



K. K. Wagh Institute of Engineering Education & Research, Nashik
(An Autonomous Institute From A.Y. 2022-23)

| SUMMER-2024 | |
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| Exam Seat No.: | |
| Academic Year:2023-2024 | Semester:III |
| Class:SY | Program:B.Tech |
| Branch Code:INT | Pattern:2022 |
| Name of Course:Programming Paradigms and Methodology | Course Code:INT222003 |
| Max. Marks:60 | Duration:2.30 Hrs. |

Instructions: Candidates should read carefully the instructions printed on the Question Paper and on the cover page of the Answer Book, which is provided for their use.

1. This question paper contains TWO pages.
2. Answer to each new question is to be started on a new page.
3. Assume suitable data wherever required, but justify it.
4. Draw the neat labelled diagrams, wherever necessary.
5. The last columns indicates the Course Outcome and level of Blooms Taxonomy of the Question/sub-question.

Question No. 1 Attempt following Question

- 1a) Distinguish between Imperative and Declarative programming paradigms. (6) CO4

Question No. 2 Attempt following Question

- 2a) Explain **any TWO** parameter passing methods with suitable sample code. (6) CO2

Question No. 3 Attempt following Question

- 3a) For a task-dependency graph, define the following with suitable example: (5) CO5

1) Critical path

2) Average degree of concurrency

OR

- 3b) What is Task-interaction graph? What is Processes and Mapping for Task-interaction graph? (5) CO5

- 3c) Explain characteristics of Functional Programming. (5) CO5

OR

- 3d) Explain the concept of map-fold in functional programming. (5) CO5

- 3e) Explain any THREE approaches to expression evaluation in detail in Little Quilt (6) CO5

OR

- 3f) What are basic objects and operations in Little Quilt functional programming language? (6) CO5

Question No. 4 Attempt following Question

- 4a) Explain Common sub-expression and Dead code elimination optimization techniques with suitable sample code. (5) CO1

OR

- 4b) Explain Code motion and Copy propagation optimization techniques with suitable sample code. (5) CO1

- 4c) Differentiate between compiler and interpreter. (5) CO1

OR

- 4d) Differentiate between Front-end and Back-end of Compiler. (5) CO1

- 4e) For expression **interest= (p*n* r) / 100**, find output of first three phases of compiler. (6) CO1

OR

- 4f) Find triples and quads for **(a-b)*c-d/b*c**. (6) CO1

Question No. 5 Attempt following Question

- 5a) What is URL? What it generally it contains, explain with sample URL. (5) CO3

OR

- 5b) Explain role of client and server with respect to database programming. (5) CO3

- 5c) Explain Windows form properties along with their default values for: Text, Location, Size, MaximizeBox, StartPosition. (5) CO3

OR

- 5d) Which events are commonly used in windows programming? (5) CO3

- 5e) What is SQL? Explain DDL, DML, DCL in brief. (6) CO3

OR

- 5f) What is exception? Explain any two exceptions which can be handled in network programming in JAVA. (6) CO3

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