

7E1721

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**B. Tech. VII - Sem. (Main / Back) Exam., January - 2022**  
**Computer Science & Engineering**  
**7CS4 -01 Internet of Things**

**Time: 3 Hours**

**Maximum Marks: 120**  
**Min. Passing Marks: 42**

*Instructions to Candidates:*

*Attempt all ten questions from Part A, five questions out of seven questions from Part B and four questions out of five from Part C.*

*Schematic diagrams must be shown wherever necessary. Any data you feel missing may suitably be assumed and stated clearly. Units of quantities used /calculated must be stated clearly.*

*Use of following supporting material is permitted during examination. (Mentioned in form No. 205)*

[ersahilkagyan.com](http://ersahilkagyan.com)

1. NIL

2. NIL

**PART - A**

**(Answer should be given up to 25 words only)**

**[10×2=20]**

**All questions are compulsory**

~~Q.1~~ Define Arduino?

~~Q.2~~ List layers of IoT protocol.

~~Q.3~~ What are the challenges of IoT?

~~Q.4~~ List available wireless communications boards available in Raspberry Pi?

~~Q.5~~ What is the difference between M2M and IoT?

~~Q.6~~ What is shodan?

~~Q.7~~ What is the connection between IoT and sensors in the commercial enterprise?

~~Q.8~~ What is the top most layer in IoT architecture?

Q.9 What are IoT testing tools?

Q.10 Differentiate between Arduino and Raspberry Pi?

### **PART – B**

**(Analytical/Problem solving questions)**

**[5×8=40]**

**Attempt any five questions**

Q.1 Explain fundamental components of IoT?

Q.2 How can IoT benefit the health care industry? Explain.

Q.3 Define IPv6. What impact could IPv6 have on IoT? Explain.

Q.4 What is REST model? Why it is important? Explain the REST methods.

Q.5 Explain 4 stages of IoT architecture.

Q.6 What is the scale of use of IoT devices in contemporary times.

Q.7 Explain the types of testing in IoT?

### **PART – C**

**(Descriptive/Analytical/Problem Solving/Design Questions)**

**[4×15=60]**

**Attempt any four questions**

Q.1 Explain –

(a) Tiny OS

(b) Ultrasonic sensor

(c) RIOT OS

Q.2 What are IoT publishers? Explain communication models in IoT.

Q.3 What are the most common IoT application? Explain the characteristics, advantages and disadvantages of IoT.

Q.4 What is SDN? What are the four key characteristics of an SDN architecture? Explain the layers of SDN.

Q.5 What is cloud computing? Why it is used? What are the main advantages of cloud computing? Is cloud computing necessary for IoT? Explain.

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