JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT
TEST -3 EXAMINATION- 2023
M.Tech-I Semester (ECE)

COURSE CODE (CREDITS):): 21M1WEC131(3)   MAX. MARKS: 35
COURSE NAME: IOT Architecture and Protocols
COURSE INSTRUCTORS: Er. Munish Sood   MAX. TIME: 2 Hour

Note: (a)All questions are compulsory.
(b)Marks are indicated against each question in square brackets.
(c) The candidate is allowed to make Suitable numeric assumptions wherever required for solving problems

Q1) What is XMPP ? With the help of a suitable diagram explain XMPP architecture ? What are the ports used by clients and server in XMPP ? Give the advantages and disadvantages of XMPP.

CO-4 [5]

Q2) What is CoAP used for? What are the similarities between COAP and HTML? Enumerate the differences between CoAP and HTTP? Explain the request response model of CoAP. What are the different CoAP methods?   **CO-3 [5]**

Q3) Explain in detail about publish/subscribe messaging transport protocol MQTT. What are MQTT topics and wildcards? Explain the Publisher – Broker - Subscriber model of MQTT. What are the QoS levels for MQTT?   **CO-4 [5]**

Q4) What is Websocket? How is it different from HTTP? How do Websockets work?

CO-3 [5]

Q5) What are the security issues in IoT? What are the issues in IoT standardization? What is Firmware Over The Air (FOTA)? How do we address vulnerability and patch management with FOTA?   **CO-4 [5]**

Q6) Write short notes on the following: **CO-4, CO-5 [2X5=10]**

 a) IoT data protocols
 b) IoT Network protocols
 c) Advanced Message Queuing Protocol (AMQP)
 d) Data Distribution Service (DDS)
 e) ZigBee