IH Used Paper BTECH-28-10-20

Code No: 135BZ **R16**

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
B. Tech III Year I Semester Examinations, October - 2020
COMPUTER ORGANIZATION
(Electronics and Communication Engineering)

Time: 2 hours **Max. Marks: 75**

Answer any five questions
All questions carry equal marks
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1.a) Explain the design of basic computer and the computer operation with a flow chart.
b) What is the difference between a microprogram and a microprocessor? Is it possible to design a microprocessor without a microprogram? [8+7]

2.a) Describe the memory reference instructions with an example.
b) Why do we need subroutine register in a control unit? Explain. [8+7]

3.a) Discuss the flag registers of 8086 with a neat diagram.
b) State and explain the different instruction formats of 8086. [8+7]

4.a) Which instruction of 8086 can be used for look up table manipulations? Give illustrations.
b) Explain the function of opcode prefetch queue in 8086. [8+7]

5.a) Write an assembly language program to convert four digit hexadecimal number to decimal number.
b) How do you generate delays in software? What are the limitations of generating delays? [8+7]

6.a) Write an assembly language program to change an already available ascending order byte string to descending order.
b) What do you mean by macro and how do you pass parameters to macro explain with an example. [8+7]

7.a) Describe in brief the different modes by which data transfer can take place between a computer unit and its I/O devices. What is the difference between synchronous and asynchronous data transfer?
b) What is the use of fast multiplication circuits? Write about array multipliers. [8+7]

8.a) Explain four segment pipelining.
b) Compare and contrast tightly coupled and loosely coupled multiprocessors. [8+7]

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