

Total No. of Questions : 5]

SEAT No. :

**PD-1578**

[Total No. of Pages : 2

**[6468] - 58**

**T.Y. B.Sc.**

**COMPUTER SCIENCE**

**CS-3511: Blockchain Technology**

**(2019 Revised Pattern) (Semester - V) (CBCS)**

*Time : 2 Hours]*

*[Max. Marks : 35*

*Instructions to the candidates:*

- 1) *All questions are compulsory.*
- 2) *Figures to the right indicate full marks.*
- 3) *Neat diagrams must be drawn wherever necessary.*

**Q1)** Attempt any Eight of the following :

**[8 × 1 = 8]**

- a) What is Bitcoin?
- b) What is the hash function?
- c) What is DAO?
- d) Give the name of crypto currencies where blockchain is used.
- e) What is Nonce?
- f) Which algorithm is used by Bitcoin to verify transactions?
- g) Define immutable ledger.
- h) What is Ether?
- i) Define consensus.
- j) Define soft fork.

**P.T.O.**

**Q2)** Attempt any Four of the following : **[4 × 2 = 8]**

- a) Write a short note on the life cycle of smart contracts.
- b) Explain symmetric & asymmetric key cryptography.
- c) Describe the consensus mechanism in detail.
- d) Write a short note on ICO.
- e) Describe EVM with the help of a neat diagram.

**Q3)** Attempt any Two of the following : **[2 × 4 = 8]**

- a) Explain the Blockchain generation.
- b) Write a short note on Byzantine fault tolerance.
- c) Explain Digital Signature with its working principle.

**Q4)** Attempt any Two of the following : **[2 × 4 = 8]**

- a) Which are the different types of Blockchain?
- b) With the help of diagram describe the process of SHA-256.
- c) Differentiate between blockchain and database.

**Q5)** Attempt any one of the following : **[1 × 3 = 3]**

- a) Explain the concept of competing chain in detail.
- b) Write notes on:
  - i) Proof of Work(PoW)
  - ii) Proof of Stake(PoS)

