

**Maulana Azad National Institute of Technology, Bhopal**  
**Department of Chemistry**

**Mini Test**  
**Engineering Chemistry**  
**Date of Exam: 24.12.2020**

Teacher: Dr. Alok Mittal

Section: I

**Duration 1.00 Hour + 15 Minutes Uploading Time, Max. Marks: 20**

***Important Instructions:***

- a. There are 4 questions in this paper and all questions are compulsory.*
- b. Answers must be hand written (not typed) on a blank sheet.*
- c. Write your name, scholar number, roll number and today's date on the top of every page of the uploaded document.*
- d. The answer sheet(s) must be uploaded on the MS Teams portal within the stipulated time (as mentioned above). In case you fail to upload within the given duration, the attachment may be sent to [chm122am@gmail.com](mailto:chm122am@gmail.com).*
- e. Please note, after uploading your file on MS Teams, make sure to turn in the uploaded document.*

**Questions:**

1. What are specifications of drinking water?
2. What are requirements of a good disinfectant?
3. a. Define hardness of water and explain its' types?  
  
b. What are x, y and z in following relation:  
$$1 \text{ mg/liter} = x \text{ ppm} = y \text{ } ^0\text{Fr} = z \text{ } ^0\text{Cl}$$
4. What is scale? How 'Scale' is formed in the Boilers, explain with necessary chemical reactions?