Exam No: _____

GANPAT UNIVERSITY
B. TECH SEM-VI (COMPUTER ENGINEERING/INFORMATION TECHNOLOGY)
FIRST INTERNAL EXAMINATION – FEBRUARY-MARCH 2023
2CEIT6PE9: INTERNET OF THINGS

TIME: 1 Hour   **TOTAL MARKS: 20**
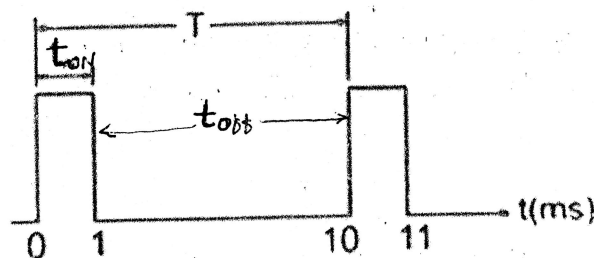
Instructions:
1) Figures to the right indicate full marks.
2) Be precise and to the point in your answer.
3) The text just below marks indicates the Course Outcome (CO) Numbers, followed by the Bloom's taxonomy level of the question, i.e., R: Remembering, U: Understanding, A: Applying, N: Analyzing, E: Evaluating, C: Creating.

Q.1 A In a circuit for IoT, suppose you have 5 volts available from Arduino board and you wish to reduce it to 3.3 volts. Design a voltage divider circuit and mention the required values of resistance on each register. **[2] 2A**

Q.1 B Calculate the resistance of following color-coded resistors: **[2] 2U**
i) BROWN-BLACK-RED   ii) GREEN-BROWN-YELLOW

Q.1 C Determine Duty Cycle for the following: **[2] 2A**

Q.1 D Describe Smart object and communication criteria for communication technologies used in smart object. **[2] 2R**

Q.2 A Describe following functions of Arduino programming environment with suitable example: **[4] 2R**
i) Serial.readString() ii) pinMode()   iii) analogWrite()   iv) Serial.begin()

Q.2 B Write characteristics of good sensor. Elaborate working of Ultrasonic and IR sensor with suitable diagram. **[4] 1U**

Q.2 C Write an Arduino program to control servo motor based on value of potentiometer and also display angle of servo motor on serial monitor. **[4] 2A**

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