



Register Number:  
Date: 27-11-2020

**ST. JOSEPH'S COLLEGE (AUTONOMOUS), BANGALORE-27**  
**M.Sc. CHEMISTRY - III SEMESTER**  
**SEMESTER EXAMINATION: NOVEMBER 2020**  
**CHOE 9518 – LIFE'S LABORATORIES**

Time- 1 1/2 hrs

Max Marks-35

**This paper contains two printed pages and three parts**

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**PART – A**

**(6 X 1 = 6 Marks)**

**Answer the following**

- 1. Freeze drying process used for**
  - a) Flavor of food
  - b) Stabilization of food
  - c) Preservation of food
  - d) All the above
- 2. Identify three most common monosaccharides?**
  - a) Glucose, sucrose and galactose
  - b) Glucose, fructose and galactose
  - c) Glucose, fructose and lactose
  - d) Glucose, sucrose and lactose
- 3. Which of the following is most commonly used stationary phase in PAGE?**
  - a) Polyacrylamide
  - b) Polyvinyl alcohol
  - c) Polypropylene
  - d) Polymethyl methacrylate
- 4. Sleep and wake process is explained by**
  - a) Infradian rhythm
  - b) Circadian rhythm
  - c) Visible rhythm
  - d) Ultra radian rhythm
- 5. Hypothalamus hormones are involved in**
  - a) Control of sleep and wake
  - b) Control of blood pressure
  - c) Control of eating and drinking
  - d) Control of walking

**6. Identify the 100% atom economy reactions?**

- a) Catalytic synthesis of Ibuprofen
- b) Diels-Alder reactions
- c) Wittig reactions
- d) All the above

**PART - B**

**(8 X 3 = 24 Marks)**

**Answer any eight of the following**

- 7. Explain briefly any three analysis tests used by forensic chemists to determine unknown drugs?
- 8. What is the impact of chemistry on society?
- 9. What are the advantages and disadvantages of additives and flavors?
- 10. Write any three neurological-molecules and their inter play?
- 11. Describe the circadian rhythm of human biological clock?
- 12. Describe the sleep deprivation and what are the physiological consequences?
- 13. What are the main compositions of paints?
- 14. What is the importance of green processes in pharmaceutical industry?
- 15. What is "tyndall effect" in colloid solution?
- 16. What are the three methods of heat transfer in cooking?

**PART - C**

**(1 X 5 = 5 Marks)**

**Answer any one of the following**

- 17. Describe any five principles of green chemistry?
- 18. Explain the various types of atomic spectroscopy and their uses in forensic chemistry?