

臺銀證券 100 年新進人員甄試試題

職等／甄試類別【代碼】：七職等／資訊人員 A【B4906】

綜合科目：IBM AS/400 主機系統相關概念(含系統操作指令、Library、File Management、Object、相關程式語言等概念)

\*請填寫入場通知書編號：\_\_\_\_\_

注意：①作答前須檢查答案卷、入場通知書編號、桌角號碼、應試類別是否相符，如有不同應立即請監試人員處理，否則不予計分。  
 ②本試卷為兩張雙面，共計肆面，共有四大題之非選擇題，各題配分均為 25 分。  
 ③非選擇題限以藍、黑色鋼筆或原子筆於答案卷上採橫式作答，並請從答案卷內第一頁開始書寫，違反者該科酌予扣分，不必抄題但須標示題號。  
 ④應考人得自備簡易型電子計算機(不得發出聲響)應試，惟不得使用財務型或工程用計算機；若應考人測驗時於桌面上放置或使用不符規定之電子計算機，經勸阻無效，仍執意使用者，該科扣 10 分；計算機並由監試人員保管至該節測驗結束後歸還。  
 ⑤答案卷務必繳回，未繳回者該科以零分計算。

題目一：

欲在 AS/400 系統上排定一個 JOB，JOB NAME 為 ACTION1，

作業內容：備份 Library 名稱為 ALIB 的所有物件且排除名稱前 3 碼為 LOG 的檔案並儲存於磁帶內（磁帶機：TAP01）。

執行時間：於每星期一至星期五上午九點開始執行第一次作業，之後每 50 分鐘執行一次，超過下午五點則結束該工作。

請參考下列指令及參數完成（一）、（二）問題之 CL 程式及工作排程。

| CL 相關指令   |
|---|
| 1.SAVLIB LIB(ALIB LOG*) DEV(TAP01)  |
| 2.SAVOBJ OBJ(*ALL) LIB(ALIB) DEV(*SAVF) SAVF(QGPL/TAP01) OMITOBJ((ALIB/LOG* *FILE)) |
| 3.DCL VAR(&TIME) TYPE(*CHAR) LEN(06)  |
| 4.DCL VAR(&TIME@) TYPE(*DEC) LEN(4 0)   |
| 5.SAVLIB LIB(ALIB) DEV(TAP01) OMITOBJ((ALIB/LOG* *FILE))                            |
| 6.SAVOBJ OBJ(LOG*) LIB(ALIB) DEV(TAP01) OMITOBJ((ALIB/LOG* *FILE))                  |
| 7.RTVSYSVAL SYSVAL(QTIME) RTNVAR(&TIME)   |
| 8.IF COND(&TIME@ *GT 1700) THEN( )  |
| 9.INZTAP DEV( ) CLEAR(*YES)   |
| 10.DLYJOB DLY( )  |
| 11.GOTO CMDLBL(START)   |
| 12.GOTO CMDLBL(END)   |

| ADDJOBSCDE 相關參數   |
|---|
| ADDJOBSCDE JOB( )   |
| CMD( )  |
| FRQ( ) 參數 *ONCE, *WEEKLY, *MONTHLY                        |
| SCDDATE( ) 參數 Date, *NONE, *CURRENT, *MONTHSTR, *MONTHEND |
| SCDDAY( ) 參數 *ALL *MON *TUE *WED *THU *FRI *SAT *SUN      |
| SCDTIME( )  |

(一) 請完成 JOB ACTION1 工作排程指令。【10 分】

1. CRTCLPGM PGM(QGPL/BACKUP) SRCFILE(QGPL/QCLSRC) SRCMBR(BACKUP)
2. ADDJOBSCDE JOB(ACTION1) CMD(CALL PGM( )) FRQ( ) SCDDATE( ) SCDDAY( ) SCDTIME( )

(二) 請以上述相關指令填入下方 STATEMENT 中，以完成 JOB ACTION1 功能。【15 分】

```
Columns . . . : 1 80 Edit
QGPL/QCLSRC
SEU==> _____ BACKUP
***** Beginning of data *****
PGM
START :

/*超過下午五點則結束*/

END :
ENDPGM
```

【請接續背面】

題目二：

USER ID :AA01 執行命令時，發生權限不足錯誤訊息如下圖(一)，請參考圖(一)至圖(六)資訊，回答(一)、(二)問題。

(一)

1.請問 USER AA01 對 Object(TASK1/ SNDMAILCL)有何權限？【4分】

2.圖(一)指示權限不足係指對何 Object？【3分】

3.承上題，哪一個 USER 對此 Object 僅具有\*USE 權限？【3分】

(二) 為使該命令正常完成 (命令內容不變)，請列出三種方法 (文字說明或列出指令皆可)。【15分】

```

Command Entry                                     S65XXXXXX
Request level: 2

Previous commands and messages:
> SBMJOB CMD(CALL PGM(TASK1/ SNDMAILCL)) JOB(SNDMAIL) USER(AONE)
Not authorized to user profile AONE.
Errors occurred on SBMJOB command.

Type command, press Enter.
====> SBMJOB CMD(CALL PGM(TASK1/ SNDMAILCL)) JOB(SNDMAIL) USER(AONE)

F3=Exit  F4=Prompt  F9=Retrieve  F10=Include detailed messages
F11=Display full  F12=Cancel  F13=Information Assistant  F24=More keys
    
```

圖(一)

```

Display Object Authority

Object.....: SNDMAILCL      Owner.....: AONE
Library.....: TASK1          Primary group....: *NONE
Object type ..: *PGM          ASP device.....: *SYSBAS

Object secured by authorization list .....: MEMLIST

User      Group      Object
*PUBLIC   Group      Authority
AONE     *EXCLUDE
          *ALL
    
```

圖(二)

```

Display Authorization List

Object.....: MEMLIST      Owner.....: AONE
Library.....: QSYS         Primary group....: *NONE

User      Object      List
*PUBLIC   Authority  Mgt
AA01     *EXCLUDE
AA02     *USE
AA03     *USE
    
```

圖(三)

```

Display User Profile - Basic

User profile.....: AA01

Previous sign-on.....: 11/01/01 12:00:00
Sign-on attempts not valid.....: 0
Status.....: *ENABLED
Date password last changed.....: 10/12/31
Password expiration interval.....: *SYSVAL
Date password expires.....: 11/01/28
Set password to expired.....: *NO
Local password management.....: *YES
User class.....: *USER
Special authority.....: *NONE
Group profile.....: GP1
Owner.....: *GRPPRF
Group authority.....: *NONE
Group authority type.....: *PRIVATE
Supplemental groups.....: *NONE
Limit capabilities.....: *PARTIAL

Press Enter to continue.
    
```

圖(四)

```

Display Object Authority

Object.....: AONE          Owner.....: QSECOFR
Library.....: QSYS          Primary group....: *NONE
Object type ..: *USRPRF     ASP device.....: *SYSBAS

User      Group      Object
*PUBLIC   Group      Authority
QSECOFR   *EXCLUDE
QSYSOPR   *ALL
          *USE

Press Enter to continue.
    
```

圖(五)

```

Display Program Information

Program.....: SNDMAILCL    Library.....: TASK1
Owner.....: AONE
Program attribute...: CLP

Program creation information:
Program creation date/time.....: 10/03/06 18:20:52
Type of program.....: OPM
Source file.....: QCLSRC
Library.....: QGPL
Source member.....: SNDMAILCL
Source file change date/time.....: 10/02/23 16:55:33
Observable information.....: *ALL
User profile.....: *USER
Use adopted authority.....: *NO
Log commands (CL program).....: *JOB
Allow RTVCLSRC (CL program).....: *YES
Fix decimal data.....: *NO

Press Enter to continue.

F3=Exit  F12=Cancel
(C) COPYRIGHT IBM CORP. 1980, 2005.
    
```

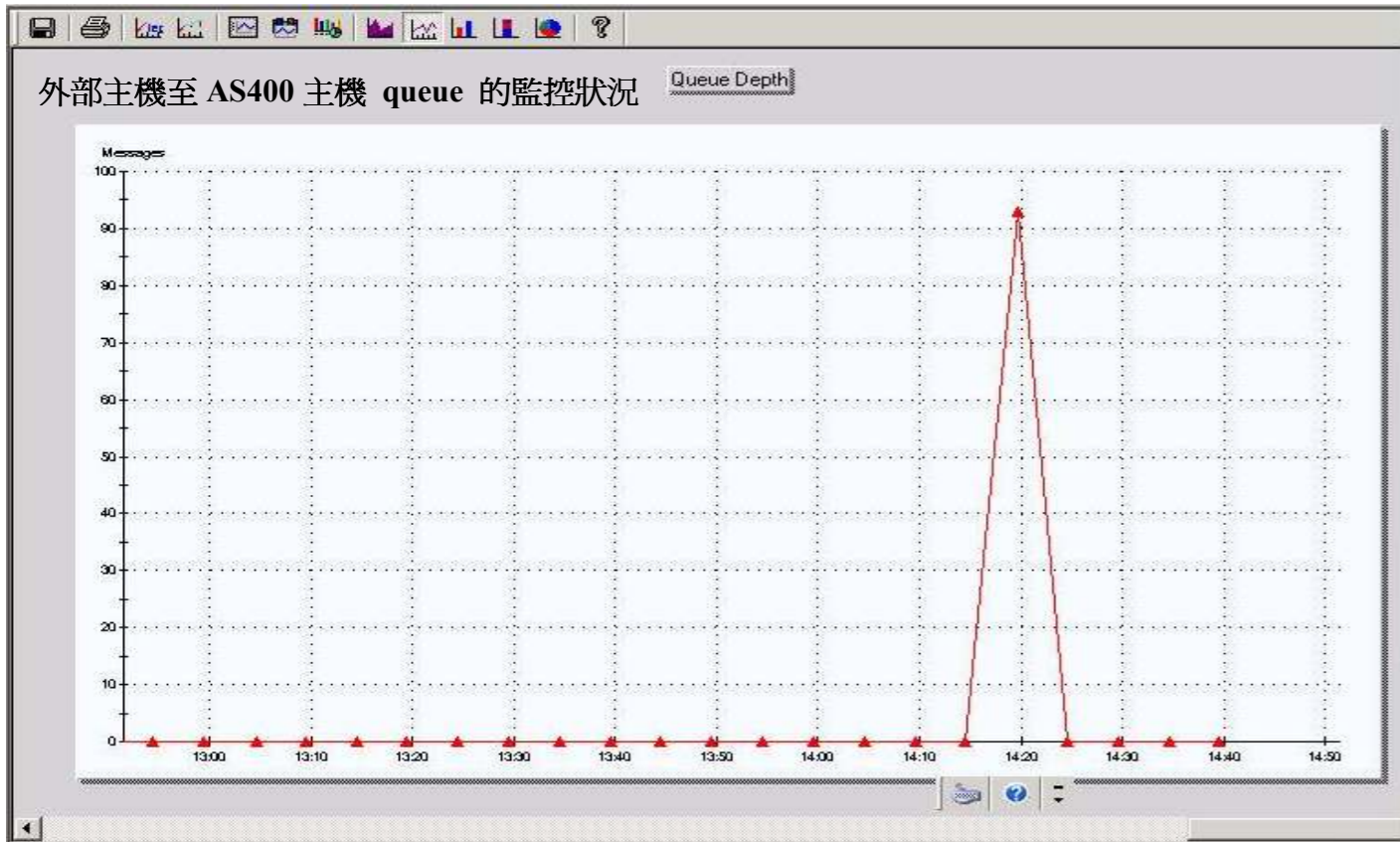
圖(六)

【請接續下頁】

題目三：

A 公司的 AS/400 主機透過 MQ 與外部主機（前端主機）做即時資料的處理與回應，外部主機執行資料查詢時 PUT REQUEST MESSAGE 至 MQ 後等待回覆，AS400 主機 GET MESSAGE 後產生 1 個 JOB(JOBNAME JOBAA)執行並將處理結果回覆外部主機，此過程正常皆能於 35 秒內完成，超過 35 秒未回覆外部主機，則外部主機視為異常並結束(Timeout)。

問題：外部主機於 14:20 左右(尖峰時間)之查詢交易俱皆 Timeout，請就圖(一)至圖(五)之資訊，說明 AS/400 主機可能發生何種情況及改善措施。【25 分】



圖(一) 外部主機至 AS400 主機 Queue Depth(待處理 Message)

10/01/01 14:23:37

|                            |          |                          |         |
|----------------------------|----------|--------------------------|---------|
| % CPU used . . . . .       | 10.0     | Auxiliary storage:       |         |
| % DB capability . . . . .  | 33.3     | System ASP . . . . .     | 564.5 G |
| Elapsed time . . . . .     | 00:00:58 | % system ASP used . . .  | 39.8613 |
| Jobs in system . . . . .   | 11324    | Total . . . . .          | 1970 G  |
| % perm addresses . . . . . | .097     | Current unprotect used : | 21695 M |
| % temp addresses . . . . . | 3.349    | Maximum unprotect . . .  | 24976 M |

Type changes (if allowed), press Enter.

| System | Pool     | Reserved | Max    | ----DB---- | ---Non-DB--- |       |       |
|--------|----------|----------|--------|------------|--------------|-------|-------|
| Pool   | Size (M) | Size (M) | Active | Fault      | Pages        | Fault | Pages |
| 1      | 2000.00  | 572.56   | +++++  | .0         | .0           | .0    | .0    |
| 2      | 18268.76 | 4.96     | 1100   | 2.1        | 9.8          | 12.5  | 48.7  |
| 3      | 5000.00  | .00      | 500    | .7         | .8           | .3    | .6    |
| 4      | 6037.76  | 1.14     | 600    | .0         | .0           | .0    | .0    |
| 5      | 150.00   | .00      | 10     | .0         | .0           | .0    | .0    |

Bottom

圖(二)系統資源使用狀況

| Itv   | Job   | User Name/ | Job    | Current | Pool | Type | Pty | Elapsed | CPU  |
|-------|-------|------------|--------|---------|------|------|-----|---------|------|
| End   | Name  | Thread     | Number | User    |      |      |     | Time    | Util |
| 14:22 | JOBAA | AONE       | 194773 | AONE    | 2    | B    | 10  | 0:50    | .0   |
| 14:22 | JOBAA | AONE       | 194798 | AONE    | 2    | B    | 10  | 0:58    | .0   |
| 14:22 | JOBAA | AONE       | 194805 | AONE    | 2    | B    | 10  | 0:49    | .0   |
| 14:22 | JOBAA | AONE       | 194819 | AONE    | 2    | B    | 10  | 0:50    | .0   |
| 14:22 | JOBAA | AONE       | 194822 | AONE    | 2    | B    | 10  | 0:51    | .0   |
| 14:22 | JOBAA | AONE       | 194824 | AONE    | 2    | B    | 10  | 1:09    | .0   |
| 14:22 | JOBAA | AONE       | 194827 | AONE    | 2    | B    | 10  | 1:11    | .0   |
| 14:22 | JOBAA | AONE       | 194830 | AONE    | 2    | B    | 10  | 1:02    | .0   |
| 14:22 | JOBAA | AONE       | 194831 | AONE    | 2    | B    | 10  | 1:06    | .0   |
| 14:22 | JOBAA | AONE       | 194836 | AONE    | 2    | B    | 10  | 1:09    | .0   |
| 14:22 | JOBAA | AONE       | 194837 | AONE    | 2    | B    | 10  | 1:09    | .0   |
| 14:22 | JOBAA | AONE       | 194838 | AONE    | 2    | B    | 10  | 1:17    | .0   |
| 14:22 | JOBAA | AONE       | 194840 | AONE    | 2    | B    | 10  | 1:09    | .0   |
| 14:22 | JOBAA | AONE       | 194842 | AONE    | 2    | B    | 10  | 1:03    | .0   |
| 14:22 | JOBAA | AONE       | 194844 | AONE    | 2    | B    | 10  | 1:05    | .0   |
| 14:22 | JOBAA | AONE       | 194846 | AONE    | 2    | B    | 10  | 1:05    | .0   |
| 14:22 | JOBAA | AONE       | 194851 | AONE    | 2    | B    | 10  | 1:02    | .0   |
| 14:22 | JOBAA | AONE       | 194860 | AONE    | 2    | B    | 10  | 1:02    | .0   |
| 14:22 | JOBAA | AONE       | 194864 | AONE    | 2    | B    | 10  | 1:01    | .0   |
| 14:22 | JOBAA | AONE       | 194866 | AONE    | 2    | B    | 10  | 1:02    | .0   |
| 14:22 | JOBAA | AONE       | 194871 | AONE    | 2    | B    | 10  | 1:07    | .0   |
| 14:22 | JOBAA | AONE       | 194874 | AONE    | 2    | B    | 10  | 1:03    | .0   |
| 14:22 | JOBAA | AONE       | 194878 | AONE    | 2    | B    | 10  | 1:07    | .0   |
| 14:22 | JOBAA | AONE       | 194880 | AONE    | 2    | B    | 10  | 1:06    | .0   |
| 14:22 | JOBAA | AONE       | 194883 | AONE    | 2    | B    | 10  | 1:05    | .0   |
| 14:22 | JOBAA | AONE       | 194884 | AONE    | 2    | B    | 10  | 1:01    | .0   |
| 14:23 | JOBAA | AONE       | 194928 | AONE    | 2    | B    | 10  | 1:22    | .0   |
| 14:23 | JOBAA | AONE       | 194933 | AONE    | 2    | B    | 10  | 1:10    | .0   |
| 14:23 | JOBAA | AONE       | 194935 | AONE    | 2    | B    | 10  | 1:02    | .0   |
| 14:23 | JOBAA | AONE       | 194937 | AONE    | 2    | B    | 10  | 1:15    | .0   |
| 14:23 | JOBAA | AONE       | 194938 | AONE    | 2    | B    | 10  | 1:02    | .0   |
| 14:23 | JOBAA | AONE       | 194940 | AONE    | 2    | B    | 10  | 1:03    | .0   |
| 14:23 | JOBAA | AONE       | 194941 | AONE    | 2    | B    | 10  | 1:13    | .0   |
| 14:23 | JOBAA | AONE       | 194943 | AONE    | 2    | B    | 10  | 1:10    | .0   |
| 14:23 | JOBAA | AONE       | 194946 | AONE    | 2    | B    | 10  | 1:12    | .0   |
| 14:23 | JOBAA | AONE       | 194949 | AONE    | 2    | B    | 10  | 1:11    | .0   |
| 14:23 | JOBAA | AONE       | 194951 | AONE    | 2    | B    | 10  | 1:03    | .0   |
| 14:23 | JOBAA | AONE       | 194955 | AONE    | 2    | B    | 10  | 1:12    | .0   |
| 14:23 | JOBAA | AONE       | 194987 | AONE    | 2    | B    | 10  | 1:06    | .0   |
| 14:23 | JOBAA | AONE       | 194990 | AONE    | 2    | B    | 10  | 1:02    | .0   |
| 14:23 | JOBAA | AONE       | 194991 | AONE    | 2    | B    | 10  | 1:05    | .0   |

| Elapsed | CPU  | --- Nbr I/O /Sec --- | --- CPU / I/O --- | Printe |      |       |       |
|---------|------|----------------------|-------------------|--------|------|-------|-------|
| Time    | Util | Sync                 | Async             | Lgl    | Sync | Async | Lines |
| 0:01    | .00  | 92                   | 40                | 6      | 0    | 1     | 0     |
| 0:01    | .01  | 93                   | 40                | 1050   | 0    | 1     | 0     |
| 0:01    | .00  | 92                   | 40                | 68     | 0    | 1     | 0     |
| 0:01    | .00  | 409                  | 213               | 58     | 0    | 0     | 0     |
| 0:01    | .00  | 93                   | 41                | 110    | 0    | 1     | 0     |
| 0:01    | .00  | 98                   | 42                | 4      | 0    | 1     | 0     |
| 0:01    | .00  | 91                   | 40                | 6      | 0    | 1     | 0     |

圖(三) JOBAA 執行狀況，由 STRDBMON 產生

Elapsed time: 00:00:00

| Unit | ASP | Type           | Status | Compression |
|------|-----|----------------|--------|-------------|
|      |     | --Protection-- |        |             |
| 1    | 1   | MRR            | ACTIVE |             |
| 1    | 1   | MRR            | ACTIVE |             |
| 33   | 1   | DPY            | ACTIVE |             |
| 34   | 1   | DPY            | ACTIVE |             |
| 35   | 1   | DPY            | ACTIVE |             |
| 36   | 1   | DPY            | ACTIVE |             |
| 7    | 2   | DPY            | ACTIVE |             |
| 8    | 2   | DPY            | ACTIVE |             |
| 9    | 2   | DPY            | ACTIVE |             |
| 10   | 2   | DPY            | ACTIVE |             |
| 11   | 2   | DPY            | ACTIVE |             |
| 12   | 2   | DPY            | ACTIVE |             |
| 13   | 2   | DPY            | ACTIVE |             |

More...

Command

====>

F3=Exit F5=Refresh F12=Cancel F24=More keys

Already at top of area.

圖(四)磁碟機組可用狀態

Elapsed time: 00:01:11

| Unit | Type | Size (M) | % Used | I/O Rqs | Request Size (K) | Read Rqs | Write Rqs | Read (K) | Write (K) | % Busy |
|------|------|----------|--------|---------|------------------|----------|-----------|----------|-----------|--------|
| 1    | 4327 | 70564    | 39.8   | 20.1    | 5.3              | .1       | 19.9      | 5.3      | 5.3       | 100    |
| 1    | 4327 | 70564    | 39.8   | 19.4    | 5.4              | .9       | 18.4      | 5.0      | 5.4       | 100    |
| 33   | 4328 | 123488   | 39.8   | 39.2    | 6.6              | 2.6      | 36.6      | 15.2     | 6.0       | 99     |
| 34   | 4328 | 123488   | 39.8   | 38.0    | 6.9              | 3.2      | 34.8      | 13.4     | 6.3       | 98     |
| 35   | 4328 | 123488   | 39.8   | 55.9    | 8.4              | 6.1      | 49.8      | 13.7     | 7.8       | 99     |
| 36   | 4328 | 123488   | 39.8   | 51.6    | 6.1              | 1.2      | 50.4      | 4.7      | 6.1       | 99     |
| 7    | 2105 | 35165    | 55.5   | 3.2     | 4.7              | .3       | 2.9       | 8.3      | 4.3       | 100    |
| 8    | 2105 | 8589     | 69.6   | 8.2     | 4.3              | .0       | 8.1       | 6.8      | 4.3       | 100    |
| 9    | 2105 | 35165    | 55.7   | 1.2     | 6.7              | .2       | 1.0       | 9.6      | 6.0       | 100    |
| 10   | 2105 | 35165    | 55.6   | 2.0     | 7.2              | .3       | 1.7       | 7.0      | 7.3       | 100    |
| 11   | 2105 | 8589     | 68.1   | 1.4     | 5.3              | .0       | 1.3       | 8.0      | 5.2       | 100    |
| 12   | 2105 | 35165    | 55.6   | 2.4     | 7.5              | .1       | 2.2       | 14.2     | 7.0       | 100    |
| 13   | 2105 | 8589     | 69.1   | 2.7     | 4.6              | .1       | 2.5       | 6.8      | 4.5       | 100    |

More...

Command

====>

F3=Exit F5=Refresh F12=Cancel F24=More keys

Already at top of area.

圖(五)磁碟機組使用情形

題目四：

請參考下列 AS/400 指令，建立批次子系統(SUBSYSTEM)。

|            |           |          |           |           |
|------------|-----------|----------|-----------|-----------|
| ADDJOBSCDE | ADDRPYLE  | ADDJOBQE | ADDRMTDFN | ADDRTGE   |
| CRTSAVF    | CRTCLD    | CRTCLU   | CRTJRN    | CHGUSRAUD |
| CHGUSRPRTI | CRTSCHIDX | CRTCLS   | CRTDDMF   | CHGUSRTRC |
| CRTFLR     | CRTOUTQ   | CRTCSI   | CRTSBSD   | CHGUSRPRF |

(一) 依提供指令說明，填入依序須下達的相關指令。【15分】

1. \_\_\_\_\_ - 可設定 Storage pools 及 Maximum jobs。
2. CRTJOBQ - 執行工作前時，可先將工作放至於此佇列中。
3. \_\_\_\_\_ - 可設定同時啟動的 Maximum active jobs 及 Max active priority n。
4. CRTJOBQ - 可設定工作在執行時可用到的 Job priority (on JOBQ)、Output priority (on OUTQ)及 Routing data。
5. \_\_\_\_\_ - 設定工作執行時可分配的 Maximum CPU time、Maximum temporary storage 及 Maximum threads。
6. \_\_\_\_\_ - 可設定工作使用指定的 CLASS。
7. \_\_\_\_\_ - 可設定 Maximum spooled file size 及 Order of files on queue。
8. CHGUSRPRF - 可設定 Special authority 及 Job description。

(二) 如須設定子系統中特定 JOB 的 Run priority，須於上題(一)的哪一指令中設定此參數值。【10分】