

Reg. No:

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SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR
(AUTONOMOUS)

B.Tech III Year II Semester Regular Examinations August-2022

SOIL AND WATER CONSERVATION ENGINEERING

(Agricultural Engineering)

Time: 3 hours

Max. Marks: 60

(Answer all Five Units 5 x 12 = 60 Marks)

UNIT-I

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|---|--|----|----|
| 1 | a Define soil erosion. | L1 | 2M |
| | b List soil and water conservation training and research institute in India. | L1 | 6M |
| | c Discuss the effect of soil erosion. | L2 | 4M |

OR

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| 2 | Briefly explain the each parameters of USLE. | L2 | 12M |
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UNIT-II

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| 3 | Explain the Factors affecting runoff. | L2 | 12M |
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OR

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| 4 | a Classify and explain the different types of mulches used in agriculture. | L3 | 6M |
| | b Explain engineering measure to control erosion. | L2 | 6M |

UNIT-III

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| 5 | Explain the steps involved in design of contour bunds. | L2 | 12M |
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OR

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| 6 | a In a hilly region, bench terracing is proposed for cultivation purpose. The general land slope is 30%. Average soil depth is about 1.0m, limiting the depth of cut to 0.7m. Raiser is to be laid on 1:1 gradient. Compute the width of terrace ,Earth work per ha and its cost @INR 2.5 per m3 and Area lost in bench terracing. | L3 | 6M |
| | b List the surplusing arrangement made in bunding system and describe the surplus weir. | L1 | 6M |

UNIT-IV

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| 7 | a Explain the construction procedure for grassed waterways. | L2 | 6M |
| | b Write a short note on maintenance of grassed waterways. | L2 | 6M |

OR

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| 8 | Explain pre and post sedimentation control methods. | L2 | 12M |
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UNIT-V

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| 9 | a Define farm pond, and write its importance. | L1 | 6M |
| | b Describe in detail about the roof water harvesting. | L2 | 6M |

OR

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| 10 | a Explain the design steps of gully control structures in brief. | L2 | 10M |
| | b Write down the Uses of Drop Structures. | L2 | 2M |

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