

B.C.A. - I (NEP Pattern) Semester-I
SEC101 / MDE Paper-V - Indian Knowledge System

P. Pages : 2

Time : Two Hours



GUG/W/24/16191

Max. Marks : 40

- Notes :
1. All questions are compulsory & carry equal marks.
 2. Draw Neat & Labelled Diagram use supporting Data Wherever Necessary.
 3. Avoid Vague Answers & Write Specific points/Answers related to questions.

Either:

1. a) Explain the Global Impact of Indian Contributions to the decimal system & the concept of zero on Modern Arithmetic & Computing. 4
- b) How does Pingalas Chaudas Shastra relate to the development of binary logic in Modern Computing? 4

OR

- c) How our Ancient followed the principles of Encoding, decoding & secure messaging. 4
- d) Elaborate the work Acharya Aryabhata. 4

Either:

2. a) Describe Dr. Hami J. Bhabha's role in establishing India's nuclear & computational infrastructure. 4
- b) Explain how Indias contributions to Computer Science. 4

OR

- c) Explain the significance of TIFRAC in India's Computational history & Dr. Narasimhan's role in its development. 4
- d) Elaborate India's contribution in computing. 4

Either:

3. a) Analyze Wipro's IKS contributions to Software Engineering & its Initiatives toward corporate sustainability. 4
- b) Write CSR contribution of company. 4
 - i) Infosys
 - ii) HCL

OR

- c) Discuss India's rise as a prominent global software talent hub & its impact on silicon valleys technological ecosystem. 4
- d) Evaluate how Indian developers have contributed to open-service platform in Emerging Technologies such as AI, Blockchain. 4

Either:

- 4. a) Analyze the role of collaborations between Indian labs & global organizations in Advancing IT Research. 4
- b) Discuss in detail how Indian research labs for preserving & promoting Indian knowledge system. 4

OR

- c) Analyze the role of private labs in bridging the gap between Academia & Industry. 4
- d) Explain how Wipro Labs leverages AI for healthcare diagnostics & energy-efficient solutions. 4

5. Attempt all questions below:

- a) Mention one characteristics of Indian Algorithms that Aligns with modern AI Techniques. 2
- b) Enlist notable Indian Computer Scientist. 2
- c) List at least 8 leading Indian Software firms. 2
- d) State one key role of IISC in Advancing India's Computing Research. 2
