TYIT

(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**.

1. Attempt _any three_ of the following: 15
  a. Define and explain Ubiquitous Computing (ubicom),
  b. List and explain the roles of people making IOT.
  c. What is manufactured normalcy field? Explain.
  d. "Data available through IOT device belongs to public or company which implement the IOT device". Discuss.
  e. What is DNS? How does it work?
  f. What are TCP n UDP ports? Explain with examples.

2. Attempt _any three_ of the following: 15
  a. What is sketching? Explain its role in prototyping.
  b. "Open source has a competitive advantage". Discuss
  c. How can one tap into the community for promoting IoT devices? Explain.
  d. With the help of an example explain the process of Scaling up the electronics.
  e. Explain the following IoT devices built with Arduino:
  f. i) The Good night lamp. ii)   Botanicals iii)   Baker treat

3. Attempt _any three_ of the following: 15
  a. Explain the sketch iterate and explore process in prototyping.
  b. Write a short note on laser cutters.
  c. What is milling? Explain.
  d. What are the legalities associated with scrapping ?
  e. What is comet? Explain
  f. Explain HTML5 web socket

4. Attempt _any three_ of the following: 15
  a Explain different types of memory.
  b With the help of examples, compare stack and heap.
  c What are libraries? Explain with examples
  d Define business model .Explain different factors in the definition.
  e With the help of a diagram, explain business model canvas.
  f What is venture capital? How can one exit?

5. Attempt _any three_ of the following: 15
  a. Explain in details the process of designing the kits.
  b. Write a short note on mass-producing the case and other fixtures.
  c. Discuss the issues in scaling up the software for large scale IOT devices.
  d. Discuss the advantage and disadvantages of technology.
  e. "The internet destroys the state". discuss
  f. What is environmental cost of Internet service for IOT device? What is the solution?

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Page 1 of 1

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