

Code No: 07A80104

**R07****Set No. 2**

**IV B.Tech II Semester Examinations, April/May 2012**  
**WATER SHED MANAGEMENT**  
**Civil Engineering**

**Time: 3 hours****Max Marks: 80**

**Answer any FIVE Questions**  
**All Questions carry equal marks**

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1. Explain the following characteristics of a watershed and its effect on runoff:
  - (a) drainage
  - (b) vegetation. [16]
2. Explain classification of erosion along with examples. [16]
3. What is terracing? Explain bench terraces in detail. [16]
4. Explain the following measures to control erosion along with its advantages and disadvantages:
  - (a) Contour techniques
  - (b) Rockfill dams. [16]
5. Explain the role of remote sensing for watershed management. [16]
6. What is dry land agriculture? Explain in detail, the various approaches involved in it. [16]
7. Explain in detail, the various activities to be carried out in the preparation and development of land. [16]
8. "In a third world country like India, the process of socio economic development is worsening environmental problems" - critically evaluate the statement. [16]

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**R07****Set No. 4**

**IV B.Tech II Semester Examinations, April/May 2012**  
**WATER SHED MANAGEMENT**  
**Civil Engineering**

**Time: 3 hours****Max Marks: 80**

**Answer any FIVE Questions**  
**All Questions carry equal marks**

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1. Explain the following spatial characteristics of watershed:
  - (a) Geometric representation of watersheds.
  - (b) Geomorphological characteristics of watersheds. [16]
2. Explain the details needed for preparation of a plan for understanding the various disciplines used in watershed management and their interrelationship. [16]
3. Enumerate effects of erosion on land fertility and land capability. [16]
4. Where are the saline soils widespread. What are the reclamation measures for these soils? Explain in detail. [16]
5. How is an agricultural programme worked out? Explain, giving an example of cropping pattern with sowing time. [16]
6. Explain the following watershed parameters:
  - (a) Circularity ratio
  - (b) Shape factor
  - (c) Surface roughness. [16]
7. What is a rock fill dam? Explain the various types of rock fill dams. [16]
8. Explain any four methods of gully control along with neat sketches. [16]

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**R07****Set No. 1**

**IV B.Tech II Semester Examinations, April/May 2012**  
**WATER SHED MANAGEMENT**  
**Civil Engineering**

Time: 3 hours

Max Marks: 80

Answer any FIVE Questions  
All Questions carry equal marks

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1. Explain characteristics of raindrops and its impact as soil erosion. [16]
2. (a) What points should be emphasized in training village entrepreneurs? Explain.  
(b) What are the requisite characteristics of the people who train the village entrepreneurs in watershed management? [8+8]
3. Explain the following:
  - (a) Specification of contour trenches
  - (b) Alignment and construction of contour trenches. [16]
4. Explain the harvesting of groundwater in detail, with neat sketches. [16]
5. (a) Explain principles of watershed management.  
(b) What are the causes of watershed deterioration? Explain in detail. [8+8]
6. Explain the following of characteristics of a watershed:
  - (a) Drainage area
  - (b) Watershed length
  - (c) Watershed shape. [16]
7. "The environmental problems of India could be solved only through a holistic management of its biomass resources". Examine and evaluate the statement critically. [16]
8. Explain the management of forest and agricultural land. [16]

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**R07****Set No. 3**

**IV B.Tech II Semester Examinations, April/May 2012**  
**WATER SHED MANAGEMENT**  
**Civil Engineering**

**Time: 3 hours****Max Marks: 80**

**Answer any FIVE Questions**  
**All Questions carry equal marks**

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1. Explain the following characteristics of a watershed:
  - (a) Socio-economic characteristics
  - (b) Physiography. [16]
2. Explain the term Rainwater harvesting. What are rainwater harvesting practices? Explain them in detail. [16]
3. What are the different factors involved in greening of the watershed? Explain in detail. [16]
4. Explain step by step procedure for check against sliding, check for compression and check against tension for any gully control drop structure. [16]
5. Explain the role of GIS for watershed development. [16]
6. (a) Explain the following:
  - i. Erosivity due to rainfall
  - ii. Soil erodibility.(b) Explain characteristics of rain drops. [16]
7. Explain the relevance of the development and effective utilization of agro Industrial infrastructure in watershed management. [16]
8. Explain the reclamation of saline soils in detail. [16]

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