

一、選擇題(75%)

1. Going from layer 1 up through layer 7, which of the following correctly describes how information is processed by a computer (the destination) as receiving an email message? (A) bits – packets – frames – segments – data (B) bits – frames – packets – segments – data (C) data – segments – packets – frames – bits (D) data – segments – frames – packets – bits.
2. Which of the following is not a characteristic of a LAN? (A) high speed (B) low-error data network (C) covering a relatively small geographic area (D) using transmission devices provided by common carriers.
3. Which of the following database model is adopted by Microsoft Access? (A) network model (B) relational model (C) hierarchical model (D) hyper-link model.
4. Which of the following language feature is not adopted in Java language? (A) array (B) threads (C) object (D) pointer
5. Which of the following declarations is illegal in C and C++?
(A) `int (**a)();` (B) `int>(*a())();` (C) `int (**a())();` (D) `int (((**a)())());`
6. In Bill's Java code, if he calls a method which does not exist in the indicated class and then compiles the code, the compiler would display an error message. The indicated coding error Bill has made is called a _____. (A) run-time error (B) syntax error (C) semantic error (D) logic error
7. Which protocol belongs to IP layer? (A) HTTP (B) SMTP (C) ARP (D) all of the above.
8. Which of the following is a wrong statement for computer virus? (A) A computer might be infected even without connecting to a network (B) Some virus lies silent until a specific date or time arrives (C) An infected file should be an executable file (D) Some virus might collect your information.
9. Which of the following is not a SQL instruction? (A) Join (B) Move (C) Select (D) Project.
10. Which of the following is not the function of high-level language compiler? (A) lexical analysis (B) parsing (C) object code generation (D) program execution.
11. A _____ is a single point sampled from a photographic image and stored in the digital format. (A) pitch (B) pic (C) pixel (D) bit
12. Most computer scientists use _____ to design and represent algorithm. (A) natural language (B) high-level program language (C) low-level program language (D) pseudocode
13. In a database table, the rows represent _____, and the columns represent _____.
(A) key fields, fields (B) records, fields (C) key fields, records (D) fields, records

14. Which of the following descriptions for WWW is wrong? (A) It is the abbreviation for World Wide Web (B) The business can offer information, such as their products or services, to the public (C) The users won't restrict to relating laws of intellectual property while setting up Home Page (D) The information on WWW shows not only words and pictures but also sound and images
15. The postfix of $A + ((B * C) / D) * E$ is (A) $ABC * D / E * +$ (B) $AB * CD + / E *$ (C) $ABCD / * E * +$ (D) $+ A * / * BCDE$
16. Which of the following IP is wrong? (A) 140.123.1.1 (B) 140.123.0.5 (C) 140.123.174.254 (D) 140.123.256.2
17. Which protocol is not used for email transition? (A) POP3 (B) ICMP (C) SMTP (D) IMAP
18. Which of the following can not be considered as a social network site? (A) MySpace (B) Twitter (C) WikiLeaks (D) Facebook
19. Conducting commerce by using mobile device, such as a smart phone, is called _____ (A) i-commerce (B) m-commerce (C) mobile payment (D) App-commerce
20. Which of the following cryptographic algorithms is commonly used for encryption in public key infrastructure? (A) DES (B) AES (C) RSA (D) MD5
21. Which of the following services can be regarded as an example of cloud computing? (A) Google Apps (B) Yahoo mail (C) Twitter (D) Wikipedia
22. The term _____ is commonly associated with web applications that allow users to participate, collaborate, and generate content. (A) social networking (B) knowledge sharing (C) Web 2.0 (D) Web 3.0
23. A navigation system that consists one or more earth-based receivers that accept and analyze signals sent by satellites in order to determine user's location is called _____. (A) Global post system (B) Global geographic systems (C) Global positioning system (D) Global geographic network
24. A(n) _____ is a construct that can be defined to store a collection of data. (A) method (B) abstract data type (C) class (D) data structure
25. Which of the following is aimed to replace bar code, and can be used to identify a piece of item via radio wave? (A) Wi-Fi (B) GPS (C) 3G network (D) RFID

二、問答題(25%)

1. 列出五種網路設備(network device)的中英文名稱，並說明其功能。(15%)
2. 在網路安全領域中，何謂 DDoS 攻擊？請詳細說明。(10%)