

(Following Paper ID and Roll No. to be filled in your Answer Books)

Paper ID : 154612

Roll No.

B.TECH.

Theory Examination (Semester-VI) 2015-16

ENVIRONMENTAL BIOTECHNOLOGY

Time : 3 Hours

Max. Marks : 100

Section-A

Q.1 Attempt all parts. All parts carry equal marks. Write answer of each part in short. (2×10=20)

- (a) Define the term pollution and its types.
- (b) How do rotatory biological reactors work?
- (c) What do you understand by the term Solid waste Management?
- (d) Define the term Biomarkers and Bio-indicators.
- (e) What the factors that affect the anaerobic process?

(1)

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(j) Define the term methanogenesis and activated sludge.

Section-B

Q2. Attempt any five parts. All parts carry equal marks:

(5×10=50)

- (a) What are the harmful effects of air and water pollution on ecosystem?
- (b) What are trickling filters? Describe them with the help of a suitable diagram and also write the formation of biofilms over trickle beds.
- (c) Name some important alternative fuels that are renewable sources of energy. Explain in brief.

(2)

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process safe for the environment?

- (h) What are steps involved in the primary treatment of waste water.

Section-C

Note: Attempt any two questions from this section.

(2×15=30)

- Q3.** Estimation of total volatile components and lignin in a given known sample.
- Q4.** “Activated sludge process is an aerobic biological process in the treatment of waste water”. Explain in detail with significant diagrams and the growth kinetics involved.

(3)

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Q5. (a)

What are the various efficient steps towards management of solid waste? Also write about the bioreactors which help in this process.

- (b) Give details of thermal and biological conversion of solid waste.

(4)

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