

Registration No:

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Total Number of Pages: 02

B.TECH
PES1C001

1st Semester Regular / Back Examination 2017-18

ENVIRONMENTA STUDIES AND HEALTH CARE

BRANCH: AEIE, AUTO, BIOMED, CHEM, CIVIL, CSE, ECE, EEE, EIE, ELECTRICAL, ETC, IEE, IT, MECH, METTA, MINERAL, MINING, MME, PT, TEXTILE

Time: 3 Hours

Max Marks: 100

Q.CODE: B1009

Answer Part-A which is compulsory and any four from Part-B.

The figures in the right hand margin indicate marks.

Part – A (Answer all the questions)

Q1 Answer the following questions: *multiple type or dash fill up type* (2 x 10)

- a) ----- primary pollutant have the largest residence time.
- b) Earth Summit was held at -----
- c) -----is the hottest layer of atmosphere.
- d) What is the importance of environmental studies?
- e) In which year OSHA was enacted?
- f) What is the validity period of EIA of a mining project?
- g) For rural areas the most suitable solid waste disposal method is -----
- h) For conventional activated sludge process the mixed liquor suspended solid should range between.....
- i) What is global warming potential?
- j) In which year the environment (protection) Act was enacted.

Q2 Answer the following questions: *Short answer type* (2 x 10)

- a) What is the permissible concentration of 24 hr content of SO₂ in µg/m³ in residential area?
- b) Define occupational health.
- c) What is a grit chamber?
- d) What is meant by IUCN Red list?
- e) State field capacity of MSW.
- f) What is the basic aim of OHSA?
- g) What is the aim of first aid?
- h) Find out the CE and DRE of an incinerator from the following data. Input phenolic waste 18.2%, out put phenol 0.04%, out put gas concentration of CO is 0.1% and CO₂ is 25.7%.
- i) What is L_{AEQ}?
- j) Differentiate between detritus food chain and grazing foodchain.

Part – B (Answer any four questions)

- Q3** a) Describe secondary waste water treatment. (10)
b) Discuss oxygen Sag curve. (5)
- Q4** a) What is an Environmental Impact Assessment? Describe the process in detail. (10)
b) What is acid rain and the impact of the same on environment? (5)
- Q5** a) Differentiate between the term sound pressure level and sound levels , bringing out clearly the basic characteristics of the three types of weighting networks. (5)
b) On take-off, an aeroplane generates noise level of 120dB. If 5 such aeroplanes take-off simultaneously what will be the noise level? (5)
c) Give an explanation of methane production process. (5)
- Q6** a) Discuss the three Rs of waste management. (5)
b) Explain three different chemical methods of hazardous waste management. (5)
c) Derive an expression for the Streeter and Phelps equation for ultimate BOD. (5)
- Q7** a) Define Hazardous Waste and Discuss the pre-transportation preparation of hazardous waste. (7)
b) Discuss environmental sanitation (4)
c) State communicable disease with example. (4)
- Q8** a) Differentiate between photochemical smog and reducing smog. (5)
b) State global warming and give a brief description of green house gases. (6)
c) The BOD of a sewage incubated for one day at 30 °C has been found to be 110 mg/ l. What will be the 5-day 20c BOD. ($K_1 = 0.1$ at 20 °C) (4)
- Q9** a) Define biodiversity and its types with suitable example. (5)
b) What is C/N ratio and in what way it affects compostability of solid waste? (5)
c) Explain the biogeochemical cycle with an example. (5)