Roll No: ----------

UNIVERSITY OF PETROLEUM AND ENERGY STUDIES

End Semester Examination, December 2017

Program: Btech CSE+TI | **Semester – VII**
Subject (Course): Real Time Operating System Internals | **Max. Marks : 100**
Course Code :CSIB-475 | **Duration : 3 Hrs**
No. of page/s:

Instruction: All Questions are Compulsory

Section A

(4 *5 =20)

1 What is different metrics use in developing an embedded system?

2 What is the role of deferrable server in an embedded system?

3 Write a short note on sporadic server.

4 What are the parameters used for performance evaluation of server.

5 Why priority inversion is required in enhancing performance of some applications.

Section B

(8 *5=40)

1 Explain the diagram of didactic C kernel with well labelled diagram.

2 Distinguish between periodic and aperiodic task scheduling.

3 Explain Graham's notation and how it is useful in classification problem.

4 Explain Jackson's algorithm.

5 What is the significance of polling server algorithm?

Section C

(20*2=40)

1. Draw well labelled diagram of embedded system design and development life cycle and explain it in detail.
2. Explain the proof of RM optimality.

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Section A

(4 *5 =20)

1 Enlist the types of task.

2 What is the importance of deferrable server in an embedded system?

3 If data is linearly separable and non-separable, which type of network is suitable for classification purpose?

4 Write a short note on sporadic server.

5 Explain resource constraints.

Section B

(8 *5=40)

1 What is the role of stack based priority ceiling protocol.

2 Explain Earliest Deadline First Algorithm.

3 Explain different processor technology that can be used in designing the embedded system.

4 Differentiate between priority inversion and priority inheritance

5 What are the execution criteria of task management?

Section C

(20*2=40)

1. Draw well labelled diagram of functions of real time operating system and explain all the functions in detail.
2. Explain paging concept in detail.