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| ***Regulation R-18 Subject code: B48PE3***  TKR COLLEGE OF ENGINEERING AND TECHNOLOGY  (Autonomous, Accredited by NAAC with ‘A’ Grade)  ***C:\Users\india\Desktop\tkrcet-logo.jpg*** **B.Tech IV-II Semester Regular Examinations, June 2022**    **ECE**  **EMBEDDED SYSTEMS (set-3)**  ***Maximum Marks: 70*** Duration: 3 hours  **Note:** **1.This question paper contains two parts A and B.**  **2. Part A is compulsory which carries 20 marks. Answer all questions in Part A.**  **3. Part B consists of 5 Units. Answer any one full question from each unit which carries 10M.**  **4. Each question carries 10 marks and may have a, b, c, d as sub questions.** | | |
| Part-A | | | |
| **All the following questions carry equal marks (10x2M=20 Marks)** | | | |
| 1 | | What are the various purposes of embedded systems? | |
| 2 | | Write the disadvantages of embedded system. | |
| 1 | | Explain any two operational quality attributes in embedded system design? | |
| 3 | | Differentiate little-endian & big-endian processors. | |
| 4 | | Give the limitations of the high-level language based development? | |
| 5 | | Discuss real time clock. | |
| 6 | | Write a short note on Embedded OS Trends. | |
| 7 | | Define is an operating system? Give any two examples. | |
| 8 | | Define task scheduling? | |
| 9 | | What is priority inversion? | |
| 10 | | What is context switching? | |
| Part-B | | | |
| Answer All the following questions. **(10MX 5=50Marks)** | | | |
| 11 | Explain quality attributes in the embedded system development context? | | |
|  | OR | | |
| 12 | Explain the classification of embedded systems. Give an example for each? | | |
| 13 | Explain the role of RESET circuit and Real Time Clock in embedded system? | | |
|  | OR | | |
| 14 | Which are the components used as the core of an embedded systems? Explain the merits and drawbacks? | | |
| 15 | Discuss the development language trends in embedded system. | | |
|  | OR | | |
| 16 | Explain the different on-board communication interfaces in brief. | | |
| 17 | Explain different types of preemptive scheduling algorithms. State merits and demerits of each. | | |
|  | OR | | |
| 18 | What is process control block (PCB)? Explain the structure of the PCB. | | |
| 19 | What is deadlock and explain about Coffman conditions? | | |
|  | OR | | |
| 20 | Explain the message passing technique for IPC. What are the merits and demerits of message based IPC? | | |

Note: 1.Set the question paper as per Syllabus mentioned

2. Descriptive each question carries 10 marks and may have a,b,c,d or i,ii,iii,iv as sub questions.

1. Please indicate the weightage of marks