

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY
DIPLOMA ENGINEERING – SEMESTER – VI • EXAMINATION – SUMMER 2016

Subject Code: 3360504

Date: 19/05/2016

Subject Name: Pulp and Paper Technology

Time: 10:30 AM to 01:00 PM

Total Marks: 70

Instructions:

1. Attempt all questions.
2. Make Suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.
4. Use of programmable & Communication aids are strictly prohibited.
5. Use of only simple calculator is permitted in Mathematics.
6. English version is authentic.

- Q.1** Answer any seven out of ten. **14**
1. Define pulp and list out type of pulp.
 2. List out types of paper product.
 3. What is enzymology?
 4. Why the lignin is removed from pulp?
 5. Define pulping and list out various methods.
 6. What is R.A.G.pulping?
 7. Define cellulose.
 8. List out different lignin chemicals.
 9. Various raw materials for pulp and paper.
 10. State application and consumption pattern of paper in India.
- Q.2** (a) Write the properties of cellulose. **03**
- OR
- (a) Write the application of cellulose. **03**
- (b) State the application of lignin. **03**
- OR
- (c) Compare three types of pulps. **04**
- OR
- (c) Give the properties of Di-methyle sulfoxide **04**
- (d) Give the properties of Di-methyle sulfides. **04**
- OR
- (d) Short note on History of pulp and paper industry. **04**
- Q.3** (a) Explain sulphite pulping. **03**
- OR
- (a) Write about the preparation of chemical cellulose in short. **03**
- (b) Explain non-fibrous raw materials for paper manufacturing. **03**
- OR

	(b)	Draw the neat figure of wet process for paper manufacturing.	03
	(c)	Explain the wet process for paper manufacturing.	04
		OR	
	(c)	Write about Bio-technical approach for pollution in paper industry	04
	(d)	Explain Black liquor recovery process.	04
		OR	
	(d)	Explain Fourdrinier machine.	04
Q.4	(a)	Prepare the flow diagram of Black liquor recovery process.	03
		OR	
	(a)	Discuss the economics of paper industry in short.	03
	(b)	Write a short note on major engineering problems in pulp industries.	04
		OR	
	(b)	Explain the Kraft pulping process.	04
	(c)	Discuss the scope of pulp and paper industries in India.	07
Q.5	(a)	Explain thermo-mechanical pulping.	04
	(b)	Discuss the major engineering problem of lignin chemicals in short.	04
	(c)	Write in short on problems faced by Indian paper industries.	03
	(d)	State the properties of cellulose in short.	03
