

P38/HSC233/EE/20160524

Time : 3 Hours

Marks : 80

Instruction :

1. All Questions are Compulsory.
 2. Each Sub-question carry 5 marks.
 3. Each Sub-question should be answered between 75 to 100 words. Write every questions answer on separate page.
 4. Question paper of 80 Marks, it will be converted in to your programme structure marks.
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1. Solve any **four** sub-questions.
 - a) What is analytical chemistry? Explain in brief about types of analysis \bar{C} suitable example. 5
 - b) Enlist various types of non-aqueous solvents. Explain any two with suitable example. 5
 - c) What is Rheology? Give classification of fluid. Explain any one class. 5
 - d) What is Titrimetric analysis? Enlist various types. Explain any one. 5
 - e) What are complexometric titration? Explain various types with suitable example. 5
2. Solve any **four** sub-questions.
 - a) Explain about factors affecting on choice of analytical method. 5
 - b) Explain phenomenon of solubility. Write in brief about types of solution. 5
 - c) What is micromeritics? Explain the importance of particle size. 5
 - d) What is solvent polarity? Classify and explain solvent on basis of polarity. 5
 - e) What are precipitation titration? Explain Mohr's method with suitable example. 5
3. Solve any **four** sub-questions.
 - a) Define error. Explain in brief about systematic error. 5
 - b) Enlist various methods of freezing point lowering determination and explain any one. 5
 - c) Define real solution. Explain in brief about negative and positive deviation. 5
 - d) Enlist and explain various steps involved in gravimetric analysis. 5
 - e) How will you prepare and standardize 0.1 N perchloric acid (HClO_4). 5

4. Solve any **four** sub-questions.
- a) What is redox titration? Enlist different method for balancing redox reaction and explain any one. 5
 - b) What is limit test? Enlist different types. Explain limit test for chloride. 5
 - c) Define Normality, Molarity, Molality, Mole fraction, Equivalent weight. 5
 - d) Enlist various types of viscometer. Explain any one with suitable example. 5
 - e) What is conductometric titration? Explain various types with suitable example. 5

