Reg. No. :

Question Paper Code : X 20662

B.E./B.Tech. DEGREE EXAMINATIONS, NOV./DEC. 2020
Third/Fourth/Fifth/Sixth/Seventh/Eighth/Ninth Semester
Civil Engineering
GE 6351 – ENVIRONMENTAL SCIENCE AND ENGINEERING
(Common to Mechanical Engineering (Sandwich)/Aeronautical Engineering/ Agriculture Engineering/Automobile Engineering/Biomedical Engineering/ Computer Science and Engineering/Electrical and Electronics Engineering/ Electronics and Communication Engineering/Electronics and Instrumentation Engineering/Environmental Engineering/Geoinformatics Engineering/ Industrial Engineering/Industrial Engineering and Management/Instrumentation and Control Engineering/Manufacturing Engineering/Marine Engineering/Materials Science and Engineering/ Mechanical Engineering/Mechanical and Automation Engineering/Mechatronics Engineering/Medical Electronics/Petrochemical Engineering/Production Engineering/Robotics and Automation Engineering/ Bio Technology/Chemical Engineering/Chemical and Electrochemical Engineering/Fashion Technology/ Food Technology/Handloom and Textile Technology/Information Technology/Petrochemical Technology/Petroleum Engineering/Pharmaceutical Technology/Plastic Technology/Polymer Technology/ Textile Chemistry/Textile Technology)
(Regulations 2013)

Time : Three Hours | Maximum : 100 Marks

Answer ALL questions.

PART – A **(10×2=20 Marks)**

1. What is meant by genetic biodiversity ?
2. List any two ex-situ methods for conservation of biodiversity.
3. What is PAN ? What are its ill effect ?
4. Give any four physical parameters for testing quality of water ?
5. What are the reasons for water logging ?
6. What do you understand by anaerobic digestion ?

7. Write any two methods to handle biomedical wastes.

8. Give reasons for landslides.

9. What is population growth ? How is it expressed ?

10. Write any two family welfare programs in India.

PART – B **(5×13=65 Marks)**

11. a) i) Explain characteristic features, structure and function of lake ecosystem. **(7)**

ii) Describe any three factors that give threats to biodiversity. **(6)**

(OR)

b) i) Describe the structure and functions of grassland ecosystem. **(7)**

ii) What are endangered and endemic species ? Give examples. **(6)**

12. a) Explain the solid waste management in detail. **(13)**

(OR)

b) i) List the sources of SO_2, NO_x, CO and HC. What are their environmental effects ? **(8)**

ii) What is ozone depletion ? What is its effect in environment ? **(5)**

13. a) What are alternate energy sources ? Explain any three renewable energy sources to meet energy demand. **(13)**

(OR)

b) What are the reasons of deforestation ? Enumerate the ill effects of deforestation ? **(13)**

14. a) Write the principles of Green Chemistry. **(13)**

(OR)

b) i) Explain the important features of Forest Conservation Act. **(6)**

ii) What are the problems that arise in rehabilitation and resettlement ? **(7)**

15. a) i) Explain Environmental impact analysis. **(6)**

ii) What are the reasons of HIV ? What are the precautions that are advised for protection from HIV ? **(7)**

(OR)

b) i) Explain the variation of population growth in various nations ? Give suitable reasons. **(7)**

ii) What is meant by value education ? Give examples. **(6)**

PART – C **(1×15=15 Marks)**

16. a) Comment on "Delhi Air Pollution". Discuss causes, effects and mitigation methods to be adopted by the government. **(15)**

(OR)

b) Describe different food resources, world food problems and effect of modern agriculture. **(15)**

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