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

InSem Examination-IISummer2025	
Exam Seat No.:	
Academic Year:2024-2025	Semester:VI
Class:TY	Program:B.Tech
Branch Code:ETC	Pattern:2022
Name of Course:Embedded Processor	Course Code:ETC223011
Max. Marks:30	Duration:1.15 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 1 page.
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 of the Question/sub-question.

                                                                                                    Marks CO

Question No. 1

1 a) Compare ARM 7, ARM 9 and ARM11.   (7)   1

Question No. 2

2 a) Compare Von Neumann and Harvard architectures, explaining their strengths and weaknesses in the   (8)   1
      context of embedded systems. Draw architecture diagram of ARM 7.

                                                          OR

2 b) Explain the function and purpose of the CPSR register in ARM processors. Write different addressing   (8)   1
      modes of ARM 7 with example.

Question No. 3

3 a) Write simple delay function program using for or while loop. How does the 'for' loop in Embedded C differ   (7)   2
      from the 'while' loop and 'do-while' loop?

Question No. 4

4 a) What are the various data types supported in Embedded C? Write an embedded C program to   (8)   2
      calculate sum of series of numbers.

                                                          OR

4 b) Describe how simulators and debuggers are used in the development of embedded systems. Write a program   (8)   2
      in embedded C to store 5 numbers in an array and find greatest number.

                                 ····· **End of question paper**·····