

Introduction to Computer Science: Final Exam

January 17, 2014. 9:10 - 12:10

Name: _____

Student ID: _____

Instructions: This paper consists of fifty multiple choice questions. Each carries 2 marks. You have to answer all of them. For each question, there is only ONE correct answer. Please circle your answer by using either blue or black ball pen. Using dictionary and calculator during examination is allowed.

Question 1

```
#include<stdio.h>
#include<stdlib.h>
```

```
int main(void){
    printf("Hello world!\n");

    system("PAUSE");
    return 0;
}
```

After compiling the above C program. What will you see on the computer screen?

- (a) "Hello world"
- (b) "Hello world!"
- (c) Hello world
- (d) Hello world!

Question 2

In the above program, the files **stdio.h** and **stdlib.h** are commonly called _____ files. They _____.

- (a) help; help
- (b) header; help

(c) help; define the operations of the functions like **printf** and **system**

(d) header; define the operations of the functions like **printf** and **system**

Question 3

If the following C program segment is executed, what will you see?

```
for (i=1,i<5, i++)
{
    printf("*");
    printf("/n");
}
```

- (a) *****
- (b) *
*
*
*
*

(c) ****

- (d) *
*
*
*

Question 4

If the following C program segment is executed, what will you see?

```
i=0;
While (i<=3)
{ printf("*");
  i = i+1;
}
printf("%d\n", i);
```

- (a) **2
- (b) **3
- (c) ***3
- (d) ****4

Question 5

Given a recursive program as follows :

$$f(n) = 2f(n - 1) + f(n - 2); \quad f(0) = f(1) = 1.$$

What is the value of $f(5)$?

- (a) 3
- (b) 7
- (c) 17
- (d) 41

Question 6

Which of the following functions are NOT done by a compiler?

- (i) Check logical error.
- (ii) Correct logical error.
- (iii) Check syntax error.
- (iv) Correct syntax error.

Answer:

- (a) (i) and (ii) only.
- (b) (ii) and (iii) only.
- (c) (i) and (iii) only.
- (d) (i), (ii) and (iv).

Question 7

Which of the following is not a feature of MS WORD?

- (a) Format a two-column article.
- (b) Convert a WORD document to a PDF file.
- (c) Convert a WORD document to a TXT file.
- (d) Convert a PDF file to a WORD file.

Question 8

Which of the following image file cannot be inserted in a WORD document?

- (a) PDF
- (b) JPEG
- (c) GIF
- (d) EPS

Question 9

Which of the followings is not a feature of MS WORD?

- (a) Grammar checking
- (b) Spelling checking
- (c) Grammar correction
- (d) Spelling correction

Question 10

Which of the following methods is the best way to duplicate part of the content from a homepage to a WORD document?

- (a) Select and "copy" the area to be copied from the homepage, move the cursor to the location the content to be added and then click "paste".
- (b) Select and "copy" the area to be copied from the homepage, move the cursor to the location the content to be added, click "selective paste" and then choose HTML format.
- (c) Select and "copy" the area to be copied from the homepage, move the cursor to the location the content to be added, click "selective paste" and choose "unformatted text".
- (d) Select and "copy" the area to be copied from the homepage, move the cursor to the location the content to be added and then click "insert".

Question 11

After you have typed the following sentences, what will you see in the WORD document?

”Computer science is an interesting subject.
hte contents are very informative.”

- (a) Computer science is an interesting subject.
Hte contents are very informative.
- (b) Computer science is an interesting subject.
the contents are very informative.
- (c) Computer science is an interesting subject.
hte contents are very informative.
- (d) Computer science is an interesting subject.
The contents are very informative.

Question 12

Which of the following is not a feature of MS WORD?

- (a) Insert equations
- (b) Insert footnotes
- (c) Insert tables
- (d) Insert audio files

Question 13

Which of the followings is not a feature of MS EXCEL?

- (a) Export the file in TXT format.
- (b) Export the file in HTML format.
- (c) Export the file either in .xls or .xlsx formate.
- (d) Export the file in WORD format.

Question 14

Which of the followings is not a feature of MS EXCEL?

- (a) Data sorting
- (b) Gammer checking
- (c) Spelling checking
- (d) Font size setting

The following table is for the Questions 15-17.

	A	B	C
1	10	16	
2	20		
3	8		
4	12		
5	0		

Question 15

The equation in cell B2 is ”= A2 + B1”. This equation is then copied and pasted to cells B3, B4 and B5. What should be the value in B5.

- (a) 36
- (b) 24
- (c) 44
- (d) 56

Question 16

The equation in cell B2 is ”= A2 + \$B\$1”. This equation is then copied and pasted to cells B3, B4 and B5. What should be the value in B3.

- (a) 36
- (b) 24
- (c) 44
- (d) 56

Question 17

The equation in cell C1 is ”= SUM(A1 : A3)”. This equation is then copied and pasted to cell C2. What should be the value in C2.

- (a) 38
- (b) 50
- (c) 40
- (d) 20

Question 18

Suppose the original values in cells A1 and A2 are 3.35 and 5.85. The equation in A3 is

= $A\$1+A\2 .

What will be the values shown on the spread sheet if A1, A2 and A3 are formatted to show integer only?

- (a) 4, 6, 9
- (b) 4, 6, 10
- (c) 3, 5, 8
- (d) 3, 6, 9

Question 19

In EXCEL, suppose we want to select multiple isolated cells, which key should be pressed during selection process?

- (a) CTRL
- (b) SHIFT
- (c) ALT
- (d) DEL

Question 20

Here is a part of the content of a homepage.

1. Group One
 - John
 - Peter
2. Group Two
 - Mary
 - Lisa

In the HTML file, what would be the correct coding for it?

- (a)

```
<ol>
  <li> Group One
  <ul><li> John <li> Peter </ul>
  <li> Group Two
  <ul><li> Mary <li> Lisa </ul>
</ol>
```

- (b)

```
<ol>
  <li> Group One
  <ol><li> John <li> Peter </ol>
  <li> Group Two
  <ol><li> Mary <li> Lisa </ol>
</ol>
```
- (c)

```
<ul>
  <li> Group One
  <ul><li> John <li> Peter </ul>
  <li> Group Two
  <ul><li> Mary <li> Lisa </ul>
</ul>
```
- (d)

```
<ul>
  <li> Group One
  <ol><li> John <li> Peter </ol>
  <li> Group Two
  <ol><li> Mary <li> Lisa </ol>
</ul>
```

Question 21

Here is part of the content of a homepage.

To validate the idea, we conduct a *statistical analysis*.

In the HTML file, what would be the correct coding for it?

- (a) `<i>statistical analysis<i>`
- (b) `<i>statistical analysis<i>`
- (c) `<i>statistical analysis</i>`
- (d) `<i>statistical analysis</i>`

Question 22

Which of the followings is the correct structure of a HTML file?

- (a)

```
<meta> ... </meta>
<body>
<html> ... </html>
</body>
```
- (b)

```
<body>
  <meta> ... </meta>
  <html> ... </html>
</body>
```

- (c) `<html>`
`<meta> ... </meta>`
`<body> ... </body>`
`</html>`
- (d) `<html>`
`<body>`
`<meta> ... </meta>`
`...`
`</body>`
`</html>`

Question 23

Which of the following countries did not participate in the earlier development of Internet?

- (a) France
- (b) England
- (c) United State
- (d) Germany

Question 24

Which of the following network topologies is best for managing the university network?

- (a) Ring
- (b) Bus
- (c) Star
- (d) Hybrid

Question 25

In terms of the speed of signal transmission, which of the following medium is the fastest?

- (a) Radio signal
- (b) Fibre optics
- (c) Twisted cable
- (d) Co-axial cable

Question 26

For an Internet connection with transmission rate 56Kbps, what will be the maximum size of a file that can be transmitted in ONE SECOND?

- (a) 7K Bytes
- (b) 56K Bytes
- (c) 7K bits
- (d) 28K Bytes

Question 27

Which of the following commands is provided by MS Windows to check the availability of an IP address?

- (a) cmd
- (b) ping
- (c) ipconfig
- (d) dir

Question 28

Which of the followings can check the connection speed between your computer and a destination IP address?

- (a) ping
- (b) ftp
- (c) telnet
- (d) pong

Question 29

DNS refers to domain name server. Which of the following statements about DNS is wrong?

- (a) Each DNS consists of the IP addresses of all the domain names in the world.
- (b) All the DNSs form a DNS network to facilitate the search of IP address of a domain name.
- (c) Even if all the DNSs are down, we are still able to access a homepage.
- (d) Even if all the DNSs are down, we are still able to send emails.

Question 30

Which of the following statements about ADSL is wrong?

- (a) ADSL refers to asymmetric digital subscriber line.
- (b) In ADSL, the uplink speed is usually much faster than the downlink speed.
- (c) In ADSL, the uplink speed is usually much slower than the downlink speed.
- (d) The main purpose of ADSL is to improve the utilisation of the network bandwidth.

Question 31

Which of the following domain names is not a valid domain name for an university or a school?

- (a) xxx.edu.tw
- (b) xxx.edu
- (c) xxx.edu.org
- (d) xxx.edu.hk

Question 32

Which of the following statements about smart phone is wrong?

- (a) A smart phone can be treated as a computer.
- (b) A smart phone can connect to the Internet by using Wi-Fi technology.
- (c) A smart phone can connect to the Internet by using 3G technology.
- (d) Without a SIM card, a smart phone is not able to connect to the Internet.

Question 33

Which of the followings is not the function of a firewall?

- (a) Block the incoming messages which are from unauthorized IP addresses.
- (b) Block the incoming messages which go to unauthorized PORT numbers.

- (c) Block the outgoing messages which go to unauthorized IP addresses.
- (d) Block the incoming messages with inappropriate contents.

Question 34

Which of the following attacks is not for a hacker to break in a remote system?

- (a) Guessing attack.
- (b) Dictionary attack.
- (c) Replaying attack.
- (d) DDOS attack.

Question 35

Which of the following techniques are commonly applied in personal identification in an information systems?

- (i) Face recognition
- (ii) Iris recognition
- (iii) DNA recognition

Answer:

- (a) (i) only.
- (b) (i) and (ii) only.
- (c) (ii) and (iii) only.
- (d) (i), (ii) and (iii).

Question 36

In terms of computational speed, which of the following orders (from fastest to slowest) about the encryption algorithms is correct?

- (a) DES > 3DES > AES
- (b) DES > AES > 3DES
- (c) AES > DES > 3DES
- (d) AES > 3DES > DES

Question 37

For asymmetric encryption algorithms, the sender and the receiver use _____ to encrypt and decrypt messages. For symmetric encryption algorithms, the sender and the receiver use _____ to encrypt and decrypt messages.

- (a) the same key, the same key
- (b) the same key, different keys
- (c) different keys, the same key
- (d) different keys, different keys

Question 38

Which of the following statements about asymmetric and symmetric encryption methods is wrong?

- (a) Asymmetric encryption methods are usually applied in short message encryption.
- (b) Symmetric encryption methods are usually applied in long message encryption.
- (c) Both asymmetric and symmetric encryption methods are suitable for both short and long message.
- (d) Asymmetric encryption methods are usually applied in "secure key" encryption.

Question 39

John sends a message to Mary with a digital signature. Peter somehow gets a copy of the message. Which of the followings will happen?

- (a) Mary can read the message but Peter cannot.
- (b) Peter can read the message but Mary cannot.
- (c) Both Mary and Peter cannot read the message.
- (d) Both Mary and Peter can read the message.

Question 40

John encrypts a message by using his own private key and Mary's public key. Then, the message is sent to Mary. Peter somehow gets a copy of the message. Which of the followings will happen?

- (a) Mary can read the message but Peter cannot.
- (b) Peter can read the message but Mary cannot.
- (c) Both Mary and Peter cannot read the message.
- (d) Both Mary and Peter can read the message.

Question 41

Which of the following methods is NOT a correct method for encryption?

- (a) John encrypts the letter first by using his public key. While Mary has received the message, she decrypts the message by using John's public key.
- (b) John encrypts the letter by using Mary's public key. While Mary has received the message, she decrypts the message by using her private key.
- (c) John encrypts the letter first by using Mary's private key and then by using his public key. While Mary has received the message, she decrypts the message first by using John's private key and then by using her public key.
- (d) John encrypts the letter first by using Mary's public key and then by using his private key. While Mary has received the message, she decrypts the message first by using John's public key and then by using her private key.

Question 42

Which of the following statements about SSL is correct?

- (a) To establish a secure session, the customer only needs to send a secure key to the server for message transfer.

- (b) To establish a secure session, the server only needs to send a secure key to the customer for message transfer.
- (c) To establish a secure session, the customer needs to send its certificate to the server for getting a secure key for message transfer.
- (d) To establish a secure session, the server needs to send its certificate to the customer for getting a secure key for message transfer.

Question 43

In compared with OSI Reference Model, which two layers does the SSL (secure socket layer) refer to?

- (a) Application and Presentation layers
- (b) Presentation and Session layers
- (c) Session and Transport layers
- (d) Presentation and Transport layers

Question 44

Which of the following statements is wrong? (B2C stands for business to customers, while C2C stands for customers to customers.)

- (a) Lativ and Payeasy sell products on-line. So, they are two examples of B2C markets.
- (b) eBay provides a platform for sellers to auction off their products and lets the bidders to bid for them. So, eBay is an example of C2C market.
- (c) China Airline sells flight tickets on-line. So, it is an example of B2C market.
- (d) Only in electronic commerce, we can find B2C and C2C markets.

Question 45

Which of the following statements can best describe the market of an App Store?

- (a) App Store is a C2C market.
- (b) App Store is a B2B market.
- (c) App Store is a C2B market.
- (d) App Store is a B2C market.

Question 46

Which of the following reasons is not the major drive of electronic commerce?

- (a) Webpage is accessible 24/7. Customer can place order at any time any where.
- (b) Complaints from the customers are reduced.
- (c) No physical shop is needed. So the operating cost is reduced to minimum.
- (d) It shortens the time spanning from customer order to arrival of the order to the customer.

Question 47

Which of the following years earmarks the beginning of electronic commerce?

- (a) 1984
- (b) 1994
- (c) 2004
- (d) 2014

Question 48

Dropbox is a public cloud for data storage. Which of the following statements about this cloud is wrong?

- (a) Dropbox is a good place for backing up your file.
- (b) Dropbox platform is user friendly.
- (c) Dropbox service is free of charge.
- (d) Dropbox is very secure.

Question 49

Which of the following features is(are) the major breakthrough of iPad, in compared with conventional notebook?

- (i) Wi-Fi access.
- (ii) Touch screen panel control.
- (iii) It does not need any keyboard.

Answer:

- (a) (i) only
- (b) (i) and (iii) only
- (c) (ii) and (iii) only
- (d) (i), (ii) and (iii).

Question 50

Which of the following methods is best way to kill a virus?

- (a) Format the hard disk.
- (b) Using an updated virus cleaner.
- (c) Turn off the computer and restart it.
- (d) Take it to a hospital and get injection.