

K. J. Somaiya Institute of Technology, Sion, Mumbai-22
(Autonomous College Affiliated to University of Mumbai)

Feb/Mar 2024 ✓✓
 (B.Tech) Program: Computer Engineering C-Scheme I/II/IIB/III: IIB
 Examination: SY Semester: III

Course Code: CEC304 and Course Name: **Digital Logic & Computer Architecture**

Date of Exam: 01/03/2024 Duration: 2.5 Hours Max. Marks: 60

Supplementary Examination

Instructions:
 (1) All questions are compulsory.
 (2) Draw neat diagrams wherever applicable.
 (3) Assume suitable data, if necessary.

		Max. Marks	CO	BT level
Q 1	Solve any six questions out of eight:	12		
i)	Convert i) (AB9) ₁₆ in to Decimal ii) (129) ₁₀ in to BCD	2	CO1	Ap
ii)	What is 2's complement of 11001011?	2	CO2	Ap
iii)	List out applications of Decoder.	2	CO3	U
iv)	Describe Micro Instruction-Format.	2	CO4	U
v)	Enlist types of RAM and ROM.	2	CO5	U
vi)	What is the function of a PCI Bus?	2	CO6	U
vii)	State the advantages of Multiplexer.	2	CO3	U
viii)	What is D Flip-flop?	2	CO3	U
Q.2	Solve any four questions out of six.	16		U
i)	Solve the following- i) Convert (342) ₁₀ to excess-3 code. ii) Find the ASCII code of "Welcome to KJSIT"	4	CO1	Ap
ii)	Use the IEEE 754 standards to find Single precision and Double precision format for (127.25) ₁₀	4	CO2	Ap
iii)	Implement the following expression using 8:1 MUX $F(A, B, C, D) = \pi M(0, 2, 4, 5, 6, 9, 12, 14)$	4	CO3	Ap
iv)	Explain the instruction cycle with the help of a neat state diagram	4	CO4	U

K. J. Somaiya Institute of Technology, Sion, Mumbai-22
(Autonomous College Affiliated to University of Mumbai)

<p>Feb / Mar 2024 ✓✓</p> <p>(B.Tech) Program: Computer Engineering C-Scheme I/II/IIB/III: IIB Examination: SY Semester: III Course Code: CEC304 and Course Name: Digital Logic & Computer Architecture</p>		
Date of Exam: 01/03/2024	Duration: 2.5 Hours	Max. Marks: 60

Supplementary Examination

v)	Describe characteristics of memory	4	CO5	U
vi)	Explain Centralized bus arbitration methods	4	CO6	U
Q.3	Solve any two questions out of three.	16		
i)	Explain the detailed Von-Neumann Model with a neat block diagram	8	CO1	U
ii)	Explain Register Organization in detail.	8	CO4	U
iii)	Explain Cache coherence and write policies	8	CO5	U
Q.4	Solve any two questions out of three.	16		
i)	Draw the flowchart of the restore division algorithm and using step by step restore division algorithmic procedure solve the following 11(Dividend)/3 (Divisor).	8	CO2	Ap
ii)	Describe the different addressing modes with examples.	8	CO3	U
iii)	Explain Flynn's classification in detail with a diagram.	8	CO6	U
