

## END OF SEMESTER EXAMINATIONS, APRIL / MAY-2018

## GENERAL CHEMISTRY-IV

SUBJECT CODE: 11UACH04 7

MAJOR: B.Sc. Chemistry

TIME : 3 HOURS

SEMESTER : IV

MAX. MARKS: 75

**SECTION – A (10 X 1 = 10)****Answer All the questions:**

1. What are coinage metals?
2. Define Molarity.
3. Give the structure of resorcinol.
4. Why resorcinol is soluble in water?
5. What is DMSO?
6. Give one method of preparation of diazomethane.
7. Define Phase.
8. What is osmotic pressure?
9. State Raoult's law.
10. Define activity.

**SECTION – B (5 X 4 = 20)****Answer All the Questions:**

11. a) Mention a few chemistry software site.  
(OR)  
b) What are the general characteristics of d-block elements?
12. a) Explain the mechanism of Riemer Tiemann reaction.  
(OR)  
b) Give any two methods of preparation of catechol.
13. a) Explain Hofmann degradation.  
(OR)  
b) Explain Gabriel synthesis.
14. a) Derive Gibb's phase rule.  
(OR)  
b) Derive Clausius- Clapeyron equation.
15. a) State Nernst distribution law. What are the conditions for its validity?  
(OR)  
b) Explain fractional distillation.

**SECTION – C (5 X 9 = 45)****Answer All the Questions:**

16. a) Give a comparative study of copper group elements.  
(OR)  
b) Write about molecular modeling program.
17. a) Give the preparation and properties of phloroglucinol.  
(OR)  
b) Explain the acidity of phenols.
18. a) Give the synthetic uses of diazomethane.  
(OR)  
b) Explain the role of lead tetra acetate in the oxidation of 1,2-diols.
19. a) Give the application of Gibbs-Duhem equations.  
(OR)  
b) Explain the colligative properties.
20. a) Explain steam distillation.  
(OR)  
b) Explain partially miscible liquid pairs.

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