

10分 (一) 什麼是DOS?

10分 (二) 什麼是主要記憶體(Main Memory) 與次要記憶體(Secondary Memory)? 說明此二者之異同? 電腦五大部門中的儲存部門與此兩種記憶體有無關係? 理由何在?

10分 (三) 分別說明檔案處理中的「讀取(Read)」與「寫入(Write)」檔案的動作。這裡指的「讀取」、「寫入」檔案的動作與一般所說的「儲存(Save)」、「載入(Load)」檔案的動作有何不同? 還是相同?

10分 (四) 我們都知道, 電腦的內部是一些電子線路的組合。但是, 電腦跟人腦一樣, 也會做計算。依您所知道的基本電腦概念(B.C.C.), 說明電腦為什麼會做計算的理由? (Hint: 人類的加、減、乘、除計算, 電腦怎麼會做?)

10分 (五) 什麼是結構化的程式設計? 是否有某些電腦語言不適合來設計一個「結構化的程式」? 理由何在?

12分 (六) 寫出下列BASIC Statements的結果:

1. a=123456789123456789
print a!

2. a#=123456789123456789
print`a#

3. a=123456789123456789
print a

4. a%=55555.5
print a%

10分 (七) The ACE Manufacturing Company occasionally hires laborers, paying them \$5.00 an hour, plus \$7.50 for all hours over eight.

Write a BASIC program to read in the worker's names and hours worked from Keyboard, and then calculate and print out a list of the amounts due them. Assume that the number of workers that ACE hires may vary day by day. The output report format should look like as follows:

NAME	HOURS WORKED	AMOUNT DUE
P. CHEN	8.0	40.00
Y. TSAI	8.5	43.75
K. LIN	10.0	55.00

(背面仍有題目,請繼續作答)

28分 (八) Develop a computerized game that generates a random number greater than 10, but less than 90. Store the number in a variable called GUESSIT, then have the user attempt to guess the number. Note that the statement RANDOMIZE(N) can be used to generate a random number between 0 and 1, where N is any value between -32768 and 32767. A sample run is shown below.

```
I'm thinking of a number between 10 and 90.  
Try to guess it!  
  
Your guess? 40  
Too high. Guess again!  
  
Your guess? 9  
The number is > than 10 and < 90.  
  
Your guess? 15  
Too low. Guess again!  
  
Your guess? 23  
Correct! You guessed the number in 4 trials!  
Play again(Y/N)? N  
Ok
```

- (a) Explain your algorithm.
- (b) Draw a flow chart.
- (c) Write a BASIC program.