

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY
BE – SEMESTER – V (NEW) EXAMINATION – WINTER 2015

Subject Code: 2153905

Date:14/12/2015

Subject Name: Nanotechnology & Environment

Time:10:30am to 1:00pm

Total Marks: 70

Instructions:

- 1. Attempt all questions.**
- 2. Make suitable assumptions wherever necessary.**
- 3. Figures to the right indicate full marks.**

Q.1 (a) Explain the types of membrane for water purification. 07
(b) Explain the Desilination. 07

Q.2 (a) Explain the health assessment. 07
(b) Describe the human health hazard. 07

OR

(b) Write short note on biologically inspired membrane. 07

Q.3 (a) Explain the inhalation and pulmonary clearance of insoluble solids. 07
(b) Explain the pulmonary effect of CNT 07

OR

Q.3 (a) Explain the photocatalytic mechanism. 07
(b) Write the factor affected of photocatalysis. 07

Q.4 (a) Write a short note on TiO₂ as a semiconductor photocatalyst. 07
(b) Explain the kinetic mechanism of photocatalysis. 07

OR

Q.4 (a) Explain the oxidation and reduction of Arsenic. 07
(b) Explain the chemistry of arsenic in water. 07

Q.5 (a) How to remove the arsenic from water using the TiO₂. 07
(b) Explain the chemistry of arsenic during catalysis. 07

OR

Q.5 (a) Explain the zeolite coted ceramic membrane. 07
(b) Describe the inorganic-organic membrane. 07
