SET A

MCQ(1x30=30)

Qn1. Private data that is used by a single-processor, then shared data are used by

1. Single processor
2. **Multi processor**
3. Single tasking
4. Multi tasking

Qn2.Conversion of this hexa expression eca8 6420hex into binary is

1. 0000 1100 1010 1000 0110 0100 0010 0000two
2. 1110 1100 1010 1000 0110 0100 0010 1111two
3. **1110 1100 1010 1000 0110 0100 0010 0000two**
4. 1110 1100 1010 1000 0110 0111 0010 0000two

Qn3.Load instruction has a delay or latency that cannot be eliminated by forwarding, other technique used is

1. **Pipeline interlock**
2. Deadlock
3. Stall interlock
4. Stall deadlock

Qn4. In distributed system each processor has its own

a) local memory  
b) clock  
c) **both local memory and clock**d) none of the mentioned

Qn5. Which routing technique is used in distributed system?  
 a) fixed routing  
 b) virtual routing  
 c) dynamic routing  
 **d) all of the mentioned**

Qn6. Inter process communication :  
 a) allows processes to communicate and synchronize their actions when using the same address space  
 **b) allows processes to communicate and synchronize their actions without using the same address space**  
 c) allows the processes to only synchronize their actions without communication  
 d) none of the mentioned

Qn7. CPU fetches the instruction from memory according to the value of  
 **a) program counter**  
 b) status register  
 c) instruction register  
 d) program status word

Qn8. Which one of the following is the address generated by CPU?  
 a) physical address  
 b) absolute address  
c) **logical address** d) none of the mentioned

Qn9. Program always deals with  
 a) **logical address** b) absolute address  
 c) physical address  
 d) relative address

Qn10. The page table contains  
 a**) base address of each page in physical memory**  
 b) page offset  
 c) page size  
 d) none of the mentioned

Qn11. Operating System maintains the page table for  
a**) each process**  
 b) each thread  
 c) each instruction  
 d) each address

Qn12. Because of virtual memory, the memory can be shared among  
 **a) processes**  
 b) threads  
 c) instructions  
 d) none of the mentioned

Qn13. Swap space exists in  
 a) primary memory  
 **b) secondary memory**  
 c) cpu  
 d) none of the mentioned

Qn14. In FIFO page replacement algorithm, when a page must be replaced  
a**) oldest page is chosen**  
 b) newest page is chosen  
 c) random page is chosen  
 d) none of the mentioned

Qn15. Two main types of branch instructions are

1. conditional branch
2. unconditional branch
3. logical branch
4. **both a and b**

Qn16. A source program is usually in \_\_\_\_\_\_\_  
 a) Assembly language  
 b) Machine level language  
 **c) High-level language**  
 d) Natural language

Qn17. Which memory device is generally made of semi-conductors?  
 **a) RAM**  
 b) Hard-disk  
 c) Floppy disk  
 d) Cd disk

Qn18. The control unit controls other units by generating \_\_\_\_  
 a) Control signals  
b) **Timing signals**  
 c) Transfer signals  
 d) Command Signals

Qn19. \_\_\_\_\_\_ bus structure is usually used to connect I/O devices.  
 **a) Single bus**  
 b) Multiple bus  
 c) Star bus  
 d) Rambus

Qn20. \_\_\_\_\_\_ is generally used to increase the apparent size of physical memory.  
 a) Secondary memory  
b) **Virtual memory**  
 c) Hard-disk  
 d) Disks

Qn21. The addressing mode, where you directly specify the operand value is \_\_\_\_\_\_\_  
 a) Immediate  
 **b) Direct**  
 c) Definite  
 d) Relative

Qn22. Devices which are used to receive data from central processing unit are classified as

1. output/input devices
2. digital devices
3. signaled devices
4. **output devices**

Qn23. Multiple variable XOR operation is defined as

1. inverted or function
2. prime function
3. even function
4. **odd function**

Qn24. Secondary storage memory is basically

1. volatile memory
2. non volatile memory
3. **backup memory**
4. impact memory

Qn25. How many 8 k × 1 RAMs are required to achieve a memory with a word capacity of 8 k and a word length of eight bits?

* 1. **Eight**
  2. Four
  3. Two
  4. One

Qn26. A three digit decimal number requires \_\_\_\_\_\_\_\_ for representation in the conventional BCD format.  
 a) 3 bits  
 b) 6 bits  
 **c) 12 bits** d) 24 bits

Qn27. The systematic reduction of logic circuits is accomplished by:  
 a) Symbolic reduction  
 b) TTL logic  
 c) **Using Boolean algebra** d) Using a truth table

Qn28. Which of the following is an important feature of the sum-of-products form of expressions?  
 a**) All logic circuits are reduced to nothing more than simple AND and OR operations** b) The delay times are greatly reduced over other forms  
 c) No signal must pass through more than two gates, not including inverters  
 d) The maximum number of gates that any signal must pass through is reduced by a factor of two

Qn29. RAMs are utilized in the computer as  
 a) Scratch-pad  
 b) Buffer  
 c) Main memory  
 **d) All of the Mentioned**

Qn30. Logic circuitry is used to detect  
 a) Underflow  
 b) MSD  
 c**) Overflow**  
 d) LSD

**Short Answer Questions (6x5=30)**

Qn 1. What is system bus? Differentiate between Computer Architecture and Computer Organization.

Chapter1

Qn 2. What is CPU? Explain how CPU works with neat diagram?

Chapter 4

Qn 3. What is virtual memory? Explain the virtual memory with neat diagram.

Chapter 13

Qn 4. What is different between parallel computing and serial computing?

Chapter 12

Qn 5. Explain the shared memory with basic diagram? Also mention its advantages and disadvantages?

Chapter 12

Qn 6. Why do computer need High Level language? Differentiate between compiler and interpreter.

Chapter 8

Qn 7. What is Machine Cycles? Explain its different stages. Also define Instruction cycle .

Chapter 4

Qn8. Explain the Combinational and Sequential circuits with neat diagram?

Chapter 7

**Long questions (2x10=20)**

Qn1

a. What is number system? Explain the different types of number systems with examples? (10)

Chapter 1

b. Write the algorithm to convert Gray code to binary and vice versa with examples. (10) Chapter 1

Qn2.

a. What do you mean by pipelining? Explain different types of pipelining? What are pipelining hazards? (10)

Chapter 12

b. What is parallel computing? Mention its pros and cons. Also, Differentiate between UMA and NUMA. (10)

Chapter 11