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B.TECH.
(SEM I) THEORY EXAMINATION 2022-23
EMERGING TECHNOLOGY FOR ENGINEERING

Time: 3 Hours**Total Marks: 25****Note:** Attempt all Sections. If require any missing data; then choose suitably.**SECTION A**

- 1. Attempt any SIX questions in brief.** **1 x 6 = 6**
- (a) Write down the major components of IoT System.
 - (b) Compare between Internet and Intranet.
 - (c) Write down the key characteristics of blockchain technology.
 - (d) Differentiate between additive manufacturing and subtractive manufacturing.
 - (e) What are the procedures for becoming a drone pilot in India?
 - (f) Write down the key objectives of 5G.
 - (g) Compare and contrast between cloud computing and distributed computing.
 - (h) What is Artificial Intelligence?

SECTION B

- 2. Attempt any three of the following:** **3x3=9**
- (a) Define Sensors. Explain their types and use in detail.
 - (b) What is Cloud computing? Discuss the various applications of it.
 - (c) What are Smart contracts? Explain the features and applications of it.
 - (d) Define Augmented Reality (AR). Compare and contrast between AR and VR.
 - (e) Discuss the various applications of 3D printing in detail.

SECTION C

- 3. Attempt any one part of the following:** **2x1=2**
- (a) What do you mean by Industrial Internet of Things (IIoT)? Explain with some applications.
 - (b) Discuss the various layers of IoT in detail.
- 4. Attempt any one part of the following:** **2x1=2**
- (a) Write a short note on AWS and why it is so popular?
 - (b) Discuss Microsoft Azure with its features and services in detail.
- 5. Attempt any one part of the following:** **2x1=2**
- (a) What is cryptocurrency? Why cryptocurrencies are volatile in nature?
 - (b) Discuss the various applications of blockchain technology in detail.
- 6. Attempt any one part of the following:** **2x1=2**
- (a) Discuss about the 3D printing process in detail. What are the advantages and limitations of 3D printing?
 - (b) What is unmanned aerial vehicle? Discuss the different types of it in detail.
- 7. Attempt any one part of the following:** **2x1=2**
- (a) What is BCI? Explain the working and major challenges of BCI in detail.
 - (b) Compare and contrast 4G and 5G. How 5G will boost virtual reality?