

**CHANDIGARH GROUP OF COLLEGES**

**SESSIONAL – 1**

**SUBJECT-REAL TIME SYSTEM**

**Examiner: Er. Kuldeep Kour**

**M.M – 24**

**Section: CSE (A+B, C+D) 6<sup>th</sup> Sem**

**Time Allotted – 1hr 45 mins**

**SECTION-A**

Que1) Define Real time system. Give example. (2)

Que2) Define Cost function, absolute deadline, relative deadline & reliability. (2)

Que3) What is performability of a real time system? (2)

Que4) Given 3 tasks:-

Periodic Time :-  $P_1=4$  ,  $P_2=8$  ,  $P_3=11$

Execution Time :-  $e_1=0.5$ ,  $e_2=2.0$ ,  $e_3=1.5$

Phasing :-  $I_1=0, I_2=1, I_3=3$

Find out the minimum time required to execute each task at least once. (2)

**SECTION-B**

**Attempt any two**

Que1) Explain the structure of Real Time system with the help of diagram. (4)

Que2) What are the characteristics of Real Time System? Explain in Detail.(4)

Que3) How Sporadic Tasks are scheduled in real time system? Explain.(4)

**SECTION-C**

**Attempt any one**

Que1) Explain Rate Monotonic Algorithm with the help of example. Also explain its difference with Earlier Deadline First Algorithm.(8)

Que2) Explain Next Fit Algorithm and Bin Packing Algorithm for multiprocessor RTS. Explain with help of example.(8)