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Narula Institute of Technology
An Autonomous Institute under MAKAUT
2024
SPECIAL SUPPLEMENTARY EXAMINATION 2024
EC702C - INTERNET OF THINGS (IOT)

TIME ALLOTTED: 3Hours   **FULL MARKS: 70**

Instructions to the candidate:

Figures to the right indicate full marks.
Draw neat sketches and diagram wherever is necessary.
Candidates are required to give their answers in their own words as far as practicable

Group A
(Multiple Choice Type Questions)
Answer any ten from the following, choosing the correct alternative of each question: 10×1=10

1.i) Identify the language preferred for IoT analytics.   (1)   CO1   BL3
a) Python
b) HTML
c) PHP
d) C++

1.ii) Which of the following is false about the MANET IoT network?   (1)   CO4   BL3
a) It is a self-configuring network
b) It has a low data rate
c) It doesn't have any encryption
d) Power is readily available for complex security

1.iii) Which of the following is false about IoT devices?   (1)   CO3   BL2
a) IoT devices use the internet for collecting and sharing data
b) IoT devices need microcontrollers
c) IoT devices use wireless technology
d) IoT devices are completely safe

1.iv) How many numbers of the element in the open IoT architecture?   (1)   CO4   BL2
a) Four elements
b) Five elements
c) Six elements
d) Seven elements

1.v) Which of the following is the way in which an IoT device is   (1)   CO3   BL1
   associated with data?
a) Internet
b) Cloud
c) Automata
d) Network

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1.vi) What is the full form of IoT?   (1)   CO1   BL1
a) Internet of Technology
b) Incorporate of Things
c) Internet of Things
d) Incorporate of Technology

1.vii) Which of the following is not an application of IoT?   (1)   CO4   BL2
a) BMP280
b) Smart home
c) Smart city
d) Self-driven cars

1.viii) Which of the following is not an IoT device?   (1)   CO1   BL1
a) Table
b) Laptop
c) Arduino
d) Tablet

1.ix) When was the actual term "Internet of Things" coined?   (1)   CO1   BL1
a) 1998
b) 1999
c) 2000
d) 2002

1.x) What is the full form of IIOT?   (1)   CO4   BL1
a) Index Internet of Things
b) Incorporate Internet of Things
c) Industrial Internet of Things
d) Intense Internet of Things

1.xi) Which of the following IoT networks has a very short range?   (1)   CO2   BL1
a) Short Network
b) LPWAN
c) SigFox
d) Short-range Wireless Network

1.xii) Which of the following is not a property of debugging environment   (1)   CO1   BL2
     in IoT devices?
a) Start and stop the program execution
b) Observe data at stop points
c) Non-intrusive in terms of performance
d) Should not act like a real system

Group B
(Short Answer Type Questions)
(Answer any three of the following) 3x5=15

2. What are the different IoT connectivity components and structure.   (5)   CO2   BL3

3. Explain with a neat diagram the Architecture of a sensor cloud   (5)   CO3   BL3
   platform

4. Explain the role of Python in IoT.	(5)	CO3	BL3
5. Describe the roles of YANG and transAPI modules in device management.	(5)	CO3	BL2
6. Explain IoT Smart X Applications?	(5)	CO4	BL4

Group C
(Long Answer Type Questions)
(Answer any three of the following) 3x15=45

7a. What is the importance of IOT networking components	(5)	CO1	BL3
7b. Differentiate between IoT proxy and IoT gateway	(5)	CO2	BL3
7c. Describe with example which devices are called IoT devices.	(5)	CO1	BL2
8a. What is Internet of Things (IoT)?	(5)	CO1	BL1
8b. What are components required to design IoT ?	(5)	CO2	BL3
8c. What is requirement of IoT Protocol Standardization?	(5)	CO4	BL3
9a. Explain the Bluetooth protocol stack	(5)	CO3	BL2
9b. Explain the sensors in Iot with examples of IoT application in smart city design.	(5)	CO3	BL5
9c. IoT is dependent on other technologies. Justify	(5)	CO2	BL4
10a. Discuss the type of data generated from a forest fire detection system.	(5)	CO3	BL4
10b. Determine and demonstrate the IoT levels for designing healthCare monitoring system.	(10)	CO3	BL2
11a. What are the differences between IPv4and IPv6	(5)	CO1	BL4
11b. Why we need of IoT Security.	(5)	CO3	BL2
11c. What are use of SPI and I2C interfaces on Raspberry Pi?	(5)	CO2	BL3

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