



第一部分：單選題，每題 2 分，共 50 分。

1. A (An) ____ is a specialized version of a linked list in which nodes can be inserted only at the start of the list and deleted only from the end of the list.
(A) queue (B) stack (C) tree (D) array
2. The set of public member function of a class is referred to as the class's ____.
(A) constructor (B) interface (C) encapsulation (D) overload
3. The ____ object sends information, such as XHTML and text, to the client.
(A) Response (B) Request (C) Server (D) Session
4. The Apache web server cannot server ____.
(A) Perl (B) PHP (C) Python (D) ASP.Net
5. Cat 5e and Cat 6 wiring can carry Ethernet traffic 100 meters up to ____.
(A) 10 Mbps (B) 100 Mbps (C) 1 Gbps (D) 10 Gbps
6. Packet switching is most efficient for ____ data.
(A) relatively constant (B) high-latency
(C) high-priority (D) bursty
7. Topology is a ____ layer concept.
(A) physical (B) data link (C) internet (D) transport
8. In NAT, the ____ creates new external source IP addresses and port numbers.
(A) router (B) firewall (C) source host (D) destination host
9. 128.171.17.13:1234 is ____.
(A) a host (B) a socket (C) a port number (D) an IP address
10. A (An) ____ provides an alias- an alternate name- for the variable. While passing ____ arguments, a (an) ____ to the variable in the calling program is passed.
(A) value (B) address (C) reference (D) property
11. What technology could replace universal product code (bar code) tags on products?
(A) Bluetooth (B) 802.11 (C) UWB (D) RFIDs
12. In structured systems analysis, the ____ defines the interactions of the application with the external world.
(A) ERD (B) DFD
(C) Context Diagram (D) Dependency Diagram
13. Which of the following is used for structural modeling in UML?
(A) class diagrams (B) use case diagrams
(C) component diagrams (D) deployment diagrams



23. Which of the following is the scope of a variable?
- (A) The type associated with the variable
 - (B) The structure associated with the variable
 - (C) The number of characters in the variable's name
 - (D) The portion of the program in which the variable can be accessed
24. The main benefit of IPv6 over IPv4 is ____.
- (A) two more bits in the IP address
 - (B) two more bytes in the IP address
 - (C) the ability to support more possible hosts
 - (D) the ability to have quality-of-service guarantees
25. Which of the following is false?
- (A) An XHTML element may be referred to in JavaScript by its *id* attribute.
 - (B) Only the *document* object has an *all* collection.
 - (C) An element's tag is accessed with the *tagName* property.
 - (D) The *frames* collection contains all the frames on a page.

第二部分：問答題，每題 10 分，共 50 分。

1. Discuss the capabilities that should be provided by a DBMS.
2. Discuss each of the tasks of the core operating system's components – process management, thread management, communication management, memory management and supervisor.
3. Compare connectionless (UDP) and connection-oriented (TCP) communication for the implementation of each of the following application-level or presentation-level protocols:
 - i) virtual terminal access (for example, Telnet);
 - ii) file transfer (for example, FTP);
 - iii) user location (for example, rwho, finger);
 - iv) information browsing (for example, HTTP);
 - v) remote procedure call.
4. Initial exchanges of public keys are vulnerable to the man-in-the-middle attack. Describe as many defenses against it as you can.
5. How have new iSCSI systems improved the applicability of storage area networks?