



# GOVERNMENT COLLEGE OF ENGINEERING, JALGAON

(An Autonomous Institute of Government of Maharashtra)

National Highway No.6, JALGAON – 425 002

Phone No.: 0257-2281522

Website : www.gcoej.ac.in

Fax No.: 0257-2281319

E-mail : princoej@redifmail.com



Name of Examination : **FY Winter 2021** - (Preview)

Course Code & Course Name : **SH102U - Engineering Chemistry**

Generated At : **18-05-2022 11:30:06**

Maximum Marks : **60**

Duration : **3 Hrs**

[Edit](#)
[Print](#)
[View Answer Key](#)
[Close](#)

**Answer Key Submission Type:** Marking scheme with model answers and solutions of numerical

## Instructions:

1. All questions are compulsory.
2. Illustrate your answer with suitable figures/sketches wherever necessary.
3. Assume suitable additional data; if required.
4. Use of logarithmic table, drawing instruments and non programmable calculators is allowed.
5. Figures to the right indicate full marks.

### Q1) Solve any three of the following

- a) Define polymer. Explain synthesis, properties and uses of teflon [5]
- b) what is IR spectroscopy and its application [5]
- c) Write a note on synthetic lubricants. [5]
- d) Write any four units of hardness of water. [5]

### Q2) Solve any three of the following

- a) Define flash and fire point and give its significance. [5]
- b) write an short note on thermal analysis [5]
- c) Explain fractional distillation of crude oil with labelled diagram [5]
- d) A water sample on analysis gives the following constituents. Calculate temporary hardness, permanent hardness and total hardness present in the water sample. [5]
 

$\text{MgCl}_2 = 9.5 \text{ ppm.}$   
 $\text{NaCl} = 12.5 \text{ ppm}$   
 $\text{Mg(HCO}_3)_2 = 7.3 \text{ ppm}$

$\text{CaSO}_4 = 13.6 \text{ ppm}$   
 $\text{SiO}_2 = 2.4 \text{ ppm}$   
 $\text{Ca(HCO}_3)_2 = 16.2 \text{ ppm}$

### Q3) Solve the following

- a) Describe electroplating method of metal coating [5]
- b) What is fuel? What are the characteristics of good fuel [5]
- c) Explain BOD and COD in detail [5]

### Q4) Write a short note on(any three)

- a) Solid waste management by incineration method. [5]
- b) Adhesive and its types. [5]
- c) Geothermal energy [5]
- d) Nuclear waste disposal [5]

Auto Generated by SsOES v6.2