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SEAT No. _____

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SARDAR PATEL UNIVERSITY
VALLABH VIDYANAGAR
B. Sc. SIXTH SEMESTER EXAMINATION

2018

SATURDAY 31st MARCH

10:00am to 01:00 pm

USO6CENV 03

WASTE MANAGEMENT

TOTAL MARKS 70

Note: 1. Answers of all the questions (including multiple choice questions) should be written in the provided answer sheet

2. Draw neat and labeled diagram wherever necessary

Q1 Answer the following multiple choice questions (10)

1. Disinfection is mainly a part of _____ treatment

(a) Tertiary (b) Secondary (c) Primary (d) Pre-Primary

2. pH is a _____ character of water

(a) Chemical (b) Physical (c) Biological (d) Hazardous

3. Mainly there are _____ types of feasibility assessments

(a) 04 (b) 03 (c) 02 (d) 01

4. _____ are biodegraded to carbon dioxide, water and methane

(a) Proteins (b) Lipids (c) Fibers (d) Carbohydrates

5. _____ of solid waste is usually expressed as mass of moisture per unit mass of weight or dry material

(a) Moisture content (b) Volume (c) Particle size (d) Density

6. Hammer mills, shredders, roll crusher, grinders, chippers, rasp mills, hydro pulpers are used for _____

(a) Mechanical component separation (b) Mechanical size and shape alteration

(c) Magnetic separation (d) Dewatering

7. Animal waste is included in Category _____ of Schedule 1

(a) 1 (b) 3 (c) 2 (d) 4

8. _____ are not the source of hazardous waste

(a) Traders (b) Generators (c) Treators (d) Disposers

9. Pulp is refined by which unit?

(a) Screed (b) Jordan (c) Beater (d) Pulp chest

10. The process of transfer of a yarn or thread from one type of package to another is known as _____

(a) Slashing (b) Weaving (c) Winding (d) Scouring

(2)

(P.T.O.)

Q2. Answer the following questions. (Any ten) (20)

1. What is CETP?
2. Explain in brief primary treatment for waste water
3. State the working of Trickling filter
4. What are industrial wastes?
5. Enlist the different categories of municipal solid waste
6. Write about, on site handling of solid waste
7. Define biomedical waste
8. What is incineration?
9. Define hazardous waste according to EPA
10. Describe the picking and carding method
11. Enlist the sources of waste from dairy industry
12. Explain the bleaching process in pulp and paper industry

Q.3. Discuss the ownership and management for CETP development (10)

OR

Q.3. (a) With the help of a labeled diagram explain stabilization in pond (05)

(b) Discuss the biological treatment of waste water (05)

Q.4. Write note on:

(a) Recycling of paper (06)

(b) Land filling (04)

OR

Q.4. Write note on:

(a) Transfer stations and different methods to transport solid waste (06)

(b) Types of collection systems for solid waste (04)

Q.5. (a) Explain different categories of biomedical waste according to Schedule 1 (06)

(b) Discuss the colour coding and type of container for disposal of biomedical waste (04)

OR

Q.5. (a) Discuss the characteristics and reactivity of hazardous waste (06)

(b) Describe wet air oxidation method (04)

Q.6. (a) Explain the recovery by Kraft process (06)

(b) Discuss the chemical treatment for removal of colour in pulp and paper industry (04)

OR

Q.6. Explain the treatment of cotton and woolen textile mill waste (10)