Enrollment No.....................................

Faculty of Engineering
End Sem (Even) Examination May-2019
EN3HS03 Environmental Sciences

Programme: B.Tech.   Branch/Specialisation: All

Duration: 3 Hrs.   **Maximum Marks: 60**

Note: All questions are compulsory. Internal choices, if any, are indicated. Answers of Q.1 (MCQs) should be written in full instead of only a, b, c or d.

Q.1 i.   Which of the following sequence in EIA are in correct order   **1**
          (a) Scoping-prediction-identification-evaluation
          (b) Screening-scoping-identification-prediction
          (c) Scoping-evaluation prediction mitigation
          (d) Screening-scoping-mitigation-evaluation

     ii. World Environment Day is celebrated on   **1**
          (a) 5th June   (b) 5 Aug   (c) 13 Oct.   (d) 25 Jan

     iii. The most important agents for Ozone depletion are   **1**
          (a) Methane   (b) CFC'S
          (c) Nuclear fallout   (d) nitrous oxide

     iv. Major causes for deforestation are   **1**
          (a) Shift cultivation   (b) Fuel requirements
          (c) Raw material to industry   (d) All of these

     v.   Rain water harvesting helps in   **1**
          (a) Reduce run-off   (b) Ground water Recharge
          (c) Reduce water pollution   (d) all of these

     vi. Which energy accounts for largest share in the renewable energy **1**
          basket of India?
          (a) Wind   (b) Nuclear   (c) Hydel   (d) Solar

     vii. Kaziranga national park is famous for   **1**
          (a) One- horned Rhino   (b) Hangul
          (c) Tiger   (d) Elephant

viii. The amount of organic matter stored by the herbivores is known as **1**
   (a) Primary production   (b) Secondary production
   (c) Respiration   (d) Photosynthesis

ix. Green building practices include **1**
   (a) Only energy efficiency
   (b) Only recycled materials
   (c) Only Environmental Protection
   (d) All of these

x. Sustainable buildings will help reduce **1**
   (a) 12% of potable water consumption
   (b) The 3" billion tons of raw material used each year in construction.
   (c) 30% Percent of all greenhouse gas emissions produced by buildings each year in the United States
   (d) All of these

Q.2 i. Define Rehabilitation. **2**

ii. What are the 3 E's of sustainability? **2**

iii. Write about the systematic approach for using EIA as a planning tool for project activity. **4**

OR iv. Differentiate between sustainable agriculture and organic farming. **4**

Q.3 i. What is acid rain? Write its causes. **3**

ii. What are the factors that influence Climate change? List out the four effects of climate change. **5**

OR iii. Explain any five methods of solid waste management. **5**

Q.4 i. What is a flood and what are the various types of floods? **3**

ii. Discuss the causes, effects and control measures of air pollution. **5**

OR iii. What is noise pollution & list the possible impacts of noise pollution on human health. **5**

Q.5 i. What are the major threats to biodiversity? **2**

Attempt any two:

ii. Explain In-situ and Ex-situ conservation of bio diversity with examples. **3**

iii. Explain grazing food chain and detritus food chain. **3**

iv. What is ecological succession? Explain various stages of ecological succession. **3**

Q.6 Attempt any two:

i. What are the applications of green chemistry? **4**

ii. Describe the Volatile Organic Compounds (VO(C) with example. **4**

iii. What are the hybrid vehicles? Explain its working and discuss advantages and disadvantages. **4**

Q.7 Discuss the causes and effects of Bhopal Gas tragedy & Kerala floods. **10**

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Marking Scheme
EN3HS03 Environmental Sciences

Q.1 i. Which of the following sequence in EIA are in correct order **1**
         (b) Screening-scoping-identification-prediction

     ii. World Environment Day is celebrated on **1**
          (a) 5th June

     iii. The most important agents for Ozone depletion are **1**
           (b) CFC'S

     iv. Major causes for deforestation are **1**
          (d) All of these

     v. Rain water harvesting helps in **1**
         (d) all of these

     vi. Which energy accounts for largest share in the renewable energy **1**
          basket of India?
          (c) Hydel

     vii. Kaziranga national park is famous for **1**
           (a) One- horned Rhino

     viii. The amount of organic matter stored by the herbivores is known as **1**
            (b) Secondary production

     ix. Green building practices include **1**
          (d) All of these

     x. Sustainable buildings will help reduce **1**
         (d) All of these

Q.2 i. Definition of Rehabilitation. **2**

     ii. 3 E's of sustainability **2**

     iii. Systematic approach for using EIA as a planning tool for project **4**
           activity.
           Definition of EIA   1 mark
           Approach   3 marks

OR   iv. Differentiate between sustainable agriculture and organic farming. **4**
          Any four difference 1 mark each   (1 mark * 4)

Q.3 i. Definition of acid rain   1 mark   **3**
         Any two causes 1 mark each (1 mark *2)   2 marks

     ii. Factors that influence Climate change **5**
          Definition   1 mark
          Factors   2 marks
          Four effects of climate change.   2 marks

OR   iii. Any five methods of solid waste management. **5**
           1 mark for each   (1 mark * 5)

Q.4 i. Flood   1 mark   **3**
         Types of floods   2 marks

     ii. Causes of air pollution   1 mark   **5**
          Effects of air pollution   2 marks
          Control measures of air pollution.   2 marks

OR   iii. Noise pollution   1 mark   **5**
           Possible impacts of noise pollution on human health.
                                      4 marks

Q.5 i. Major threats to biodiversity **2**
         Attempt any two:

     ii. In-situ conservation of bio diversity with examples **3**
                                      1.5 marks
          Ex-situ conservation of bio diversity with examples.
                                      1.5 marks

     iii. Grazing food chain   1.5 marks   **3**
           Detritus food chain.   1.5 marks

     iv. Ecological succession   1 mark   **3**
          Stages of ecological succession.   2 marks

Q.6   Attempt any two:

     i. Applications of green chemistry **4**
         1 mark for each   (1 mark * 4)

     ii. Volatile Organic Compounds (VOC) **4**
          Definition   1 mark
          Description   2 marks
          Example.   1 mark

     iii. Hybrid vehicles   1 mark   **4**
           Its working   1 mark
           Advantages   1 mark
           Disadvantages.   1 mark

Q.7   Bhopal Gas tragedy **10**
          Causes   2.5 marks
          Effects   2.5 marks
          Kerala floods.
          Causes   2.5 marks
          Effects   2.5 marks

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