

Subject Code: 3132605

Date: 3/12/2019

Subject Name: Latex Technology

Time: 02:30 PM TO 05:00 PM

Total Marks: 70

Instructions:

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

		Marks
Q.1	(a) Relate the influence of time of day of tapping on yield of latex.	03
	(b) List the climate requirements and suitable soil conditions for the growth of Hevea Brasiliensis tree.	04
	(c) Explain the seed propagation method for Hevea tree and evaluate with the help of schematic diagram.	07
Q.2	(a) Apply some alternative ways for prevention of NR latex allergy.	03
	(b) Classify the basic types of latex allergies.	04
	(c) Identify the effect of Ammonia as a good bactericide for NR latex with graphical representation.	07
OR		
	(c) Construct the long-term Ammoniation process diagram and explain it.	07
Q.3	(a) List the basic types of colloid mills.	03
	(b) Analyze the influence of size of balls on function of ball mill.	04
	(c) Elaborate the Centrifugation technique for concentration of NR latex and construct the suitable diagram.	07
OR		
Q.3	(a) Examine the degree of dispersion for an aqueous dispersion.	03
	(b) Compare the advantages of Attrition mill over ball mill.	04
	(c) Discuss the Electrodecantation method for NR latex concentration with schematic illustration of equipment.	07
Q.4	(a) List any three physical properties of colloidal solution and write about the same.	03
	(b) Classify the types of colloids based on nature of dispersed phase.	04
	(c) Explain in detail about Zeta Potential and write the factors affecting it.	07
OR		
Q.4	(a) Define the terms: (i) Colloids (ii) Dispersed phase (iii) Dispersion medium	03
	(b) Compare Lyophilic sol and Lyophobic sol.	04
	(c) Explain in detail about Gelation by salts.	07
Q.5	(a) List the different types of surfactants based on their chemical nature.	03
	(b) Categorize different class of accelerators used in latex compounding. Write about any one in detail.	04
	(c) Discuss in detail about 'Antioxidants' used in latex compounding.	07
OR		
Q.5	(a) What is the role of thickening agent in latex compounding? Write its examples.	03
	(b) Classify surfactants based on their functions. Write about any one in detail.	04
	(c) Discuss in detail about 'Kaolinite Clay' and 'Calcium Carbonate' as fillers used in latex compounding.	07
