

國立臺北科技大學

九十七學年第二學期電機系博士班資格考試

電腦網路理論試題(公告用)

第一頁 共一頁

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注意事項：

1. 本試題共【10】題，配分共 100 分。
2. 請按順序標明題號作答，不必抄題。
3. 全部答案均須答在試卷答案欄內，否則不予計分。
4. 考試時間：二小時。

1. (10%) In CRC error detection scheme, choose $P(x) = x^3 + 1$. Encode the bits 101110.
2. (10%) In an RSA system, the public key of a given user is $e=13$, $n=95$. What is the private key of this user?
3. (10%) What is “traceroute” on Linux (or “tracert” on Windows)? How does it work?
4. (10%) What is the purpose of the If-Modified-Since field in HTTP header?
5. (10%) Give some reasons for using fragmentation and reassembly in the IP protocol.
6. (10%) What is the benefit of the three-way handshake mechanisms in transport protocols?
7. (10%) Under heavy loads, how do the behavior of CSMA/CD and token ring differ?
8. (10%) How is SMTP used as the transfer protocol for images?
9. (10%) What is the difference between a store-and-forward switch and a cut-through switch?
10. (10%) Briefly explain the three types of IPv6 addresses.

