

- ① 08/04/2022 , 9:30 AM
- ② Exam Roll No. 21234757061
- ③ MCA
- ④ Sem-I / Year-I
- ⑤ UPC : 223401104
- ⑥ Computer System Architecture

Ans 2 (B) (i) DMA \longleftrightarrow (C) Disk

(ii) Cache \longleftrightarrow (D) High Speed RAM

(iii) Interrupt I/O \longleftrightarrow (B) Printer

(A)

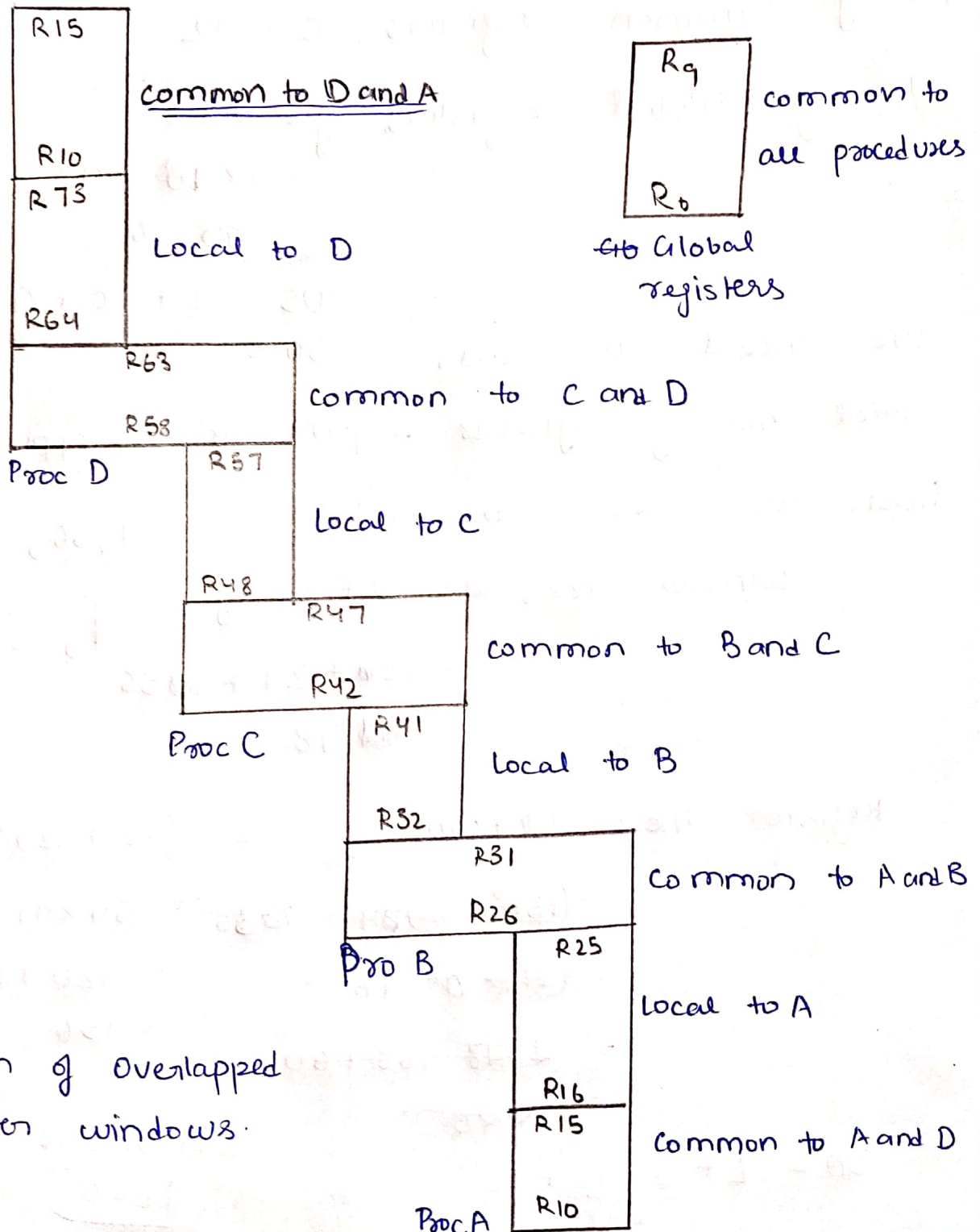


Fig. Design of overlapped register windows.

~~Total~~ Total registers in each window

$$= l + 2c + g = 30$$

~~Now~~ where l = no of local register
 c = no of register common
 to two overlapping windows
 g = no of global register

Also given that,

No of windows, $w = 4$

Now ~~30 = l + 2c~~ $g = 12$ (given)

No of shared registers = $2c = 2 \times l$ (given)

So, $\boxed{c = l}$

window size = $30 = l + 2l + 12$

$$18 = 3l$$

$$\boxed{l = 6}$$

Total Registers = $(l + c)w + g$

$$= (6 + 6)4 + 12$$

$$= (12 \times 4) + 12$$

$$= 48 + 12 = 60$$