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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. *Environment-impact assessment*

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.