GOVERNMENT COLLEGE OF ENGINEERING, JALGAON
(An Autonomous Institute of Government of Maharashtra)

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Name of Examination : **Winter 2020** - (Preview)

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

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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.*

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1) Solve any three of the following

a) Define and give significance of (i) Viscocity Index (ii) Flash Point (iii) Fire Point (iv) Cloud and pour Point   [05]

b) Enlist the characteristics of good fuel.   [05]

c) A water sample contain $Ca(HCO_3)_2$=22.4 mg/l,$Mg(HCO_3)_2$=19.2 mg/l,$CaSO_4$=23.5mg/l.Calculate the temporary and permnant hardness of water.   [05]

d) Give composition and boiling ranges of various fractions of crude oil   [05]

2) Solve any three of the following

a) Explain in detail causes effects and control measures of water pollution   [05]

b) Give preparation and uses of polycarbonate   [05]

c) Explain in detail units of hardness   [05]

d) Explain properties and uses of HDPE   [05]

03) Solve any three of the following

a) What are lubricants?Explain boundary lubrication with neat labelled diagram   [05]

b) Explain munciple water treatment by using bleaching powder   [05]

c) What are sensors?Give its types   [05]

d) Explain cathodic protection and anodic protection   [05]

04) Write a short notes on

a) Proximate analysis   [05]

b) Geothermal Energy   [05]

c) Reverse Osmosis   [05]

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