





選擇題 (單選) 50 題，每題 2 分，共 100 分，請在每題的選項內選擇最適當的答案。

注意：答錯倒扣 1 分，扣至零分為止。(不答不倒扣)

請在答案卷之【選擇題作答區】內依序作答。

1. A famous theory observed and established by Stanley Milgram in 1967 saying that the world is "small" so that every two people are connected by only a few number of links: (A) Four Degrees of Separation (B) Five Degrees of Separation (C) Six Degrees of Separation (D) Seven Degrees of Separation (E) Ten Degrees of Separation.
2. Which of the following is generally not considered as a social networking website? (A) Myspace (B) Facebook (C) Orkut (D) Wretch (E) all of the above are social networking sites.
3. Which of the following can best describe the principle of Web 2.0? (A) Ajax (B) Blogging (C) harnessing collective intelligence (D) networking (E) community.
4. "Folksonomy" refers to the use of _____ for classification by the folks. (A) HTML (B) XML (C) markup (D) tag (E) none of the above.
5. Which of the following technology allows users to retrieve new content from a regularly changing web site without the need to browse the entire web site? (A) Really Simple Structure (B) Reader Feedback System (C) Rich Site Structure (D) Reader Subscription System (E) Really Simple Syndication.
6. An element of a graphical user interface that displays information or provides a specific way for a user to interact with the operating system and application: (A) pop-up-box (B) widget (C) toolbar (D) icon (E) API.
7. Which of the following is wrong? (A) Hotmail is an email service provided by Microsoft (B) Live Search is Yahoo's search engine (C) Live Search Maps allows users to search 2D and 3D maps (D) Yahoo! Answers allows users to ask questions on any topic, and get answers from real people (E) all of the above are correct (selected this only if none of the above can be selected).
8. Google's new browser: (A) Chrome (B) Google Talk (C) Google IE (D) Firefox (E) Mozilla.
9. Which of the following is most closely related to eBay to ensure that payment is transferred securely from buyer to seller on the condition that the product is sold as claimed? (A) SSL (B) SET (C) Visa (D) PayPal (E) FedEx.
10. Google's main source of revenue that allows companies to advertise on Google based on the keywords they select, so that their information will be displayed on the side bar along with users' search results: (A) AdWords (B) AdSense (C) PageRank (D) DoubleClick (E) none of the above.
11. The software OCR bundled with a scanner is usually used to (A) convert scanned images to a standard format such as jpg or gif (B) refine and remove printing spots for scanned documents (C) convert scanned documents to image files (D) convert scanned documents to text files (E) none of the above.
12. Which of the following is wrong? (A)  is a DVI port (B)  is a parallel port (C)  is a DVI-sub port (D)  is a USB port (E) all of the above are correct.
13. Which of the following Google products provides images obtained from satellite imagery, aerial photography and GIS 3D globe to allow users to view a place or an area? (A) Google Map (B) Google 3D (C) Google Earth (D) Google Sky (E) Google Image.
14. The encryption scheme where the sender and the receiver share the same key for encoding and decoding the message: (A) asymmetric encryption (B) symmetric encryption (C) common key encryption (D) hash key encryption (E) none of the above.
15. A new jargon, pushed primarily by Google, to promote the idea of using parallel and distributed computing technology to integrate thousands of computers to provide users computing resources without the need to have knowledge of, expertise in, or control over the technology infrastructure: (A) power grid (B) swarm computing (C) agent computing (D) cloud computing.
16. In the public key encryption scheme, suppose A wishes to send a message to B, and the purpose of the encryption is to let B believe that the message is indeed sent by A, not by any other person pretending to be A. Then, which key(s) should be used to encrypt the message? (A) A's public key (B) A's private key (C) B's public key (D) B's private key (E) A's private key and B's public key.

17. In the public key encryption scheme, suppose A wishes to send a message to B, and the purpose of the encryption is to ensure that the message can only be seen by B, not by any other person who has eavesdropping the message. Then, which key(s) should be used to encrypt the message? (A) A's public key (B) A's public key and B's private key (C) B's public key (D) B's private key (E) A's private key and B's public key.
18. Which of the following is used to ensure a secure communication connection in Web? (A) Secure FTP (B) SSH (C) RSH (D) HTTPS (E) none of the above.
19. Which of the following (A-D) does not offer C2C e-commerce service? (A) Amazon (B) eBay (C) www.ruten.com.tw (D) Yahoo!奇摩 (E) all of the above does.
20. Which of the following (A-D) is wrong? (A) HTML is a markup language for content presentation (B) XML is a markup language for describing content (C) tags in HTML are predefined (D) you can define your own tags in XML (E) all of the above are correct.
21. Which of the following refers to the learning where the teacher and his pupils interact in different places but during the same time (A) virtual learning (B) open school (C) synchronous distance learning (D) asynchronous distance learning (E) none of the above.
22. A U.S. non-profit organization set up to oversee the creation of an affordable educational device for use in the developing world, and leading to the development, construction and deployment of the XO-1 laptop: (A) W3C (B) eee-PC consortium (C) MIT Media Lab (D) OLPC (E) Internet Corporation for Assigned Names and Numbers (ICANN).
23. Which of the following is not an object-oriented programming language? (A) C (B) C++ (C) C# (D) Java (E) all of the above are.
24. A company offering something that is ready for immediate use is said to offer a(n) (A) outsourcing service (B) value-added service (C) customized service (D) turnkey solution (E) prototyping.
25. Which of the following tools in (A-D) is not mainly used in the analysis phase (A) class diagram (B) entity-relationship diagram (C) data flow diagram (D) decision table (E) all of the above are.
26. Which of the following are usually used to launch distributed denial of service attacks? (A) zombies (B) robots (C) spoofing (D) back doors (E) Sobig.
27. Which of the following (A-D) is wrong? (A) *spam* is an unsolicited e-mail message (B) *phishing* attempts to acquire sensitive information such as usernames, passwords and credit card details by masquerading as a trustworthy entity in an electronic communication (C) *adware* is program that displays online advertisements (D) a *Trojan horse* appears to perform a desirable function but in fact performs undisclosed malicious functions that allow unauthorized access to the host machine (E) all of the above are correct.
28. Which of the following operating systems does not belong to the Unix family? (A) Linux (B) Ubuntu (C) Solaris (D) Red Hat (E) all of the above does.
29. Which of the following protocol is designed for short range wireless communication (e.g., between personal devices)? (A) 802.11 (B) Bluetooth (C) RFID (D) WiMAX (E) 802.11g.
30. Which of the following sites is famous for providing statistic information on web traffic? (A) Alexa (B) Google Analytics (C) AOL (D) Akami (E) A9.
31. Which of the following (A-D) is wrong? (A) Ethernet typically uses bus topology (B) packet collision in ring networks is resolved by random backoff (C) Ethernet is designed for LAN, not for WAN (D) when network usage is very high, a ring network has better throughput than a bus (E) all of the above are correct.
32. An advantage of object-oriented (OO) programming is code reusability. Which of the following features in OO primarily supports this? (A) abstraction (B) polymorphism (C) inheritance (D) protection (E) interfaces.
33. Which of the following database is open source? (A) DB2 (B) Access (C) Sybase (D) Oracle (E) none of the above.
34. One of the core members of the Internet Protocol Suite that provides reliable, ordered delivery of a stream of bytes from one program on one computer to another program on another computer: (A) TCP (B) UDP (C) IPv4 (D) IPv6 (E) NTP.
35. A network protocol that enables a server to automatically assign an IP address to an individual computer's TCP/IP stack software. (A) DNS (B) BGP (C) SMTP (D) DHCP (E) none of the above.
36. Which of the following (A-D) regarding database is wrong? (A) a key field is the field that uniquely identifies each record in a file (B) in relational database, a row in a table represents a record (C) in relational

database, columns in a table correspond to fields (D) data dictionary refers to the repository of information about data such as meaning, relationships to other data, origin, usage, and format (E) all of the above are correct.

37. Which of the following cannot be described by an entity-relationship (ER) diagram? (A) attributes of relationships (B) relationship between entity sets (C) attributes of entity sets (D) primary keys (E) all of the above are meant to be described in an ER diagram.
38. Which of the following best describes a system that allows users to view, understand, question, interpret, and visualize data in many ways that reveal relationships, patterns, and trends in the form of maps, globes, reports, and charts? (A) CGI (B) GPS (C) GMS (D) GIS (E) none of the above.
39. The technology pushed by Wal-Mart to require its vendors to place some tags on all shipments to improve its supply chain management: (A) barcode (B) 3D barcode (C) RFID (D) QR code (E) E-ZPass.
40. Which of the following terms best denotes various forms of instruction sets designed for efficient execution by a software interpreter as well as being suitable for further compilation into machine code? (A) assembly (B) byte code (C) object code (D) source code (E) scripts.
41. Which of the following systems is used to manage information about customers, interact with customers, and to improve a company's relationship with its customers? (A) EIS (B) OLAP (C) MIS (D) CRM (E) KMS.
42. The address encoding in IPv4 uses ____ bits. (A) 32 (B) 40 (C) 64 (D) 128 (E) 256.
43. Which of the following is wrong? (A) Skype uses peer-to-peer technology to deliver voice packets (B) Skype-out refers to the use of a Skype account to dial a regular phone (C) you can make a Skype phone call from a mobile phone if the phone is connected to the Internet (D) you can make a videoconferencing in Skype (E) all of the above are correct.
44. Consider the following class declaration in a Java like object-oriented program:

```
class T {
    private int x1;
    public int x2
    public T() {x1=0;}
}

class S extends T {
    int y1;
    protected int y2;
}
```

Which of the following (A-D) is wrong? (A) variable x1 is not accessible in class S (B) the function T () is called a constructor (C) T is a superclass of S (D) variable y2 is accessible in every subclass of S (E) all of the above are correct.

45-50. Consider the following binary tree

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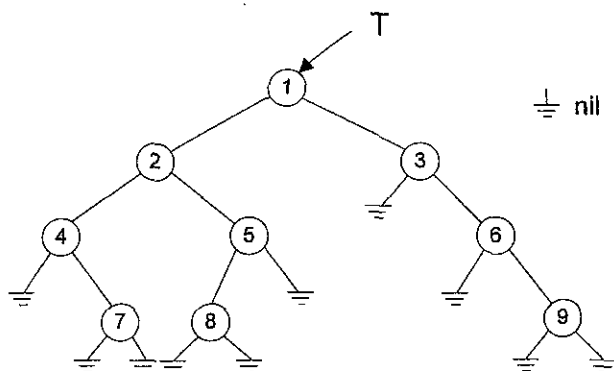


Fig. 1

and the following C-like program code for traversing a binary tree:

```

traverse (struct node *t) {
    if (t != nil) {
        traverse (t->left);
        visit(t);
        traverse (t->right);
    }
}
    
```

where $t \rightarrow \text{left/right}$ points to the left/right subtree of t , respectively.

45. Suppose $\text{visit}(t)$ is to output the id of the root node pointed to by t . Then when applying the above program to traverse the tree T in Fig. 1, what is the 1st output of the program? (A) 1 (B) 3 (C) 4 (D) 7 (E) none of the above.
46. Continue the above question. What is the last output of the program? (A) 1 (B) 3 (C) 6 (D) 9 (E) none of the above.
47. If we change the code to the following

```

traverse-2 (struct node *t) {
    if (t != nil) {
        traverse-2 (t->left);
        traverse-2 (t->right);
        visit(t);
    }
}
    
```

Then when applying the new program to traverse the tree T , what is the 5th output of the program? (A) 4 (B) 5 (C) 7 (D) 2 (E) none of the above.

48. Continue the above question. What is the last output of the program? (A) 1 (B) 3 (C) 8 (D) 9 (E) none of the above.
49. If we change the code to the following

```

traverse-3 (struct node *t) {
    if (t != nil) {
        traverse-3 (t->right);
        traverse-3 (t->left);
        visit(t);
    }
}
    
```

Then when applying the new program to traverse the tree T , what is the 4th output of the program? (A) 1 (B) 5 (C) 7 (D) 8 (E) none of the above.

50. Continue the above question. What is the 7th output of the program? (A) 2 (B) 5 (C) 7 (D) 8 (E) none of the above.