

臺灣綜合大學系統 109 學年度學士班轉學生聯合招生考試試題

科目名稱	計算機概論	類組代碼	B30.D33
		科目碼	B3091
<p>※本項考試依簡章規定所有考科均「不可」使用計算機。 本科試題共計 4 頁</p>			
<p style="text-align: center;">choice problem with one correct answer: (4% for each) 答錯不倒扣</p> <ol style="list-style-type: none"> 1. Which of the following is false about database? <ol style="list-style-type: none"> A. data stored in database can be linked list, and double linked list. B. index for a table can speed up the searching speeds C. SQL is the major language used in database D. Object-oriented database can provide the data storage and access by intuition E. Performance of database outperforms that of file structure 2. Which of the following is false for the polymorphism of object-oriented programming? <ol style="list-style-type: none"> A. the binding of the method of the object related to the polymorphism is determined in compiling time B. provides a mechanism to process the future and unknown problem in a predefined way C. object of parent class can reference the object of child class D. the inheritance relationship should be designed before applying the polymorphism E. overloading mechanism is different from polymorphism 3. Which of the following is false about the characteristic of object-oriented programming? <ol style="list-style-type: none"> A. the inherence mechanism can enhance the code reuse B. information hiding can speed up the compiling speed C. static member function works like function library in C D. object declaration without new did not involve memory allocation for it E. object name is a reference variable 4. Which is false for TCP/IP protocol? <ol style="list-style-type: none"> A. each IP address should be unique worldwide during the communication B. Domain name server serves the translation from domain name to ip address C. IP v4 suffers the insufficiency the amount of ip addresses D. IP v6 is compatible with ip v4 through some (tunneling) technique E. ping and traceroute are the commands for IP address translation 5. Which one is false for TAM (Technique Acceptance Model) model? <ol style="list-style-type: none"> A. it uses a uniform model to assess the acceptable degree of a new system/techniques B. Jobs Steven of Apple Company uses user experience to survey the technique acceptance degree C. TAM model focuses on the concept rather than the product detail D. project manager should use measure tool, like TAM, to evaluate the maturity of the product E. TAM model can be used as a tool for software testing. 6. Which of the following is false about the semi-conductor company? <ol style="list-style-type: none"> A. Fabless company focuses its energy in designing rather than production B. Moore's law says the performance of VLSI increases twice around 18 month C. Wafer foundry focuses on the production of wafer, and the major design is the job of fabless company D. wafer foundry and fabless cannot be integrated as a company E. The smaller the logic gate, the higher the performance and the lower power the needed 7. Which of the following is false for the linked list? <ol style="list-style-type: none"> A. double linked list provides forward and backward move from a node B. First come first serve can be implemented by linked list C. linked list can be implemented by an array with sufficient array size D. double linked list outperforms the circular link list in searching an element if no index and no sorting E. a tree can be transformed into a linked list by some traverse algorithm 8. Which is <u>correct</u> for subtraction of two binary numbers? <ol style="list-style-type: none"> A. the 1's and 2's complement mechanisms are used to transfer the subtraction to addition B. the look-ahead addition can not be used in the subtraction C. the carry-bit is of no use in the subtraction D. the bits addition (or subtraction) can be only performed from the least significant bit toward the most significant bit 			

- E. multiplication can be performed by a sequence of subtraction
9. Which one is false for operating system?
- A. it provides basic I/O subroutines that can be called by applications
 - B. before executing operating system, it must be loaded into main memory
 - C. bootstrap means starting up the operating system
 - D. memory allocation to process is the job of compiler
 - E. process calls interrupt to ask the service provided by operating system
10. Which one is false for web server?
- A. web server is software run upon a host, like PC workstation
 - B. web server and email server can be installed in a same host
 - C. web server can use work-balance mechanism, providing a number of hosts to process a huge requests from the clients
 - D. web browser receives the html, JavaScript, JQuery and other web-based language from application server and interpret and react to the above web-based language in client screen
 - E. Clients can access database through web server itself only.
11. Which one is false for computer organization?
- A. DMA (Direct Memory Access) takes over the job of memory to/from storage device
 - B. Bios performs the bootstrap jobs
 - C. Data in RAM lasts unless the power continues
 - D. Bus connects CPU and memory
 - E. CPU has several layers of caches to confirm the data security
12. Which one is false for tree?
- A. algorithm of minimum spanning tree is run in the graph structure
 - B. a tree has no cycle
 - C. the number of nodes in a tree equals to the number of edges plus one
 - D. binary search tree is the search path for a sorted data if using the binary search
 - E. A tree is a recursive structure
13. Which one is false for graph?
- A. the algorithm to find the shortest path from a specific node to another specific node in the graph is a permutation problem
 - B. the algorithm to find the shortest path from a specific node to all other nodes in the graph can adopt the greedy method
 - C. the adjacent matrix for a graph is simple but costs a lot of memory
 - D. the adjacent list for a graph is simple and saves a lot of memory
 - E. the costs of an edge between two nodes cannot be quantified
14. Which one is false for a social network?
- A. it can be represented as a tree
 - B. it can use the graph theory to compute the most significant persons
 - C. an isolated sub social network has no links connecting to the nodes outside the isolated social network
 - D. Facebook is a type of social network existing in computer virtual space
 - E. The six-degree separation theory claims that any two persons can know each other across around six hops (i.e., friends) at most amid the two friends
15. Which is false for the IOT (internet of thing)?
- A. the sensor performs a probe to sense the change of the environment
 - B. the sensor generates a lot of data pipelined to the storage for processing
 - C. the program can actively enquire the sensor or be passively interrupted to get the data
 - D. self-driving car equips a lot of sensors to dictate the driving of the car
 - E. IOT needs data visualization to guide how to collect the data
16. Which is false for big data?
- A. data visualization makes the data being sensed by perception of sights, color and trend
 - B. outlier detection is also the job of the big data
 - C. data structure, data base, data mining and big data use the same techniques to process the different data
 - D. data warehouse performs the job of data aggregation in big data
 - E. parallel processing associated with the related storage can increase computing of the big data

17. Which one is false for the image?
- A. Jpeg is a format of images, whose image edge remains smooth if enlarged.
 - B. bitmap is also an image format, whose image edge will become saw-teeth if enlarged
 - C. pixel is the unit of the precision of the image; the higher the pixel amount, the higher the precision
 - D. assume a pixel is represented by 3 bytes, a 800x600 image needs 1.44M bytes
 - E. Lossless compression cannot restore its original precision after compression
18. Which one is false for electronic commercial (EC)?
- A. EC can be classified as C2C, B2C, B2C, and so on
 - B. reputation of a service in EC can be got from the rating by the involved actors in the EC transaction
 - C. O2O used in EC is the abbreviation of "office to office"
 - D. encrypted communication is important in EC
 - E. The data collected from the transaction of EC can be used to mine valuable information to facilitate the operation of EC.
19. Which of the following is false for constructor and destructor in Object-oriented programming?
- A. the constructor has the same name as the class name
 - B. the destructor is executed when the object's memory is no longer referenced by variable
 - C. it is possible to have more than one constructor in a class
 - D. it is possible to have more than one destructor in a class
 - E. overloading mechanism allow different constructors of a class exists simultaneously
20. Which of the following is false for the browser?
- A. a browser can be seen as an interpreter interpreting the data received from the web server
 - B. some tag in html is meta data describing the visual effects of the data
 - C. JavaScript is a client language, which is performed by web server
 - D. JQuery is a client language, which provides a lot of commands working on the Dom (Document Object Model) -tree of the web page
 - E. CSS (Cascading Style Sheets) is a client language to provide a way to use predefined visual effects of some elements in a web page.
21. Which of the following is false for the algorithm?
- A. Binary search can be classified as divide-and-conquer approach
 - B. Minimum spanning tree can be classified as greedy approach
 - C. The worst case of bubble sort occurs when the order of the data is aligned in the reverse order against the desired order
 - D. Finding the shortest path from a specific node to another specific node can be resolved by the dynamic programming
 - E. To find the next best move in a chess play can be performed well by binary search approach
22. Which of the following is false for the hosts working in internet?
- A. client-server structure generally means a server providing service to clients through applications
 - B. web-based structure generally means a server providing service to the client through the browser
 - C. peer-to-peer structure means that each host can perform client and server roles simultaneously
 - D. 3-tier structure means a job being finished needs three tiers' cooperation. Normally, the three tiers are the client, application and database tiers
 - E. host-terminal structure should be disappeared
23. Which of the following is false about artificial intelligence (AI)?
- A. Rule-base system can be classified as a branch of AI
 - B. deep-learning is a type of rule-base system
 - C. neural network can learn the experience through computing
 - D. AI can be used to replace the well-documented jobs worked by human
 - E. Computer vision, natural language, machine learning, pattern recognition, robot, automatic control, sensor and so on are the preliminary requirement for AI
24. Which of the following is false for the terms?
- A. Database focuses on the data store and retrieval from the computer
 - B. Data structure focuses on the efficiency and economics in storage for data arrangement
 - C. Big data focuses on the capacity and capability in process huge data
 - D. data warehouse focuses on data correctness of the data storage
 - E. data mining focuses on finding the unknown but useful rules from the data.
25. Which of the following is false for the terms?

- A. network protocol focuses on the agreement, error-proof, error-recovery, etc in data communication
- B. intranet is a smaller internet but working in a company-like scale
- C. internet is a collection of the local area network who can communicate with each other
- D. web application focuses on the web server's programming
- E. app coding focuses on data structure in the cell phone.