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**Question Paper Code : 40043**

B.E./B.Tech. DEGREE EXAMINATION, APRIL/MAY 2018

Second Semester

Aeronautical Engineering

GE 8291 – ENVIRONMENTAL SCIENCE AND ENGINEERING

(Common to Automobile Engineering/Civil Engineering/Computer Science and Engineering/Computer and Communication Engineering/Electrical and Electronics Engineering/Electronics and Instrumentation Engineering/Environmental Engineering/Geoinformatics/Industrial Engineering/Industrial Engineering and Management/Instrumentation and Control Engineering/Manufacturing Engineering/Marine Engineering/Mechanical Engineering/Mechanical Engineering (Sandwich)/Mechanical and Automation Engineering/Mechatronics Engineering/Production Engineering and Robotics and Automation Engineering)  
(Regulations 2017)

Time : Three Hours

Maximum : 100 Marks

Answer ALL questions.

PART – A

(10×2=20 Marks)

1. Define ecosystem.
2. Write the various adaptive features of desert plants.
3. What is particulate matter ?
4. Define marine pollution.
5. List the types of nuclear reactors.
6. List some ways to protect soil.
7. Write the various uses of sustainable development indicators.
8. What do you know about watershed ?
9. List the effect of population explosion.
10. Name some tests available to find HIV infection.

40043



## PART – B

(5×13=65 Marks)

11. a) Draw the process of food chain and food web. (13)

(OR)

b) i) Discuss in detail about the various values of biodiversity. (6)

ii) Discuss the measures to conserve biodiversity from human activities. (7)

12. a) Demonstrate the various classes of water pollution and enumerate in detail about the following i) domestic waste water ii) storm water iii) industrial waste. (13)

(OR)

b) Write in detail the causes, effects and control measures of water pollution. (13)

13. a) i) What is deforestation and describe in detail causes, effects and control measures in deforestation. (7)

ii) Show the uses of mineral resources and tell its impacts on environment. (6)

(OR)

b) i) Describe the role of individuals in conserving the natural resources. (6)

ii) Demonstrate the changes caused by overgrazing and agriculture. (7)

14. a) Write the needs and advantages of rainwater harvesting. (13)

(OR)

b) i) Illustrate in detail about Green House effects and Global warming with neat sketch. (7)

ii) Discuss about the effects of nuclear Hazards. (6)

15. a) Explain the role of value education to students for the betterment of societal life. (13)

(OR)

b) Write down the role of information technology in environment and human health. (13)

## PART – C

(1×15=15 Marks)

16. a) Explain how will you calculate rain water harvesting potential for your house. (15)

(OR)

b) Compare the physical and chemical characteristics of Marine water with terrestrial water. (15)