Student Regd. No **B**

COURSE CODE: DCAP608
COURSE TITLE: REAL TIME SYSTEMS

Date of Exam:- 16 Oct **Session:- 1:30-4:30**
Time Allowed : 3 hour **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 questions chosen.***
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.*

PART A

Q1. Write short notes on the following:

a) Signal processing.

b) Temporal parameters.

c) Off-Line vs. online scheduling.

d) Cyclic scheduling

e) Arbitrary Response time

f) Actuator

g) Effective deadline

h) Data dependency

i) Job vs. process

j) Rate Monotonic (2*10=20)

PART B

Q2. Give some of the applications of Real time systems. [10]

Q3. Discuss a reference model of Real Time Systems. [10]

Q4.Differentiate between Hard and Soft Real Time Systems. [10]

Q5. What are commonly used Approaches to Real Time Scheduling. [10]

Q6. What are the various pros and cons of Clock Driven Scheduling? [10]

Q7. How to check the optimality of RM and DM Algorithms? [10]

Q8. Differentiate between Dynamic and Static Systems. [10]

Q9. Write an algorithm for constructing Static Schedules. [10]

Q10. What are the challenges in validating timing constraints in Priority Driven System? [10]