UG 4th - Semester Examination - 2025 (Under NCCF)

Award	:	**All**
Discipline	:	**Computer Science**
Course Type	:	**VAC-2 (VA)**
Course Name	:	**Digital and Technological Solutions**
Course Code	:	**VAC403**
Full Marks	:	**35** **Time: 2 Hours**

(The figures in the right-hand margin indicate full marks. Candidates are required to give their answers in their own words as far as practicable. Notations and symbols have their usual meaning.)

1. **Answer any *five* of the following questions.**   1X5=5

   a) Which technology allows wireless data transfer over short distances?
   b) What is the full form of IoT?
   c) Which type of software manages hardware and software resources?
   d) What is the name of the technology that is used to create virtual worlds?
   e) Which tool is used to convert an algorithm into a graphical representation?
   f) What is the full form of UPI?
   g) Define e-wallet.
   h) What is phishing in cyber security?

2. **Answer any *five* of the following questions.**   2X5=10

   a) List some of the cloud-based services that you are using at present.
   b) Write down four popularly used UPI app.
   c) What are the components of ICT?
   d) How Does Digital Technology help in Education?
   e) What is the full form of NEFT and RTGS?
   f) Mention two benefits of Digital India for rural citizens.
   g) What is a block in a blockchain?
   h) How does cryptocurrency differ from traditional currency?

3. **Answer any *two* of the following questions.**   5X2=10

   a) Define flowchart. Draw a flowchart to display largest between two numbers.   1+4

   b) Define operating system. Explain in brief functions of operating system.   2+3

   c) What are the major services and benefits of Digital India and e-Governance? Explain in brief.

   d) What is a digital signature? Explain how it works with the help of a diagram.   2+3

4. **Answer any *one* of the following questions.**   **10X1=10**

   a) Describe Cyber Security threats and challenges with examples. What safety measures and tools can be used to protect against cyber threats? Briefly discuss the legal and ethical issues related to cyber security.   4+3+3

   b) i) Discuss the advantages and disadvantages of 3D printing.
      ii) Describe any five major features of blockchain.   5+5

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