

M. Tech.-II (Information Technology) (CBCS – 2015 Course) :
WINTER - 2018
SUBJECT: REAL TIME SYSTEMS

Day: Thursday
Date: 22/11/2018

Time: 11.00 AM TO 02.00 PM
Max Marks: 60

W-2018-3146

N.B.:

- 1) All questions are **COMPULSORY**.
- 2) Figures to the right indicate **FULL** marks.
- 3) Answers to both the sections should be written **SEPARATE** answer book.
- 4) Assume suitable data, if necessary.

SECTION-I

Q1 Define a real time system. Discuss the issues in real time computing. **(10)**

OR

List and explain the desired properties of good performance measure for real time systems.

Q.2 What is scheduling? What are the common approaches used for real time scheduling? Explain any one in brief. **(10)**

OR

State and explain the Identical Linear Reward Function for scheduling of an IRIS task.

Q.3 State and explain the algorithm to be used for task assignment when number of processors to be used has to be minimized. **(10)**

OR

Which algorithm assigns and schedules tasks with precedence conditions and additional resource constraints? Explain the algorithm in detail.

SECTION-II

Q.4 State the obvious properties of mechanisms for exception handling. How is a run time error handled? Explain with example. **(10)**

OR

How can multitasking be improved? Discuss the step wise approach for improving multitasking.

Q.5 List and justify, the different databases supported by a hard real time system. **(10)**

OR

How serialization consistency is maintained in real time database? Elaborate with an example.

Q.6 Define real time communication. Draw a block diagram for the same and explain it in detail. **(10)**

OR

State different models of real time communication with a suitable diagram.