

School of University Polytechnic

Diploma in Computer Science and Engineering Semester End Examination - Jul 2024

Duration: 180 Minutes Max Marks: 100

Sem III - N1DK320B - Fundamentals of Electronic Devices and Digital Electronics

General Instructions

Answer to the specific question asked

Draw neat, labelled diagrams wherever necessary

Approved data hand books are allowed subject to verification by the Invigilator

 Explain the working of varactor diode. Implement the following function using a multiplexer F (A, B, C) = (0, 1, 3, 4, 8, 9, 15) Identify the distinct features of SR, JK, and D flip-flops. Apply your understanding to construct a comparison chart outlining their characteristics and capabilities. Appraise the fundamental purpose of a decoder in digital circuits and categorize the main types of decoders based on input and output configurations. Examine the designing of mod-6 counter. Elaborate zener diode. Appraise SR flip-flop. Elaborate input and output characteristics of Common Base 	1)	What is transistor?Why it is so called?	K1(2)
 Implement the following function using a multiplexer F (A, B, C) = (0, 1, 3, 4, 8, 9, 15) Identify the distinct features of SR, JK, and D flip-flops. Apply your understanding to construct a comparison chart outlining their characteristics and capabilities. Appraise the fundamental purpose of a decoder in digital circuits and categorize the main types of decoders based on input and output configurations. Examine the designing of mod-6 counter. Elaborate zener diode. Appraise SR flip-flop. Elaborate input and output characteristics of Common Base 	2)	Illustrate the properties of boolean algebra with proof.	K2(4)
F (A, B, C) = (0, 1, 3, 4, 8, 9, 15) 5) Identify the distinct features of SR, JK, and D flip-flops. Apply your understanding to construct a comparison chart outlining their characteristics and capabilities. 6) Appraise the fundamental purpose of a decoder in digital circuits and categorize the main types of decoders based on input and output configurations. 7) Examine the designing of mod-6 counter. 8) Elaborate zener diode. 9) Appraise SR flip-flop. K5(K5(K5(K5(C) K5(3)	Explain the working of varactor diode.	K2(6)
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8) Elaborate zener diode. 9) Appraise SR flip-flop. 10) Elaborate input and output characteristics of Common Base		output configurations.	
9) Appraise SR flip-flop. 10) Elaborate input and output characteristics of Common Base K50	7)	Examine the designing of mod-6 counter.	K4(12)
10) Elaborate input and output characteristics of Common Base K60	8)	Elaborate zener diode.	K5(15)
Elaborate input and catput characteristics of Common Baco	9)	Appraise SR flip-flop.	K5(15)
COHIGILATION	10)	Elaborate input and output characteristics of Common Base configuration.	K6(18)