



SET 4

<b>Scheme of Valuation/Answer Key</b>			
<b>(Scheme of evaluation (marks in brackets) and answers of problems/key)</b>			
<b>APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY</b>			
<b>THIRD SEMESTER B.TECH DEGREE EXAMINATION, DECEMBER 2018</b>			
<b>Course Code: CS201</b>			
<b>Course Name: DISCRETE COMPUTATIONAL STRUCTURES</b>			
<b>Max. Marks: 100</b>		<b>Duration: 3 Hours</b>	
<b>PART A</b>			
<b>Answer all questions, each carries 3 marks.</b>			<b>Marks</b>
<b>1</b>		<b>proof</b>	<b>(3)</b>
<b>2</b>		<b>Ceil(N/5)=6, N=26</b>	<b>(3)</b>
<b>3</b>		<b>Definition(1.5) Example (1.5)</b>	<b>(3)</b>
<b>4</b>		<b>Proof</b>	<b>(3)</b>
<b>PART B</b>			
<b>Answer any two full questions, each carries 9 marks.</b>			
<b>5</b>	<b>a)</b>	<b><math>A_n = (c_1 + c_2 n) 2^n + n^2 (n/6 + 1) 2^n</math> Homogeneous solution(2.5) Particular Solution(2.5)</b>	<b>(5)</b>
	<b>b)</b>	<b>RoS={{(1,5),(3,2),(2,5)}} SoR={{(4,2),(3,2),(1,4)}} Ro(SoR)={{(3,2)}} RoR={{(1,2),(2,2)}}</b>	<b>(4)</b>
<b>6</b>	<b>a)</b>	<b>Proof- 3 marks Equivalence class-3 marks</b>	<b>(5)</b>
	<b>b)</b>	<b>8!, 7!, 6!</b>	<b>(4)</b>
<b>7</b>	<b>a)</b>	<b>Composition Table(2) Checking properties(3)</b>	<b>(5)</b>
	<b>b)</b>	<b>Proof</b>	<b>(4)</b>
<b>PART C</b>			
<b>Answer all questions, each carries 3 marks.</b>			
<b>8</b>		<b>Proof</b>	<b>(3)</b>

9	Ring Feild	(3)
10	Proof	(3)
11	Definition – 2 marks, example – 1 mark	(3)

**PART D**

**Answer any two full questions, each carries 9 marks.**



12	a)	Statement(2) Proof (3)	(5)
	b)	Proof	(4)
13	a)	Determination of distributive lattice or not	(4)
	b)	Proof	(5)
14	a)	Composition table(2) Properties(3)	(5)
	b)	Definition	(4)
<b>PART E</b>			
<b>Answer any four full questions, each carries 10 marks.</b>			
15	a)	Proof	(5)
	b)	Since the question 15b is incorrect, full credits may be given to those who have written propositional form of the premises given. 1.25 * 4 = 5 marks	(5)
16	a)	Truth Table	(5)
	b)	Proof	(5)
17	a)	Proof	(5)
	b)	Explanation –(3) Example(2)	(5)
18	a)	Proof	(5)
	b)	Proof	(5)
19	a)	Symbolisation	(5)
	b)	Proof	(5)
20	a)	Determination of truth value	(5)
	b)	Proof	(5)
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