Total No. of Questions : 10]

SEAT No. :

P9316

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[6181]-549
B.E. (E & TC)
EMBEDDED SYSTEM & RTOS
(2015 Pattern)(Elective-I) (Semester-I)(404184C)

Time : 2½ Hours] *[Max. Marks : 70*

Instructions to the candidates:

1) ***Neat diagrams must be drawn wherever necessary.***
2) ***Figures to right indicate full marks.***
3) ***Assume suitable data, if necessary.***

Q1) a) Define following Terms :- **[5]**

i) Time to market,

ii) Latency,

iii) NRE Cost,

iv) Unit Cost,

v) Flexibility

b) Explain V-shaped model. State its merits and demerits. **[5]**

OR

Q2) a) Explain Typical process for Embedded System development. **[5]**

b) Comment on commercial RTOS. **[5]**

Q3) a) Comment on significance of Interprocess communication. **[5]**

b) Explain RTOS services **[5]**

OR

Q4) a) Explain any 03 queue functions **[5]**

b) Explain real times scheduling algorithm. **[5]**

Q5) a) Explain different ARM process series, its version and features. **[8]**

b) Explain CMSIS standard in detail. **[8]**

OR

Q6) a) How interrupt structure of cortex is different from ARM7. **[8]**

b) Draw interfacing diagram of motor control using PWM with LPC1768. Write down program or algorithm for the same. **[8]**

P.T.O.

Q7) a) Explain Linux Kernel architecture and its configuration. **[9]**

b) Explain the role of boot loader in Embedded linux system? What are the characteristics of the same. **[9]**

OR

Q8) a) Explain Linux file system. What is journaling flash file system? What are advantages of the same. **[9]**

b) Explain the following tool utilities Minicomp, BusyBox, Red Boot. **[9]**

Q9) a) Write a program for Arduino board to read analog input and convert it into digital. **[8]**

b) Explain with the help of case study, the application development using Arduino board. **[8]**

OR

Q10)a) Draw an interfacing diagram of 4 LEDs with Arduino board, write a program for the same. **[8]**

b) What is Arduino Uno? Explain standard libraries in Arduino. **[8]**