



Register Number:

Date:

**ST. JOSEPH'S COLLEGE (AUTONOMOUS), BANGALORE-27**  
**UG - IV SEMESTER (OPEN ELECTIVE)**  
**END SEMESTER EXAMINATION: JULY 2022**  
**CHOE 4218 – INDUSTRIAL AND MATERIAL CHEMISTRY**

Time- 1 ½ hrs

Max Marks-35

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

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**PART – A**

Answer ALL of the following

(1X 6 = 6 Marks)

- 1) Hardest abrasive is  
a) Fluorite    b) Gypsum    c) Diamond    d) Talc
- 2) Main constituents of crude oil are  
a) nitrogen & oxygen    b) carbon & hydrogen  
b) lithium & hydrogen    d) oxygen & boron
- 3) Octane number of iso-octane is  
a)100    b) 0    c) 90    d)50
- 4) Which of the following is an example for natural fuel  
a) water gas    b) coal    c) coal gas    d) acetylene
- 5) Superior grade of coal among the following is  
a) Bituminous    b) Lignite    c) Peat    d) Anthracite
- 6) An example for high explosive is  
a) TNT    b) gun powder    c) Tetracene    d) black powder

**PART - B**

Answer any Eight of the following

(3 x 8 =24 Marks)

- 7) How are refractories classified? Give one example for each.
- 8) What is safety glass? Mention the two types of safety glass.
- 9) Define lubricity. Write any two examples of lubricants.
- 10) How is carborundum manufactured? Give any two of its applications.
- 11) What does nanotechnology deal with? Write any two properties of nanomaterials.

- 12) Explain any three uses of nanomaterials.
- 13) List any three biological parameters of water quality.
- 14) Write any three differences between temporary & permanent hardness of water.
- 15) Write any three characteristics of a good fuel.
- 16) What is the main constituent of gobar gas? Give any two of its sources.

### **PART - C**

**Answer any ONE of the following**

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

- 17) a) What are propellants? Write its classification with one example each.  
b) Write any two requirements of a good explosive.
- 18) Write a note on refining of petroleum.