Q.P. Code:

2 ½ Hours

VCD - 15/10/19 APPLIED CHEM. Total Marks: 75

1. Attempt **all** questions.
2. **All questions** carry **equal** marks.
3. Draw **neat labeled diagrams** wherever necessary.
4. Use of **log tables** and **non-programmable calculator** is **allowed**.
5. For **Q 2, Q 3 and Q 4** attempt A and B **OR** C and D.

Q 1 Do as directed (Any fifteen) 15

1. Myoglobins are _____ forms.
   a. Tetramer b. Monomer
   c. Dimer d. Trimer
2. Define Coenzymes.
3. _____ element is involved in wound healing.
4. Dietary allowance of Copper recommend _____ in a day
   a. 2-3 mg/d. b. 200-300 mg/d
   c. 100-200 mg/d. d. 125-200 mg/d
5. Define Substitution reaction.
6. _____ catalyzes the decomposition of hydrogen peroxide to water and oxygen.
7. _____ is first principle of green chemistry.
8. Products of green synthesis are _____.
9. Which of the following is green solvent
   a. Formaldehyde b. Benzene
   c. Water d. Ethanol
10. The term missing in Risk = Hazard x _____
11. Define Green solvents.
12. True or False. CFC causing depletion of the ozone layer.
13. Find out% atom economy. $N_2 + 3H_2 \rightarrow 2NH_3$
14. Microwaves have wavelength between _____
    a. 1 cm to 1 m b. 20-100 KHz
    c. 200- 400 nm d. None of these

15. Theoretical yield = _____ X Molecular weight of product / Molecular weight of reactant

a. Weight of reactant used
b. Weight of product used
c. 100
d. None of the above

16. The condensation of a compound containing dimethyl amine, acetophenone and formaldehyde to form beta amino compound is called _____reaction.

a. Mannich
b. Hantzsch
c. Both a and b
d. Reformatsky

17. Reduction of 2-butyne to cis-2- butene as major product and trans-2-butene (minor product) is an example of _____ reaction.

a. Regio selectivity
b. Diastereoselective
c. Enantioselective
d. Chemo selective

18. Explain the term 'Synthon'.

19. Give the formula to calculate % Yield

20. Give one example for synthetic equivalent (SE)

Q. 2 A	Write on the biochemical importance, dietary sources and dietary allowance of zinc.	08
Q. 2 B	Distinguish between hemoglobin and myoglobin.	07
	OR	
Q. 2 C	Write briefly on the Macronutrients.	08
Q. 2 D	Write a note on Metal Complexes in Medicines.	07
Q. 3 A	Green chemistry based on twelve Principle – Explain.	08
Q. 3 B	Explain Atom economy with two suitable examples.	07
	OR	
Q. 3 C	Write a note on green material and green reagents.	08
Q. 3 D	Explain green solvent as ionic liquids.	07
Q. 4 A	Describe criteria for ideal organic synthesis.	08
Q. 4 B	Elaborate multicomponent reaction with one example.	07
	OR	
Q. 4 C	Write reactions of polymer supported polypeptide synthesis	08
Q. 4 D	Explain concept of chemoselectivity and enantioselectivity in organic synthesis reaction	07
Q. 5	Write Short notes on **any three** of the following	15
a.	Types of Elimination reaction.	
b.	Peroxidases	
c.	Green chemistry	
d.	Green catalysts	
e.	Retrosynthesis	