

※ 考生請注意：本試題不可使用計算機。請於答案卷(卡)作答，於本試題紙上作答者，不予計分。

1. Explain in details the following terminologies. <25%>
 - (A) Vehicle Ad Hoc Network (VANET),
 - (B) CSMA / CD
 - (C) IOT
 - (D) DNS
 - (E) FDMA
2. How much data can be downloaded in the 4G LTE with 100M bandwidth in one minute theoretically? <5%>
3. Distinguish between communication at the network layer and communication at the data link layer. <10%>
4. 802.11p is designed for the applications of the connected vehicles, what are the differences between 802.11p and traditional Wi-Fi families (802.11 a/b/g/n/ac) ? <10%>
5. What is three-way handshake? When does it apply to? < 10%>
6. <10%>
 - (a) Rewrite the following IP address using dotted-decimal notation:
01010111 10000100 00110111 00001111
 - (b) Rewrite the following IP address using binary notation:
201.24.44.32
 - (c) What is the hexadecimal equivalent of the following Ethernet address?
01011010 00010001 01010101 00011000 10101010 00001111
7. Please discuss in detail what are the differences between TCP and UDP protocols. <10%>
8. List and explain at least 5 application layer protocols. <20%>