

Roll No. ....

Total No. of Questions : 6 ]

[Total No. of Printed Pages : 4

**EH-240**

**B.E. I<sup>st</sup> Semester (CGPA) Inform. Tech.  
Examination, 2019**

**Engg. Chemistry**

**Paper - IT - 101**

**Time : 3 Hours]**

**[Maximum Marks : 60**

**Note :-** Attempt all questions. Each questions carry equal marks.

1. Write short answer for the following :-

2×5=10

- How anion exchanger can be regenerated.
- Why n-heptane rated as octane Number '0'.
- What is calgon conditoning
- What is PVC in parts.
- Thickness of ozone layer decreases in sun light.

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2. (a) Distinguish between boiler corrosion and caustic embrittlement. 5

(b) Calculate total Hardness of water sample in  $\text{CaCO}_3$  equivalent of following analysis: 5

$\text{MgCl}_2 = 95 \text{ ppm}$ ,  $\text{NaCl} = 56 \text{ ppm}$

$\text{Mg}(\text{HCO}_3)_2 = 62 \text{ ppm}$ ,  $\text{SiO}_2 = 32 \text{ ppm}$

$\text{CO}_2 = 44 \text{ ppm}$

OR

(a) What are the various steps of water treatment? Discuss the salient features of slow sand filtration. 7

(b) Write short note on priming and foaming 3

3. (a) What is meant by antiknocking? Write short note on tetraethyl lead 5

(b) What do you know about proximate analysis of coal? Write about the volatile matter analysis. 5

OR

(a) What do you understand by the term carbonization? Discuss the process of carbonization. 6



(b) Draw a schematic neat diagram for fluid bed catalytic cracking. 4

4. (a) What are the extreme pressure additives? Define the condition for Extreme pressure lubrication? 5

(b) Explain why a copper equipment shall possess a small steel bolt. 3

OR

(a) Define and give significance of the following. 5

(i) Viscosity Index

(ii) Emulsification number

(b) What do you understand by a differential aeration theory of corrosion? Explain. 5

5. (a) Mention the possible cause for failure of a refractory. 4

(b) Distinguish between 6

(i) thermoplastics and thermosetting

(ii) Addition and condensation polymerization.

OR

(a) Give composition of portland cement. What will be the impact of cement if gypsum is not added in it. 6

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- (b) Write short note on compounding of rubber. 4
6. (a) Write an elaborative note on ozone layer depletion. 5
- (b) What are the major adverse affect on SO<sub>x</sub> and CO on human heath. 5

OR

- (a) Write a critical note on global warming. 5
- (b) Write princple of IR spectroscopy and its application in analysis. 5

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