

Day: Saturday
Date: 17/11/2018

W-2018-2446

Time: 10.00 AM TO 01.00 PM
Max. Marks: 60

N.B:

- 1) All questions are **COMPULSORY**.
 - 2) Figures to the right indicate **FULL** marks.
 - 3) Assume suitable data if necessary.
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Q.1 What is the difference between homo polymers and hetero polymers? How they are prepared? Explain the property variation with suitable example. (10)

OR

- Q.1** a) Which are the types of polymer? Explain in details. (05)
b) What is the difference between polymer liquid and solids? Explain property variation with an example. (05)

Q.2 Which are the methods for determining polymer molecular weight? Explain one of them in detail. (10)

OR

- Q.2** a) What is stereoisomerism? How it affects polymer properties? (05)
b) How chemical bonding in polymer affects its properties? (05)

Q.3 What is the difference between solution and suspension polymerization? Explain with mechanism and importance during the polymer synthesis? (10)

OR

Q.3 What is Smith Ewartz kinetics for emulsion polymerization? Explain in details. (10)

- Q.4** a) What is crystallinity in polymers? How it affects polymer properties and applicability? (05)
b) What is the influence of polymer molecular weight on glass transition temperature? (05)

OR

Q.4 What is geometrical and chemical structure of polymer molecules? How the variation in it affects polymer properties and applicability? (10)

Q.5 What is fiber reinforced plastic? How it affects on polymer properties and applicability? (10)

OR

- Q.5** a) How the phase morphology varies during blending? Explain its effects. (05)
b) What are polymer eutectics? Explain their significance. (05)

- Q.6** a) What is vulcanization? Explain its significance. (05)
b) How the blow molding works? Explain its industrial applicability. (05)

OR

- Q.6** a) What is calendaring? How it is used in polymer processing? (05)
b) What is the principal behind rubber processing on two roll mill? Explain in details. (05)

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