



**NAVVRACHANA
UNIVERSITY**
a UGC recognized University

School: School of Engineering and Technology
Program/s: BTech(CSE)
Year: 2nd **Semester:** 4th
Examination: End Semester Examination
Examination year: May - 2023

Course Code: CS307

Course Name: Computer Organization and Architecture

Date: 22-05-2023

Total Marks: 40

Time: 10:00 am to 12:00 noon

Total Pages: 01

Instructions:

- Write each answer on a new page.
- Use of a simple calculator is permitted.
- Draw all relevant waveforms in answer sheet only.
- * COs=Course Outcome mapping. # BTL=Bloom's Taxonomy Level mapping

Que. 1.	Do as directed.	Marks	CO	BTL
A.	Convert $(11001.1010)_2 = (\text{_____})_{10}$ $(123.10)_8 = (\text{_____})_{10}$ $(ABC.1)_{16} = (\text{_____})_{10}$	[10] [02]	CO1	BT4
B.	Certain binary data is encoded using even-bit Hamming Code 1 1 1 0 0 0 0 1 1 0 1 Find the position containing error, correct the data and write.	[02]	CO1	BT4
C.	Write the IEEE Floating Point representation (Single Precision) of the real number "-21.55".	[02]	CO1	BT4
D.	List down ARM products.	[01]	CO1	BT1
E.	What is Amdahl's Law.	[01]	CO1	BT1
F.	What is an Interrupt? List down different classes of Interrupts.	[01]	CO1	BT1
G.	What is an Operating System? List down different aspects of OS.	[01]	CO1	BT1
Que. 3.	Attempt any five.	[10]		
A.	What do you mean by positional number system? Explain with any example. List various positional number systems you have studied.		CO1	BT2
B.	Differentiate between Decoder & DeMultiplexer		CO2	BT3
C.	Differentiate between Microprocessor & Microcontroller.		CO2	BT3
D.	Differentiate between SRAM & DRAM.		CO3	BT3
E.	Differentiate between Direct Addressing & Register Addressing modes.		CO3	BT3
F.	Differentiate between CPU & GPU.		CO4	BT3
Que. 3.	Attempt any two.	[10]		
A.	Write a short note on Embedded Systems.		CO1	BT2
B.	Explain in detail different type of operands.		CO2	BT2
C.	Write a short note on different micro-operations of control unit.		CO4	BT2
Que. 4.	Attempt any one.	[10]		
A.	Explain the design of Hard disk with appropriate diagram. Write a short note on RAID.		CO1	BT2
B.	Write a short note on register organization.		CO3	BT2