Registration No : | | | | | | | | | | |

Total Number of Pages : 01 **BTech.**

HSSM3402

8th Semester Regular / Back Examination 2017-18

ENVIRONMENTAL ENGINEERING

BRANCH : CSE, FASHION, FAT, IT, ITE, MECH, METTA, MME, TEXTILE

Time : 3 Hours

Max Marks : 70

Q.CODE : C549

Answer Question No.1 which is compulsory and any five from the rest.

The figures in the right hand margin indicate marks.

Answer all parts of a question at a place.

Q1 **Answer the following questions :** **(2 x 10)**

a) Name the criteria air pollutants.
b) How is energy flow in ecosystem different from nutrient cycling?
c) Name two measures undertaken for noise control.
d) Give the flow diagram of activated sludge process.
e) Give the different stages of anaerobic digestion.
f) Define BOD and COD.
g) Name two important Environmental laws.
h) Define biosphere.
i) Enumerate various waste minimization techniques.
j) Define environmental impact assessment.

Q2 **a)** Define an ecosystem. What are the structural and functional elements of an ecosystem? **(5)**

b) Define a food chain. Explain different types of food chains with a neat sketch. What is a food web? **(5)**

Q3 **a)** Define environmental gradient. Show how the environmental gradients decide the tolerance level with a neat sketch? **(5)**

b) What do you mean by biogeochemical cycles? Briefly discuss about the carbon cycle with a neat sketch. **(5)**

Q4 **a)** How are SO_x gases originate in the atmosphere? Discuss about the effect of SO_x gases on human being, flora, fauna and monuments. **(5)**

b) Discuss about the physical properties of water. **(5)**

Q5 **a)** Briefly discuss about the construction and working of a rapid gravity filter. **(5)**

b) Discuss about the function of alum as a coagulant. **(5)**

Q6 **a)** What is acid rain? How is it caused? Discuss about its effects. **(5)**

b) Briefly discuss about global warming. How is greenhouse effect related to it? **(5)**

Q7 Discuss about the source, classification and composition of municipal solid waste. Discuss about various waste minimization techniques. **(10)**

Q8 **Write short answer on any TWO :** **(5 x 2)**

a) Air pollution meteorology.
b) Incineration.
c) Environmental impact statement.
d) Ground water recharge.