

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 TiO_2 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 TiO_2 . **07**
(b) Explain the chemistry of arsenic during catalyst. **07**

OR

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