Code No: 138EK **R16**

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
B. Tech IV Year II Semester Examinations, September - 2020
REAL-TIME SYSTEMS
(Common to CSE, IT)

Time: 2 Hours **Max. Marks: 75**

Answer any Five Questions
All Questions Carry Equal Marks
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1. Discuss briefly on various commands used for process management in UNIX. [15]

2. Define a semaphore. Discuss different types of semaphores supported by RTOS kernel. [15]

3. a) Define a signal. State its importance.
   b) Give a detail description of signal control block and explain various operations of it. [5+10]

4.a) Describe in detail about spurious interrupts and how to handle them.
   b) Enumerate the steps in servicing a Timer Interrupt. [7+8]

5. Draw the block diagram of Automatic Chocolate Vending Machine System (ACVM) and explain its functional block diagram and uses. [15]

6. Discuss briefly on various commands used for Text processing in UNIX. [15]

7. Explain how Round-Robin scheduling work with an illustrative example in RTOS. [15]

8. Explain typical operations and uses of Pipe object with an illustrative example. [15]

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JNTUH USED PAPER Sep-2020