Reg. No. :

Question Paper Code :R3205

B.E./B.Tech. DEGREE EXAMINATION, NOV 2024

Third Semester

Computer Science and Engineering

R21UCS305-COMPUTER ORGANIZATION

(Common to ECE, IT, CSBS, AI&DS, CSD, CSE(AIML), IOT & CYBER SECURITY)

(Regulations R2021)

Duration: Three hours   Maximum: 100 Marks

Answer All Questions

PART A - (10 x 2 = 20 Marks)

1.	What are the various types of instructions?	CO1 U
2.	Define Memory unit	CO1 U
3.	How bit pair recoding of multiplier speeds up the multiplication process?	CO1 U
4.	What is Restoring Division?	CO1 U
5.	What are the possibilities of imprecise exception?	CO1 U
6.	What are called stalls?	CO1 U
7.	What is locality of reference?	CO1 U
8.	What are asynchronous DRAM?	CO1 U
9.	What is meant for interrupts?	CO1 U
10.	What is DMA?	CO1 U

PART – B (5 x 16= 80 Marks)

11. (a) Write in detail about various types of addressing modes.   CO1 U   (16)

Or

(b) Explain in detail about instruction and instruction sequencing. CO1 U   (16)
With proper example

12. (a) Perform Multiplication of integers 14 and -7 using Booth's CO2 App (16)
Multiplication Algorithm

Or

(b) Consider 4-bit dividend and 2 bit divisor, show the steps involved   CO2 App   (16)
in binary division using restoring methodology and non restoring
methodology and also explain in detail.
Dividend 1011
Divisor   0101

13. (a) What is instruction Hazards? What are the conflicts that occurred   CO1 U   (16)
during instruction Hazards?

<div align="center">Or</div>

(b) Explain about parallel processing and its types.   CO1 U   (16)

14. (a) Discuss the Memory Hierarchy in computer system with regard to   CO1 U   (16)
Speed, Size and Cost?

<div align="center">Or</div>

(b) What do you mean by virtual memory? Discuss how paging helps   CO1 U   (16)
in implementing virtual memory.

15. (a) Explain the architecture of USB.   CO1 U   (16)

<div align="center">Or</div>

(b) Explain in detail about Accessing I/O devices.   CO1 U   (16)

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