

11068 : Pulp & Paper Technology - IV : 7 PT 03

P. Pages : 1

Time : Three Hours

**AW - 3391**

Max. Marks : 80

- Notes :
1. Due credit will be given to neatness and adequate dimensions.
 2. Assume suitable data wherever necessary.
 3. Diagrams and chemical equations should be given wherever necessary.
 4. Illustrate your answer necessary with the help of neat sketches.
 5. Discuss the reaction, mechanism wherever necessary.
 6. Use of pen Blue/Black ink/refill only for writing the answer book.

SECTION - A

1. How and why stuff has to change to furnished? **14**

OR

2. Explain basic operations are to be carried out for production of paper in stock preparation. **14**

3. Describe the role of hollander beater in paper manufacturing process? How strength properties are incorporated in beater? **13**

OR

4. How freeness tester control the beating time? Explain with graphical representation. **13**

5. "Jorden Refiners plays important role in paper manufacturing process". Justify with respect to it's functioning. **13**

OR

6. Compare the advantages and disadvantages of conical refiners and disk refiners. **13**

SECTION - B

7. Classify the sizing process. Explain their advantages & disadvantages. List out the chemicals used in sizing operations. **14**

OR

8. Explain the role of surface tension, porosity and thickness of paper and board affects the sizing properties. **14**

9. List out various fillers used in filling process. What are the essential properties must possess by a good filler? How are they loaded in stock? **13**

OR

10. Discuss the theories of retention of fillers. **13**

11. Define wet end additives. Why starch is preferred as most popular additives? **13**

OR

12. Explain the pre treatment of fresh water for pulp manufacturing process. **13**
