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**Question Paper Code : 41186**

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

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

**Mechanical Engineering**

**GE 6351 – ENVIRONMENTAL SCIENCE AND ENGINEERING**

(Common to Mechanical Engineering (Sandwich) Aeronautical Engineering/  
Agricultural 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. Define 'keystone species' with suitable example.
2. What are indicator species? Give example.
3. Define 'noise pollution'.
4. What are mitigation procedures? Give example.



5. Define the term 'man induced landslide'.
6. What is bioconversion of pollutants ? Give example.
7. What are biomedical wastes ? Give example.
8. Define the term 'environmental ethics'.
9. What is population explosion ?
10. Define 'GIS-remote sensing'.

**PART – B (5×13=65 Marks)**

11. a) i) What are ecological succession processes ? Explain in detail.  
ii) Explain the desert and grassland ecosystem in details.  
(OR)  
b) i) Explain any ten control measures man-wildlife conflicts in detail.  
ii) Explain the conservation of biodiversity via in-situ and ex-situ in detail.
12. a) i) What are the roles of individual in prevention of pollution ? Explain  
ii) What is the various water treatment processes ? Explain any two.  
(OR)  
b) i) Explain the term 'marine pollution' and nuclear hazards in detail.  
ii) What are ozones ? Explain their functions and depletion mechanism.
13. a) i) Explain the exploitation of mineral resources with two case studies.  
ii) Explain the role of an individual in conservation of natural resources.  
(OR)  
b) i) Explain the energy conversion process with suitable examples  
ii) What is biochemical degradation of pollutants ? Explain.
14. a) i) Explain the 12 principles of Green Chemistry.  
ii) What are resettlement and rehabilitation of people ? Explain.

(OR)



- b) i) Explain the roles of state and central pollution control board .
- ii) Explain Wildlife Protection Act and Forest Conservation Act in detail.

15. a) i) Explain any ten role of information technology in human health.
- ii) How to give value education on HIV/AIDS ? Explain.

(OR)

- b) i) What are the woman and child welfare programme available in India ? Explain in detail.
- ii) What are the family welfare programmes available ? Explain.

PART – C

(1×15=15 Marks)

16. Give a case study of any anthropogenic (Man-made) pollution disaster (s) known to you and discuss the effects of these on the environment (including the human populations) in which they happened.
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