

Total No. of Questions : 4]

P9032

SEAT No. :

[Total No. of Pages : 1

**Oct-22/TE/Insem - 564**  
**T.E. (Information Technology)**  
**INTERNET OF THINGS**  
**(2019 Pattern) (Semester - I) (Elective - I) (314445 D)**

*Time : 1 Hour]*

*/Max. Marks : 30*

*Instructions to the candidates:*

- 1) Answer Q.1 or Q.2, Q.3 or Q.4.
- 2) Neat diagrams must be drawn wherever necessary.
- 3) Figures to the right side indicate full marks.
- 4) Assume suitable data, if necessary.

- Q1)** a) Define IoT and explain physical design of IoT [7]  
b) Explain IoT world Forum (IoTWF) standardized seven-layer IoT architectural reference model. [8]

OR

- Q2)** a) Explain enabling technologies in IoT [7]  
b) Write a short note on (Any Two): [8]  
i) Software defined Networking  
ii) Network function virtualization  
iii) Wireless Sensor Networks

- Q3)** a) Define Sensor and explain types of sensors with examples. [7]  
b) Write a short note on (Any Two): [8]  
i) 12C bus protocol  
ii) CAN bus protocol  
iii) UART  
iv) USRT

OR

- Q4)** a) Draw and explain interfacing of LED with ARDIUNO with program to blink it. [7]  
b) Draw and explain interfacing of DC motor with ARDIUNO with program of speed control. [8]