**ST. JOSEPH’S COLLEGE (AUTONOMOUS), BANGALORE-27**

**Register No:**

**Date:**

**UG-IV SEMESTER (OPEN ELECTIVE)**

**SEMESTER EXAMINATION: APRIL - 2020**

**CHOE 4218: INDUSTRIAL AND MATERIAL CHEMISTRY**

**Time: 1 ½ hrs** **Max Marks:35**

This question paper contains **3 parts and 21 questions.**

**PART-A**

Answer any **FIVE** of the following questions. **5x1=5**

1. Write an example for an acidic refractory.

2. What is reverse osmosis?

3. What is graphene?

4. Write an application of abrasives?

5. Define octane number.

6. Write the main components of CNG gas.

7. What is a dynamite?

**PART-B**

Answer any **TEN** of the following questions. **10x2=20**

8. What is cement? Write the raw materials used for the manufacture of cement.

9. Write any two properties of refractive materials.

10. Write two applications of carbon nanotubes.

11. Write any two advantages of gaseous fuels.

12. What is borosilicate glass? Write its composition.

13. What is the difference between petrol and diesel?

14. What is biofuel?

15. What are propellants?

16. Differentiate hard water from soft water.

17. Name two approaches to synthesize nanomaterials.

18. How is coal converted to coke?

19. Define explosives. Name three types of explosives.

**PART-C**

Answer the following questions **2x5=10**

20. (a) Write a short note on fractional distillation of crude oil and different fractions of distillation.

 OR

(b) What is a biogas? Give any two of its advantages and disadvantages.

21. (a) Write a short note on applications of nanomaterials.

 OR

(b) Define hardness of water. How hardness of water is removed using zeolite?

**CHOE4218\_B\_20**