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P.E.S. College of Engineering, Mandya - 571 401

(An Autonomous Institution affiliated to VTU, Belagavi)

Seventh Semester, B.E. - Computer Science and Engineering

Semester End Examination; Jan. / Feb. - 2021

Block Chain Technology

Time: 3 hrs

Max. Marks: 100

Note: Answer FIVE full questions, selecting ONE full question from each unit.

UNIT - I

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|------|--|----|
| 1 a. | Differentiate between Centralized and Decentralized system. | 10 |
| | b. Explain in detail layers of Block Chain. | 10 |
| 2 a. | Explain the limitations of Centralized system and also give the uses of Block Chain. | 10 |
| | b. Explain in detail DES cryptography. | 10 |

UNIT - II

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|------|---|----|
| 3 a. | Explain in detail Diffie-Hellman key exchange algorithm. | 10 |
| | b. Differentiate between Symmetric and Asymmetric key cryptography. | 10 |
| 4 a. | Explain the properties of Block Chain solutions. | 10 |
| | b. Explain the different consensus mechanisms. | 10 |

UNIT - III

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| 5 a. | What is Bit Coin? Explain Bit Coin Block Chain. | 10 |
| | b. With a neat diagram, explain Bit Coin Block Chain network on the Internet. | 10 |
| 6 a. | Explain the Bit Coin transaction with one input and multiple transactions input. | 10 |
| | b. Explain wallet application with the Bit Coin network. | 10 |

UNIT - IV

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| 7 a. | Explain the design philosophy of Ethereum. | 10 |
| | b. Explain Ethereum transaction and message structure. | 10 |
| 8 a. | Explain Ethereum ecosystem. | 10 |
| | b. Explain the Ethereum smart contract with respect to blocks. | 10 |

UNIT - V

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|-------|---|----|
| 9 a. | Explain the application interacting with the Bit Coin Block Chain using Block explores API. | 10 |
| | b. Explain the interacting programmatically with Ethereum creating a smart contract. | 10 |
| 10 a. | Explain the interacting application with Bit Coin Block Chain using Block explorer API. | 10 |
| | b. Differentiate between public nodes versus self hosted nodes. | 10 |

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