

Roll No.

Total Pages : 02

BT-2/M-19

32024

APPLIED CHEMISTRY

AS-103N

Time : Three Hours]

[Maximum Marks : 75

Note : Attempt *Five* questions in all, selecting at least *one* question from each Unit. Log Table should be provided as per requirement.

Unit I

1. (a) Derive the Clausius-Clapeyron Equation. 10
(b) At what temperature will water boil when the atmospheric pressure is 528 mmHg ? Latent heat of vaporization of water is 545.5 cal/g. 5
2. (a) Discuss the phase rule diagram of Pb-Ag system. 10
(b) What is the second law of thermodynamic ? Give its limitations. 5

Unit II

3. Discuss the composition, properties and method of preventions of scale and sludge formation. 15
4. What is Green Chemistry ? Write its all principles. 15

Unit III

5. Define corrosion of metals. What are different types of corrosion ? Explain the electrochemical theory of wet corrosion, giving its mechanism. 15
6. Write short notes on the following :
 - (a) Saponification number
 - (b) Flash and fire point
 - (c) Pour point. 5×3

Unit IV

7. Write notes on the following :
 - (a) Nano composite
 - (b) Dendrimers. 8,7
8. Write notes on the following :
 - (a) Clays
 - (b) Feldspaeer
 - (c) Porcelain. 5×3