國立彰化師範大學 101 學年度碩士班招生考試試題

系所：　資訊管理學系數位內容科技與管理碩士班　　　　科目：　計算機概論

一、單選題(共 10 題，每題 3%，共 30%)

1. _____ is a system that perceives its environment, learns from it, and interacts with it intelligently.
   (A) Android　(B) Window 7　(C) iPad　(D) An intelligent agent　(E) Multi-touch

2. _____ is a cross-platform language for structuring and presenting content for the World Wide Web on Window, Android, and iOS.
   (A) C++　(B) XML　(C) HTML 5　(D) Flash　(E) ASP

3. A register in a CPU can hold _____.
   (A) instructions　(B) data　(C) program counter values　(D) all of the above

4. The _____ layer of the TCP/IP protocol suite is responsible for the logical delivery of a message between client and server processes.
   (A) application　(B) session　(C) transport　(D) data-link　(E) physical

5. Three types of topologies are specified for LANs. Which of the following is NOT among them?
   (A) ring　(B) point-to-point　(C) star　(D) bus　(E) none of the above

6. Cinemagraph are still photographs, which are usually published in an animated _____ format, can give the illusion of the viewer is watching a video.
   (A) JPEG　(B) PNG　(C) BMP　(D) GIF　(E) none of the above

7. The prefix notion of *(2+3)*4+5* is _____.
   (A) +*4+235　(B) +5*423+　(C) 23+4*5+　(D) *4+23+5　(E) none of the above

8. _____ is a pictorial representation of an algorithm.
   (A) XML　(B) UML　(C) HTML　(D) PHP　(E) all of the above

9. Which of the followings is not one of the characteristics of object-oriented languages?
   (A) encapsulation　　　　(B) inheritance
   (C) polymorphism　　　　(D) cloud computing　　　　(E) none of the above

10. Public-key algorithm is a kind of _____ algorithms and it can guarantee integrity, _____, and privacy.
    (A) symmetric, authentication　(B) asymmetric, authentication
    (C) symmetric, authorization　(D) asymmetric, authorization　(E) none of the above

二、填空題 (共 6 題，每題 5%，共 30%)

1. The computer industry used the term "__" to define information that contains text, images, audio, animation and video.

2. There are __ bytes in 32 Terabytes.

3. ALU (in Computer) stands for __　__ Unit.

4. RFID (in Computer Network) stands for __　__ Identification.

5. SaaS (Cloud Computing) stands for __ as a __.

6. UML (in computer language for software development) stands for __　__ Language.

三、Problems (40%)

1. An integer $A = (C9)_{16}$ is stored in two's complement. (10%)

   Compute

$$A \quad = \quad (\qquad\qquad\qquad\qquad)_2$$
$$-A \quad = \quad (\qquad\qquad\qquad\qquad)_2$$

2. Write down the running result of the following Java program.

   player index: _____ (10%)

   distance: _____ (10%)

```java
public class CrazyMath {
    public static int getPlayerIndex(byte first){
        return first & 0X07;
    }
    public static int getDistance(byte first,byte second){
        return (int) (first | second << 8);
    }
    public static void main(String[] args) {
        byte first = 0X15;
        byte second = 0X04;
        System.out.println("player index:"+ getPlayerIndex(first));
        System.out.println("distance:"+ getDistance(first,second));
    }
}
```

3. A "thin" client is a computing device functions as a virtual desktop, using the computing power residing on networked servers. Write down three advantages of adopting thin clients in cloud computing environment. (10%)