

B.C.A.- I (NEP) Semester-I
MDE101 - Paper-V - Indian Knowledge System

P. Pages : 2

Time : Two Hours



GUG/S/25/16191

Max. Marks : 40

- Notes :
1. All questions are compulsory & carry equal marks
 2. Draw neat & labelled diagram use supporting data whenever necessary.
 3. Avoid vague answers & write specific points answers related to questions

Either:

1. a) Define Indian knowledge system? Explain its historical perspective on Indian knowledge & computing? 4
- b) Describe ancient Indian contribution to the concept of zero & its positional notation? 4

OR

- c) What do you mean by computational principles in Ancient India? Explain. 4
- d) Explain traditional Indian knowledge in mathematics & Astronomy? 4

Either:

2. a) Describe an pioneering Indian computer scientist & its contribution to global computing? 4
- b) Explain about Homi J. Bhabha in contribution to computing & foundation of Tata Institute of Fundamental Research (TIFR)? 4

OR

- c) Describe in brief about Dr. Raj Reddy innovation in artificial intelligence? 4
- d) Explain prof. Narasimhan contribution to theoretical computer science? 4

Either:

3. a) Explain in brief about rise of Indian software firms & its global impact? 4
- b) Explain following: 4
 - i) (TCS) Tata consultancy services & its role in shaping global out sourcing & IT services.
 - ii) HCL technologies & its innovation in both hardware & software development.

OR

- c) Describe about Indian developer involvement in global open-source project in Linux. 4
- d) Explain about India's software talent & its participation globally? 4

Either:

4. a) Describe about Indian Institute of Technology (IITs) & its contribution to computer science education & research? 4
- b) Explain about DRDO role in high performance computing & simulation technology? 4

OR

- c) NIT & NIC hubs are increasing research on emerging technology like AI ,data science & blockchain? Explain. 4
- d) Describe about Indian research labs & its contribution to software engineering & cybersecurity? 4
5. Attempt all questions below:
- a) Explain in short traditional Indian knowledge in logic & philosophy? 2
- b) Describe in short development of PARAM super computer? 2
- c) Explain NASSCOM's role in promoting India's global IT capabilities? 2
- d) Explain Indian Institute of Science (IISc) & its role in computing research? 2
