**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 the composition of cement.

2. What is coal?

3. Name the metal ion which gives green colour to glass.

4. What is synthetic petrol?

5. Write the composition of LPG.

6. What do you mean by calorific value of fuel?

7. Write the full form of RDX.

**PART-B**

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

8. What are abrasives? Give a classification of abrasive materials.

9. Write any two properties of refractive materials.

10. How can fuels be classified? Write an example for each.

11. Write any one application of nanotechnology in textile industry.

12. Explain setting and hardening of cement.

13. What are carbon nanotubes?

14. What is temporary and permanent hardness of water?

15. Write the classification of different types of coals and give the approximate percentage of carbon in each.

16. Write applications of nanomaterials in solar cells.

17. What are the advantages and disadvantages of solid fuel?

18. What is the difference between osmosis and reverse osmosis?

19. How does the ‘self-cleaning windows’ work?

**PART-C**

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

20. (a) Explain the origin of petroleum.

OR

 (b) Write a short note on high explosives.

21. (a) What is glass? Give composition and raw materials used in the manufacture of glass. Discuss about different varieties of glass.

OR

 (b) Write a short note on biofuel.

**CHOE4218\_A\_20**