

1.(1)  $4096-128=3968$ bytes

$12+16+32+70=130$ bytes

$3968/130=30$ (向下取整)

可以装下 30 个 records

(2)(i)  $24+1300=1324$ bytes

$3968/1324=2$ (向下取整)

$5/2=3$ (向上取整)

需要 3 个 blocks

(ii)  $3968*3-1324*5=5284$ bytes

空余空间 5284bytes

(iii) 由  $3968/1324=2$ (向下取整), 1 个 block 不可以满足要求

考虑使得 1 条 records 跨越 2 个 blocks 并将 5 条 records 存入 2 个 blocks

$1324*5+12*2=6644$ bytes

$3968*2=7936$ bytes  $> 6644$ bytes

需要 2 个 blocks

2.  $4096-128=3968$ bytes

(i)  $59*(63+4)=3953$ bytes  $< 3968$ bytes can be stored in a single block

(ii)  $39*(94+4)+10*(100+4)=4862$ bytes  $> 3968$ bytes can't be stored in a single block

(iii)  $50*(11+4)+10*(13+4)+20*(148+4)=3960$ bytes  $< 3968$ bytes can be stored in a single block

(iv)  $2*(1982+4)=3972$ bytes  $> 3968$ bytes can't be stored in a single block

(i)(iii) can be stored in a single block