Question Paper

MANIPAL ACADEMY OF HIGHER EDUCATION

MANIPAL SCHOOL OF INFORMATION SCIENCES, MANIPAL
FIRST SEMESTER MASTER OF ENGINEERING- ME (AUTOMOTIVE EMBEDDED SYSTEMS) DEGREE EXAMINATION - FEBRUARY 2021
Vehicular Adhoc Networks [AES 602]

Marks: 100   **Duration: 180 mins.**

MONDAY, FEBRUARY 8, 2021

Answer all the questions.

1) Differentiate the characteristics of IVCs from that of MANETs? (TLO 1.1) (10 Marks) — (10)

2) Define the significance of VANET? Write a note on the different VANET applications. (TLO 1.1) (2+8 Marks) — (10)

3) Explain the working of the following protocols: (TLO 2.1) (5+5 Marks) — (10)

   a. Improved Greedy Traffic Aware Routing protocol (GyTAR).
   b. Edge Node Based Greedy Routing Protocol (EBGR).

4) Illustrate the steps involved in IP passing with the help of a flow chart. (TLO 2.1) (10 Marks) — (10)

5) Distinguish the working of the following Localization Techniques for VANET: (TLO 1.4) (5+5 Marks) — (10)

   a. Global Positioning System
   b. Cellular Localization.

6) Explain the concept of Pulse Relay used in the Priority-Ensured Medium Access scheme. (TLO 3.2) (10 Marks) — (10)

7) Describe the significance of layered software system architecture in Cooperative Vehicular safety applications and explain each layer's modules. (TLO 2.2) (10 Marks) — (10)

8) Explain the working of following protocols for information transport in Information dissemination. (TLO 2.3) (5+5 Marks) — (10)

a. Flooding b. Request/Reply

9)   Outline the key issues and different MAC metrics considered in ⁽¹⁰⁾ evaluating MAC proposals for VANETs? Explain. (TLO 3.2) (10 Marks)

10)   Write a note on the Delay Tolerant Network (DTN) and explain ⁽¹⁰⁾ its working. (TLO 2.3) (10 Marks)

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