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Question Paper Code : 50657

B.E./B.Tech. DEGREE EXAMINATION, NOVEMBER/DECEMBER 2017

Third/Fourth/Fifth/Sixth/Seventh/Eighth Semester

Mechanical Engineering

GE 6351 – ENVIRONMENTAL SCIENCE AND ENGINEERING

(Common to : Aeronautical Engineering/Agriculture Engineering/Automobile Engineering/Biomedical Engineering/Civil 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. Write on nitrogen cycle.
2. Define endangered species.
3. Mention two invasive species.
4. What are in-situ and ex-situ conservation ?
5. What is called endemic species ?
6. What is mitigation ?
7. What is a nuclear holocaust ?

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8. What is child abuse ?
9. What is a watershed ?
10. Write on EIA.

PART – B

(5×13=65 Marks)

11. a) Discuss uniqueness of different ecosystems : Forest ecosystem, grassland ecosystem, desert ecosystem and aquatic ecosystem.

(OR)

- b) Which are the biodiversity hotspots in India ? What are the threats they face ?

12. a) Discuss the human-animal conflict with special reference to media coverage.

(OR)

- b) Discuss physical, chemical and biological parameters to ensure drinking water quality.

13. a) How could we tackle fertilizer-pesticide problems in modern agriculture ?

(OR)

- b) Discuss the renewable sources of energy with respect to solar, wind and hydel power.

14. a) Write on some of the significant Acts related to environment

(OR)

- b) Discuss the 12 principles of Green Chemistry.

15. a) Discuss the linkages among population explosion, development and environment.

(OR)

- b) Elucidate the role of GIS and remote sensing in environment and health.

PART – C

(1×15=15 Marks)

16. a) India is a Mega-diversity nation. Explain in detail about this statement. Explain the in-situ and ex-situ conservation of biodiversity.

(OR)

- b) Explain in detail about the various clauses of Biomedical waste (Management and handling) Rules 1998.