Student Registration Number

C

COURSE CODE: DCAP608
COURSE TITLE: REAL TIME SYSTEM

Date: 24-Sep-2013 **Time: 09:30-12:30**
Time Allowed: 3 hours **Max. Marks: 80**

1. *This paper contains 10 questions divided in two parts on 1 page.*
2. Part A is compulsory.
3. In Part B (Questions 2 to 10), attempt any 6 questions out of 9. Attempt all parts of the selected question.
4. *The marks assigned to each question are shown at the end of each question in square brackets.*
5. *Answer all questions in serial order*.
6. The student is required to attempt the question paper in English medium only.

Part-A

Q1.

a) What is real time system? [2]
b) What is the difference between soft real time and hard real time system? [2]
c) What are the high level controls in real time systems? [2]
d) Give an example of software control structures. [2]
e) Define Release time. [2]
f) Describe Jobs and processors. [2]
g) Define Release time jitter. [2]
h) Difference between precedence graph and task graph. [2]
i) Discuss with example data dependency. [2]
j) Explain the preemption and Non- Preemption. [2]

Part-B

Q2 Discuss Priority Driven Scheduling with the help of example. [10]

Q3 Difference between offline and On line scheduling. [10]

Q4 Discuss the general structure of cyclic schedules. [10]

Q5 Discuss the maximum utilization of schedulable. [10]

Q6 Discuss the structure and components of real time system. [10]

Q7 Discuss Deadline and time constraints. [10]

Q8 Define the resource parameters of job. [10]

Q9 Discuss the concept of Cyclic Executive with reference to clock drive scheduler in detail. [10]

Q10 Explain the control hierarchy of Air-traffic controller with suitable diagram. [10]