PVP 14

Code: EC7T4A

IV B.Tech - I Semester –Regular / Supplementary Examinations
March - 2021

EMBEDDED AND REAL TIME SYSTEMS
(ELECTRONICS & COMMUNICATION ENGINEERING)

Duration: 3 hours Max. Marks: 70

PART – A

Answer ***all*** the questions. All questions carry equal marks

11 x 2 = 22 M

1.

a) What are the essential structural units in embedded processor?
b) List out the major application areas of embedded systems.
c) What is the operational quality attributes?
d) What are the factors for selecting a processor during system design phase?
e) What is ISR?
f) Define protocol.
g) Distinguish between serial and parallel communication devices.
h) What are the emerging serial bus standards?
i) What is the advantage of piconet?
j) List the features of CAN BUS.
k) What are optimizing design techniques for embedded system?

PART – B

Answer any ***THREE*** questions. All questions carry equal marks.

3 x 16 = 48 M

2. a) Explain different classification of embedded systems with example. 8 M

   b) Explain the role of embedded systems in automotive domain. 8 M

3. a) Explain the different characteristics of embedded systems in detail. 8 M

   b) What is hardware software co-design? Explain the fundamental issues in hardware software co-design. 8 M

4. a) Explain about Timer and counting devices in Embedded Hardware. 8 M

   b) Explain the merits and limitations of parallel port over serial interface. 8 M

5. a) Discuss about networked embedded systems. 8 M

   b) Discuss IEEE 802.11 standard. 8 M

6. a) Explain processes and threads in real time operating systems. 8 M

b) Explain various techniques used for uploading the code in to the target hardware. 8 M