

P. Pages : 2

Time : Three Hours

**AW - 3398**

Max. Marks : 80

- Notes :
1. Answer **three** question from Section A and **three** question from Section B.
  2. Due credit will be given to neatness and adequate dimensions.
  3. Illustrate your answer necessary with the help of neat sketches.
  4. Use of pen Blue/Black ink/refill only for writing the answer book.

**SECTION – A**

1. Give an account of manufacture of  $\text{TiO}_2$  by (i) Sulphate method and (ii) Chloride process **13**  
in detail. Why RI of Rutile grade is high? Also state properties & uses of  $\text{TiO}_2$ .

**OR**

2. Discuss chemistry & industrial application of. **13**  
i) Epoxy Resin.  
ii) Amine Resin
3. Discuss the important pigmentary properties in detail. **13**

**OR**

4. Discuss the chemistry of oxidative & thermal polymerization of drying oils. Explain with **13**  
neat diagram of preparation of stand oil.
5. Describe the working of “Triple Roll” mill with neat diagram. Also discuss the factors **14**  
affecting efficiency of triple roll mill.

**OR**

6. Write about **any two**. **14**  
i) Drying mechanism of paint system.  
ii) Blower oil.  
iii) Powder coating.

**SECTION – B**

7. Differentiate between true pigment and supplemental pigments (extender). Discuss some **13**  
of the extender pigments with respect to their manufacture, properties & uses.

**OR**

8. Discuss the classification of natural resin. Write in detail about their occurrence properties **13**  
& uses.



9. Describe the working of "Ball mill" with neat diagram. Discuss the factors affecting grinding efficiency of ball mill. 13

OR

10. Give an account of chemistry, composition & industrial properties, uses of 13  
i) Ethyl Ether  
ii) MTO  
iii) MEK  
iv) Isopropanol
11. Describe the manufacture of "Alkyd Resin" by monoglyceride process by giving neat diagram. Also discuss the "oil length" of alkyd in detail. 14

OR

12. Write about any two. 14  
i) Attritor mill.  
ii) Constituents of paint system.  
iii) Red oxide primer.

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