



BMSCOLLEGE OF ENGINEERING, BANGALORE-19
(Autonomous Institute, Affiliated to VTU)
Department Name: Computer Science and Engineering

SECOND INTERNALS

Course Code: 20CS5PCIOT	Course Title: Internet Of Things
Semester: 5 th (A,B,C)	Max Marks: 40
Faculty Handling the Course	Dr.K.Panimozhi
Instructions: Internal choice is provided in Part C.	


PART-A

Total 5 Marks (No choice)*

No.	Question	Marks
1	Explain the functionalities of Layer 4 of IoT Reference architecture.	05

PART-B

Total 15 Marks (No Choice, each question should be maximum of 5 marks)*

No.	Question	Marks
2a.	Analyse the need for header compression in 6LoWPAN.	05
2b.	Analyse the given packet structure and explain in detail <div><div>MQTT-Packet: CONNECT</div><div><div>contains:</div><div><div>clientId</div><div>cleanSession</div><div>username (optional)</div><div>password (optional)</div><div>lastWillTopic (optional)</div><div>lastWillQos (optional)</div><div>lastWillMessage (optional)</div><div>lastWillRetain (optional)</div><div>keepAlive</div></div><div><div>Example</div><div>"client-1"</div><div>true</div><div>"hans"</div><div>"letmein"</div><div>"/hans/will"</div><div>2</div><div>"unexpected exit"</div><div>false</div><div>60</div></div></div></div>	05
2c.	Justify how reliability is achieved in CoAP.	05

PART- C

Total 20 marks (Choice is between (3a or 3b) and (4a or 4b))

No.	Quest	Marks
3a.	Assume that a room has 2 bulbs and 2 ACs. Design and implement a system to automatically control this room using Bluetooth technology.	10
OR		
3b.	Design a smart home using RFID	10
4a	Design a smart package handling system using WiFi and use any cloud services to store and analyze the data.	10
OR		
4b.	Design and implement burglar /theft alert system using appropriate hardware components, system should make a call and SMS as alert to the user.	10