

COMPUTER ORGANIZATION & ARCHITECTURE [BCS 302]
UNIT-5: INPUT-OUTPUT ORGANIZATION QUESTIONS DATABASE

QUESTION DESCRIPTION-PART A

1. Write the difference between serial & parallel communication. [2017-18]
2. Describe Cycle Stealing in DMA. [2018-19]
3. What is the I/O Control Method? [2019-20]
4. Explain the term Cycle Stealing. [2020-21]
5. What is the transfer rate of an eight-track magnetic tape whose speed is 120 inches per second and whose density is 1600 bits per inch? [2021-22]
6. List down the functions performed by an Input/Output unit. [2022-23]
7. Why does the DMA get priority over CPU when both request memory transfer? [2022-23]
8. In what way synchronous and asynchronous serial modes of data transfer differ? [2023-24]

QUESTION DESCRIPTION-PART B

1. What is DMA? Describe how DMA is used to transfer data from peripherals. [2019-20]
2. Draw and explain the block diagram of typical DMA Controller. [2020-21]
3. Explain destination-initiated transfer using Handshaking Method. [2021-22]
4. Define interrupt. Also discuss different types of interrupt. [2022-23]
5. What are the basic differences between interrupt initiated I/O and programmed I/O? Explain in detail. [2023-24]

QUESTION DESCRIPTION-PART C

1. Explain the working of DMA controller with help of suitable diagrams. [2017-18]
2. Short Notes on DMA Based Transfer.
3. Give the block diagram of DMA Controller. Why are the read and write control lines in a DMA Controller Bidirectional? [2018-19]
4. Write down the difference between Isolated I/O and Memory Mapped I/O. Also discuss advantages & disadvantages of Isolated I/O and Memory Mapped I/O. [2019-20]
- 5.a Discuss the design of a typical input/output interface. [2019-20]
- 5.b What are Interrupts? How are they handled? [2019-20]
- 6.a What do you mean by Asynchronous Data Transfer? Explain STROBE CONTROL and HANDSHAKING MECHANISM. [2020-21]
- 6.b Discuss the different mode of data transfer. [2020-21]
- 7.a Explain how the computer buses can be used to communicate with memory and I/O. Also draw the block diagram for CPU-IOP communication. [2021-22]
- 7.b What are the different methods of asynchronous data transfer? Explain in detail. [2021-22]
- 8.a With a neat schematic diagram, explain about DMA controller and its mode of data transfer. [2022-23]
- 8.b Discuss the design of a typical input or output interface. [2022-23]
- 9.a What do you mean by synchronous data transfer? Explain strobe control and handshaking mechanism. [2023-24]
- 9.b Explain the various modes of data transfer and discuss direct memory access mode in detail. Also explain how DMA is superior to other modes. [2023-24]