BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI
(END SEMESTER EXAMINATION)

CLASS: BTECH   SEMESTER : VII
BRANCH: ALL   SESSION : MO/2022

SUBJECT: IT423 INTERNET OF THINGS

TIME: 3:00 Hours   FULL MARKS: 50

INSTRUCTIONS:
1. The question paper contains 5 questions each of 10 marks and total 50 marks.
2. Attempt all questions.
3. The missing data, if any, may be assumed suitably.
4. **Before attempting the question paper, be sure that you have got the correct question paper.**
5. Tables/Data hand book/Graph paper etc. to be supplied to the candidates in the examination hall.

Q.1(a)   Define Internet of things with examples   [2]
Q.1(b)   Write the role of platform fo IoT system? Briefly explain it with the help of any example.   [3]
Q.1(c)   How does resources constraint for Operating System in IoT is applicable? Explain it.   [5]

Q.2(a)   With the help of a diagram show the working process of IoT system.   [2]
Q.2(b)   Define IoT topology? Compare it with Local area network topology using a diagram.   [3]
Q.2(c)   What do you mean by Layer/stack architecture of IoT? Explain it with the help of a suitable diagram.   [5]

Q.3(a)   Define ZigBee network protocol with its feature.   [2]
Q.3(b)   What do you mean by quality of services with respect to IoT? Write related characteristics.   [3]
Q.3(c)   How does service discovery protocol work? Briefly explain it with the help of a diagram.   [5]

Q.4(a)   Briefly define gateways using a diagram by implementing concept of IoT.   [2]
Q.4(b)   Differentiate M2M from IoT system. Also use the diagram for the same.   [3]
Q.4(c)   What do you mean by business processes in IoT system? Explain it with the help of an example.   [5]

Q.5(a)   How does cloud computing optimize the process of IoT? Write it briefly.   [2]
Q.5(b)   Differentiate working process of fog computing with grid computing.   [3]
Q.5(c)   What is smart grid? Explain it with the help of a suitable diagram.   [5]

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