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

B.Tech II Year II Semester Supplementary Examinations July-2021

MATERIALS, TESTING & EVALUATION

(Civil Engineering)

Time: 3 hours

Max. Marks: 60

PART-A

(Answer all the Questions 5 x 2 = 10 Marks)

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|---|---|--|----|
| 1 | a | Give any four uses of stones. | 2M |
| | b | Define distemper and Varnish. | 2M |
| | c | What are the mechanical properties of aggregates? | 2M |
| | d | What are the Vibrators used for compacting and Name some concrete chemicals? | 2M |
| | e | Define true stress and plastic deformation of metals. | 2M |

PART-B

(Answer all Five Units 5 x 10 = 50 Marks)

UNIT-I

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|---|---|--|----|
| 2 | a | Explain the tests required to determine the suitability of bricks for construction work. | 5M |
| | b | With a neat sketch, explain the parts of Bull's trench kiln. | 5M |

OR

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|---|---|---|----|
| 3 | a | Explain various quarrying methods of stone along with their importance. | 5M |
| | b | Explain the process of burning bricks in Hoffman's kiln with a neat sketch. | 5M |

UNIT-II

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|---|---|--|----|
| 4 | a | What are the field tests of cement? | 5M |
| | b | What are the ingredients of cement? Explain them | 5M |

OR

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|---|---|--|----|
| 5 | a | Define Distemper and varnish. | 5M |
| | b | Write about painting plastered surfaces and painting metal surfaces. | 5M |

UNIT-III

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|---|---|--|----|
| 6 | a | What do you mean by soundness of aggregate? Explain | 5M |
| | b | What is alkali-aggregate reaction? And how will it affect the concrete properties. | 5M |

OR

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|---|--|-----|
| 7 | | 10M |
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UNIT-IV

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|---|---|---|----|
| 8 | a | Explain the phenomenon of gain of strength of concrete with age | 5M |
| | b | Calculate the Gel/space ratio and the theoretical strength of a sample of concrete mad with 500 gms of cement and 0.6 w/c ratio, on full hydration and 70% hydration. | 5M |

OR

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|---|---|---|----|
| 9 | a | What are the various factors affecting the properties of Fibre Reinforced concrete? | 5M |
| | b | Write the various applications of Fibre Reinforced concrete. | 5M |

UNIT-V

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| 10 | | 10M |
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OR

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| 11 | | 10M |
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END