ/D-23

24034

PROGRAMMING IN KOTLIN

MCA-20-35(iii)

Time : Three Hours]

[Maximum Marks : 75

Note : Attempt *Five* questions in all, selecting *one* question from each Unit. Q. No. **1** is compulsory. All questions carry equal marks.

1. (a) What is the use of lateinit keyword ? Illustrate.
- (b) What are the different types of Integer in Kotlin ?
- (c) Discuss the syntax of repeat loop using an example.
- (d) What is the use of open modifier on a function ?

Unit I

2. (a) What is Elvis operator ? How is it used ? Illustrate.
- (b) How is an array created in Kotlin ? What are the different techniques for array traversal ? Discuss.
3. (a) What is a map ? What is the difference between mutable and immutable map ? How are these created ? Discuss.
- (b) What is a range ? Write a code to generate the odd numbers from 20 to 1 using range.

Unit II

4. (a) What are the different looping constructs available in Kotlin ? Explain while and for using suitable examples.
- (b) What do you understand by default and named parameters ? Discuss the rules for using them.
5. (a) What are the penalties of higher order functions ? What is the use of inline function ? When do we make the use of noinline modifier ? Discuss.
- (b) What is the use of when statement ? Explain using an example.

Unit III

6. (a) What is an abstract class ? How is it declared in Kotlin ? Discuss the rules for overriding methods and properties in abstract class.
- (b) What do you understand by enum class ? What are the inbuilt properties and methods associated with it ? Illustrate.
7. (a) Discuss the following methods in data class using suitable examples :
 - (i) hashCode() and equals()
 - (ii) componentN().

- (b) What is Coroutine ? What is a dispatcher ? What is the difference between confined and unconfined dispatcher ? Discuss.

Unit IV

8. (a) What is the difference between linear and relative UI layout ? Discuss.
- (b) Write a brief note on recycle view.
9. (a) How can you handle the exception in Kotlin ? Can we use try block without catch block ? Discuss.
- (b) What is the difference between an activity and fragment ? Discuss.