

Code No: 5255AH

R15

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

M. Tech I Semester Examinations, August - 2017

EMBEDDED C

(Embedded Systems)

Time: 3hrs

Max.Marks:75

Note: This question paper contains two parts A and B.

Part A is compulsory which carries 25 marks. Answer all questions in Part A. Part B consists of 5 Units. Answer any one full question from each unit. Each question carries 10 marks and may have a, b, c as sub questions.

PART - A

5 × 5 Marks = 25

- 1(a) Discuss the identification of a suitable programming language for embedded systems. [5]
- b) Explain the Switch bounce behavior with the help of waveforms. [5]
- c) Explain in detail the project header with example. [5]
- d) Explain the TCON and TMOD registers. [5]
- e) Explain the alarm control panel. [5]

PART - B

5 × 10 Marks = 50

- 2) Draw the pin diagram of 8051 and discuss the operation of each pin. [10]

OR

3. What is an interrupt? Explain the interrupt handling in an embedded system with neat sketch. [10]

- 4) Write a program in embedded C for counting the number times the switch is pressed and released. [10]

OR

5. Write an embedded C program for reading and writing bits in a generic version along with explanation. [10]

- 6) Explain an example in which the number of goats passing a sensor was measured and displayed on a port in restructured version. [10]

OR

7. Explain the reconstructing the hello embedded world with example. [10]

8. Explain the creation of hardware delays using Timer 0 and Timer 1. [10]

OR

- 9) Explain creating hardware timeouts and write program to test hardware timeouts. [10]

- 10) Explain the case study of intruder alarm system along with block diagram and write an embedded C programming for it. [10]

OR

11. Explain the intruder alarm running in the simulator. [10]