

## T.J.S ENGINEERING COLLEGE



Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai.

Accredited by NAAC / ISO 9001:2015 Certified Institution

TJS Nagar, Peruvoyal, Near Kavaraipettai, Gummidipoondi Taluk, Thiruvallur District -601206

2.6.2. QIM Attainment of Programme outcomes and course outcomes are evaluated by the institution.

Question paper



## T.J.S. ENGINEERING COLLEGE

EJS Nagar, Kavaraipettai, Chennai 601206





MID TERM 1 QUESTION PAPER 2020-2021 ODD SEMESTER

| SUBJECT NAME | : EMBEDDED & REAL TIME SYSTEM  | SUBJECT CODE  | : EC8791       |
|--------------|--------------------------------|---------------|----------------|
| BRANCH       | : ECE .                        | YEAR/SEMESTER | : IV/VII       |
| DATE         | ज्ञ <u>6</u> 6 <b>ए</b> 0/2020 | TIME          | :10:00-4130 PM |
| FACULTY NAME | : G.BHAVANI                    | MAX MARKS     | : 50           |

| CO 1              | Outline the concepts of embedded systems ·                  |                |  |
|-------------------|---|----------------|--|
| CO2               | Describe the architecture and programming of ARM processor  |                |  |
| CO3               |   |                |  |
| CO4               | Model real-time applications using embedded-system concepts |                |  |
| CO5               |   |                |  |
| CO6               |   |                |  |
| K1- Rei           | nembering   | K4- Analyzing  |  |
| K2- Understanding |   | K5- Evaluating |  |
| K3- Applying      |   | K6- Creating   |  |

| Answer ALL questions PART A - (5 × 2 = 10 Marks) |   |      |                |                     |  |
|--|---|------|----------------|---------------------|--|
| Q.NO   | QUESTION  | MARK | CO-<br>MAPPING | BLOOM'S<br>TAXONOMY |  |
| 1  | What is the role of microprocessor in embedded computing? | 2    | CO1            | K1                  |  |
| 2  | Design formalism for system design.                       | 2    | CO1            | K1                  |  |
| 3  | Define quality assurance.                                 | 2    | CO1            | K2                  |  |
| 4  | Define program counter.                                   | 2    | CO2            | K1                  |  |
| 5  | What are the instruction sets is arm processor            | 2    | CO2            | KI                  |  |

## PART B -(2x 13=26 marks)

| ба.                                     | Explain in detail the design methodologies and design flow.                           | 13                                      | CO2  | K2       |
|---|---|---|--|----------|
|   | (OR)  | *************************************** |  | 6-       |
| 6b.                                     | Explain in detail the design steps of modern train controller with suitable diagrams. | 13                                      | CO2  | · KI     |
| 7a.                                     | Explain the architecture of ARMCORTEX M3/M4 processor                                 | 13                                      | CO1  | K4       |
|   | OR  |   | ***************************************  | <u> </u> |
| 7b.                                     | List out the features of LPC 214x family.   | 13                                      | CO1  | K2       |
|   | PART C (1x14=14 marks)  |   | The state of the s |          |
| 8a.                                     | Explain the design with computing the platform in embedded systems design.            | 14                                      | CO2  | К3       |
| *************************************** | ·OR   |   |  | l        |
| 8b.                                     | Explain the architecture of ARM7TDMI-S processor                                      | 14                                      | COI  | KI       |

**FACULTY IN CHARGE** 

HOD-ECE

PRINCIPAL

PRINCIPAL

T.J.S. ENGINEERING COLLEGE

Peruvoyal, Kavaraipettai, Gummidipoondi Taluk, Thiruvallur Dist - 601 203. TJS/ECE/EC8073/Medical Electronics