

ACAD-27 a)	Shri Ramdeobaba College of Engineering and Management, Nagpur -440013	Iss. No.: 01, Rev. No.: 00
Ref. Clause(s): 9.1		Date of Rev: 01/01/2018
Department: Computer Application	Semester : I Course Code: MCT544 Course Name: Theory of Automata and Formal Languages	Shift: I & II Page: 01/01
Programme: MCA	<u>Test : 2</u>	Date of Exam: 15/05/2021
Max Marks: 15	Session: 2020-21 (Winter-2020)	Time: 1 Hours

**Instructions: All Questions are Compulsory.**

Q. No.	Question	Marks	COs Mapped	EO
Q. 1 A)	Write Short Notes On: i) Right Linear Grammar ii) Regular Grammar	03	CO1, CO2	L1, L2
Q. 1 B)	Prove that, $L = \{0^n 1^n \mid n \geq 1\}$ is non-regular.	02	CO1, CO2	L4, L5
Q. 2 A)	Explain different Normal forms of the Grammar.	02	CO1, CO2	L1, L2
Q. 2 B)	Construct a PDA equivalent to the following grammar: $S \rightarrow aSa \mid bSb \mid a$	03	CO2	L6
Q. 3 A)	Write short notes on : Properties of Recursively Enumerable Language	03	CO3	L1, L2
Q.3 B)	Explain the concept of Post Correspondence Problem with example.	02	CO3	L3
<b>OR</b>				
Q.3.B)	Construct a TM for the language $L = \{0^n 1^n 2^n\}$ where $n \geq 1$	02	CO3	L4, L5