



# ST. XAVIER'S COLLEGE

MAITIGHAR, KATHMANDU

MIDTERM EXAMINATION

B.Sc.CSIT — 6<sup>th</sup> SEMESTER - 2014

Course Title: Real Time System

Full Marks: 60

Course Code: CSC-354

Time: 2Hrs

Pass Marks: 24

*Candidates are requested to answer the questions in their own words as far as practicable.*

## Long Answer Questions:

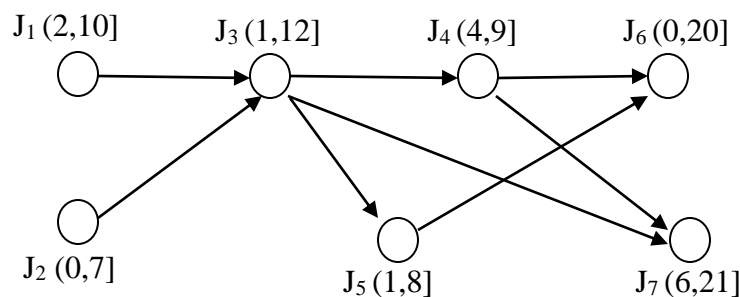
[12\*2=24]

- 1) State and prove optimality of EDF algorithm. When will it be non-optimal?
- 2) Define digital controller. Explain it with well labeled diagram.

## Attempt all (short questions):

[6\*5=30]

- 3) Explain radar signal processing with diagram.
- 4) Differentiate between clock driven scheduling and priority driven scheduling.
- 5) How many jobs does a hyper period (H) comprise if the periods are provided as 4ms, 6ms and 9ms and their respective execution times are 2ms, 2ms and 5ms? Find the total utilization of the system.
- 6) Define general structure of cyclic schedule.
- 7) Find the effective release time and effect dead lines of the jobs in the following task graph. Why do we need to find the effective release time and deadline of the jobs?



## 8) Write short notes on: (Any two)

[3\*2=6]

- a. Graphical kernel system
- b. Weiler Atherton clipping
- c. Color CRT