



Regulation R18  
**TKR COLLEGE OF ENGINEERING AND TECHNOLOGY**  
(Autonomous, Accredited by NAAC with 'A' Grade)

Subject code:2P4FB

**B.Tech IV Semester Supplementary Examinations, July 2022**  
**COMPUTER ORGANIZATION**  
(INFORMATION TECHNOLOGY)

**Maximum Marks: 70**

**Date:22.07.2022 Duration: 3 Hours**

- Note: 1.This question paper contains two parts A and B.  
2. Part A is compulsory which carries 20 marks. Answer all questions in Part A.  
3. Part B consists of 5 units, Answer any one full question from each unit, which carries 10Marks

**Part-A**

- All the following questions carry equal marks (10x2M=20 Marks)
- 1 Differentiate the vectored and non-vectored interrupt.
  - 2 What is the difference between a direct and an indirect address instruction?
  - 3 Explain about interrupt programmed I/O.
  - 4 Explain the difference between synchronous serial and asynchronous serial data transfer.
  - 5 Why does DMA have priority over the CPU when both request a memory transfer?
  - 6 Define Hit ratio in the case of cache memory.
  - 7 Discuss the purpose of INTR in 8086 micro-processor
  - 8 Write the memory Read statement in 8086 micro-processor
  - 9 Write about passing parameters to macros.
  - 10 Name two assembler directive of 8086 micro-processor.

**Part-B**

Answer ANY FIVE QUESTIONS

(5 x 10M= 50Marks)

- 11 Explain the various modes of addressing with numerical example. [10]  
OR
- 12 Explain briefly about the micro instruction format. [10]
- 13 Explain source initiated and destination initiated data transfer using Handshaking method. [10]  
OR
- 14 Explain the importance of IOP and the communication between CPU and IOP with diagram. [10]
- 15 Explain virtual memory concept and how the logical address mapped to the physical address with numerical example. [10]  
OR
- 16 Explain the importance of cache memory in the memory organization in a computer system. [10]
- 17 Draw the register organization of 8086 and explain typical applications of each register. [10]  
OR
- 18 Explain the 8086 micro-processor architecture. [10]
- 19 a) Write an ALP to find transpose of a 3x3 matrix. [5]  
b) Write an ALP for addition of two numbers. [5]  
OR
- 20 Explain about the concept of segmented memory with a neat diagram explain its advantages. [10]