**TU/CODL**

**TEZPUR UNIVERSITY**

**SEMESTER END EXAMINATION (AUTUMN) 2019**

**DEM 103: URBAN WATER MANAGEMENT**

**Time: 3 Hours Total Marks: 70**

*The figures in the right-hand margin indicate marks for the individual question.*

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1. Give two examples of each of the following 1x4=4

1. Water-related diseases
2. Water-based diseases
3. Water-borne diseases
4. Water-scarce diseases

2. State True or False : 1x6=6

1. The Urban Heat Island Effect (UHI) is a phenomenon whereby the air over the rural areas results is slightly warmer compared to surrounding urban areas.
2. Increased urban water demand generates pressure on existing infrastructure and the problem is more severe in developing countries.
3. Solid waste management also includes agricultural waste.
4. In the osmosis process, demineralized water is produced by forcing water through semi permeable membranes at high pressure.
5. Agricultural runoff is an example of point source of pollution.
6. Continuous sources introduce contaminants to the streams for extended periods of time

3. Answer the following questions: 5x4= 20

1. Explain the factors that aggravate water scarcity.
2. What is the effect of urbanization on surface run off?
3. What is point and non-point source of pollution?
4. What is greywater and blackwater?

**P.T.O.**

4. What is rainwater harvesting? What are the types of rain water

harvesting? Discuss its need and benefits. 10

5. Describe briefly the history of water supply system. 10

6. Discuss the classification criteria and regulatory norms of 3R’s

for a sound material-cycle society. 10

7. What is urban flood ? Discuss the cause and counter measures

of urban flooding. 10

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