COOS

Unit 1 to 4 Question Bank

Q. 1) Explain the following addressing modes with example:

1) Immediate addressing mode

2) Absolute addressing mode

Q. 2) Differentiate between RISC and CISC.

Q. 3) With the help of suitable diagram, explain memory mapped I/O.

Q. 4) Explain the following addressing modes with example:

1) Register addressing mode

2) Indirect addressing mode

Q. 5) Write a short note on: Multiprocessors and Multicomputers

Q. 6) Differentiate between the pipelining and non-pipelining.

Q. 7) What do you mean by performance of the system? How to calculate the performance equation.

Q. 8) Explain the Basic functional units of a computer.

Q. 9) What do you mean Bus? Discuss various types of buses.

Q. 10) What do you mean pipelining? Explain with example.

Q. 11) How to calculate the performance measurement?

Q. 12) With suitable example, explain the concept of subroutine.

Q. 13) Write a short note on accessing the I/O Device.

Q. 14) What do you mean by Direct Memory Access (DMA)? Explain with diagram.

Q. 15) What is bus arbitration? Explain in brief.

Q. 16) Explain in brief the structure of cache memory.

Q. 17) Explain in brief – SCSI (Small Computer System Interface) –

Q. 18) What do you mean by USB (Universal Serial Bus)?

Q. 19) What do you mean SCSI Bus? Explain in brief.

Q. 20) What do you mean by Universal Serial Bus (USB). Explain in brief.

Q. 21) Explain the following term-

i) Cache Write though

ii) Cache Write back

Q. 22) Explain the various mapping function.

Q. 23) What do you mean by cache memory? Explain with example.

Q. 24) Explain the characteristics of memory. Discuss the memory hierarchy structure.

Q. 25) What do you mean by an operating system? What are its basic functions?

Q. 26) What's the main purpose of an OS? What are the different types of OS?

Q. 27) What are the benefits of a multiprocessor system?

Q. 28) What is process? Explain process life cycle and process control block.

Q. 29) Differentiate between process and thread.

Q. 30) Explain multithreading models with diagram.

Q. 31) What are the types of schedulers? Explain them with suitable diagram?

Q. 32) Consider the set of 4 processes whose arrival time and burst time are given below-

Process Id	Arrival time	Burst time
P1	1 ms	6 ms
P2	1 ms	8 ms
P3	2 ms	7 ms
P4	3 ms	6 ms

Calculate the average waiting time and average turn-around time by using Shortest Job First CPU scheduling policy.

Q. 33) Consider the set of 4 processes whose arrival time and burst time are given below-

Process Id	Arrival time	Burst time	Priority
P1	0	5 ms	1
P2	1	3 ms	2
P3	2	8 ms	1
P4	3	6 ms	3

Calculate the average waiting time and average turn-around time by using Priority Scheduling.

Q. 34) Consider the processes which are given below in the table having arrival time is 0 and burst time is given. Schedule this processing by using FCFS scheduling algorithm.

Process	Burst Time
P1	10
P2	20
P3	6
P4	4
P5	2

Q. 35) Consider the set of 6 processes whose arrival time and burst time are given below-

Process Id	Arrival time	Burst time
P1	0	4
P2	1	5
P3	2	2
P4	3	1
P5	4	6
P6	6	3

If the CPU scheduling policy is Round Robin with time quantum = 2, calculate the average waiting time and average turnaround time.

Q. 36) consider the set of 6 processes whose arrival time and burst time are given below-

Process Id	Arrival time	Burst time
P1	5	5
P2	4	6
P3	3	7
P4	1	9
P5	2	2
P6	6	3

If the CPU scheduling policy is Round Robin with time quantum = 3, calculate the average waiting time and average turn around time.

Q. 37) Explain contiguous memory allocation policies with suitable example.

Q. 38) Compare fixed and variable sized partitioning.

Q. 39) Explain segmentation with suitable example.

Q. 40) Explain paging with suitable example.

Q. 41) Describe any four types of file organization.

Q. 42) Explain file system and methods to access file.

Q. 43) What is I/O buffering? Explain types of buffers.

Q. 44) Consider the following string

1 2 3 4 2 1 5 6 2 1 2 3 7 6 3 2 1 2 3 6

The number of page frames = 4

Calculate page faults using (i) FIFO (ii) LRU (iii) Optimal

Q. 45) Explain TLB with suitable example.

Q. 46) What do you mean by demand paging? Explain in brief.

Q. 47) How the logical address will converted into the physical address? Explain with suitable diagram.

Q. 48) Explain the concept of virtual memory. Explain in brief.