

T.Y.B.Sc.IT Sem-V @BCS dt 11/02/2025

Time: (2½ Hours)

[Total Marks: 75]

N. B.: (1) All questions are compulsory.

(2) Make suitable assumptions wherever necessary and state the assumptions made.

(3) Answers to the same question must be written together.

(4) Numbers to the right indicate marks.

(5) Draw neat labeled diagrams wherever necessary.

(6) Use of Non-programmable calculators is allowed.

Q.1 Attempt any three of the following:

15

a. Define the term IOT with two appropriate examples.

b. Explain calm and ambient technology using example.

c. List and Explain the roles of people making IOT

d. What are enchanted objects? Explain with examples how technology has always been associated with magic.

e. Differentiate between Static IP and Dynamic IP

f. Define protocol

1. HTTP 2. SMTP 3. TCP 4. FTP 5. IMAP

Q.2 Attempt any three of the following:

15

a. Compare Raspberry pi and Arduino

b. Explain advantages and disadvantages of mixing open and close source

c. Define and give brief description of the term prototyping.

d. Compare between Python and C++ as development language for Internet of Things.

e. Which parameter are important for changing embedded platform?

f. What is sketching? Explain in brief.

Q.3 Attempt any three of the following:

15

a. Explain Laser cutting & the criteria for selecting the Laser cutter.

b. Explain repurposing.

c. What is 3D printing? Explain types of 3D printing.

d. What are hinges & joints? Explain any two.

e. Explain Mashing of API.

f. Explain the following terms:

1. Scraping 2. Legalities

Q.4 Attempt any three of the following:

15

a. Define RAM. What are the types of RAM?

b. difference between crowd funding and govt. funding

c. Explain in detail SRAM and DRAM.

d. Write a note on long tail of internet.

e. Discuss business model for canvas in IOT.

f. Explain the following terms

1. Stack 2. Heap

- Q.5** Attempt **any three** of the following:
- a. Explain correctness and maintainability
  - b. Explain five critical requirements for sensor common project.
  - c. writes a short note on mass producing the case and other fixture.
  - d. How to design PCB explain in brief?
  - e. Explain-disrupting control and crowdsourcing with suitable examples.
  - f. Write a short note on cautious optimism as solution for IoT.

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