

6. a) Explain Real time operating system (RTOS) services in detail. 5
b) What are the different common scheduling model used by schedulers? Also explain cyclic and Round Robin with Time slicing scheduling model. 9

7. a) Explain architecture of 8051 Microcontroller with the help of neat sketch. 9
b) Explain Timer/counter of 8051 in detail. 4

OR

8. a) Explain following loop and jump instruction of 8051. 6
i) JZ ii) JNC
iii) LJUMP

- b) Write and explain different addressing modes supported by 8051 microcontroller. 7

9. a) How is serial data communication achieved in 8051 microcontroller? 7

- b) Discuss the concept of Interrupt Vs. polling. 6

OR

10. a) Draw and explain external hardware interrupts. 7

- b) Explain the following register of 8051 used for serial communication. 6
i) SBUF ii) SCON.

11. a) Describe how to interface a stepper motor to the 8051. 7

- b) Describe operation modes of LCD and explain its pins - VCC, VSS, VEE, R/W read/write, RS, register select. 7

OR

12. a) Explain : 6
i) INTR
ii) Vin (+) and Vin (-)
iii) Vref/2

- b) Explain basic idea of 8051 interfacing the keyboard to 8051 and also draw the flowchart for detection and identification of key activation. 8
