

APJ Abdul Kalam Technological University  
Second Semester M.Tech Degree Examination May 2016  
Ernakulam II Cluster  
Branch: Electronics and Communication Engineering  
Specialization: VLSI and Embedded Systems  
05EC 6006- EMBEDDED REAL TIME SYSTEMS

Duration: 3 hrs.

Max. Marks: 60

I a) What are the functions provided by  $\mu\text{C}/\text{OS-II}$  to make a task move from one state to another? [5 Marks]

b) With an example illustrate how  $\mu\text{C}/\text{OS-II}$  makes a highest priority task ready to run. [7 Marks]

II a) Write a note on task checking function provided by  $\mu\text{C}/\text{OS-II}$ . [5 Marks]

b) Enumerate the Time management services provided by  $\mu\text{C}/\text{OS-II}$  [7 Marks]

III a) What is the service provided by  $\mu\text{C}/\text{OS-II}$  to post a message in mailboxes? [10 Marks]

b) Illustrate the function *OSMboxDel()* [8 Marks]

**OR**

IV a) Enumerate any two services provide  $\mu\text{C}/\text{OS-II}$  to access semaphores. [10 Marks]

b) Distinguish *OSQPostFront()* from *OSQPost()* [8 Marks]

V a) How your application can get a memory block from one of the created memory partitions. [10 Marks]

b) Illustrate the service used to obtain information about a memory partition. [5Marks]

c) Illustrate the data structure that is used by  $\mu\text{C}/\text{OS-II}$  to keep track of memory partition. [3 Marks]

**OR**

VI a) Highlight with an example how we can use the dynamic memory allocation feature of  $\mu\text{C}/\text{OS-II}$  [10 Marks]

b) How  $\mu\text{C}/\text{OS-II}$  support the waiting for memory block using counting semaphore. [5 Marks]

c) Prepare a note on *OSQFlush()* [3 Marks]