1. Give the definition of hard real-time system!

2. What is a batch job?

3. What is a time-sharing system?

4. Give the definition of turnaround time and the unit of turnaround time!

5. What is the basic difference between the SJF and SRTF scheduling algorithms?

6. How the time slice of the RR algorithm should be selected if the average CPU burst is known?

7. Give the interface of a semaphore, and describe the functions in some words (what they do)?

8. What kinds of solutions are available to avoid Priority Inversion?

9. List minimum 4 forms of Inter Process Communication (IPC) solutions?

10. What is the maximum user mode virtual address space a process can access in 32 bit Windows operating systems by default?

11. What is the maximum supported physical memory in 32 bit Windows client operating systems?

12. What is the working set in Windows?

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15 minutes are given to answer the questions. A minimum of 7 proper answers are required to consider the second part of the exam.