P7

1

a) DM ya que no se especifica el deadline y valdría para $D \leq T$?

b) EDF ya que las tareas se priorizan según el deadline absoluto.

2

a)

	c	t	u
T_1	2	6	0,33
T_2	4	9	0,44
T_3	3	17	0,178

$0,948 \not\leq L_0(3)$

Test falla

~~no~~ no podemos garantizar su planificabilidad

b)

$U = 0,948 \leq 1$ Test OK podemos garantizar la planificabilidad

3

a) En el instante que coincide con el mayor periodo ...

b) En el instante del hiperperiodo, el MCM de los periodos

4

a)

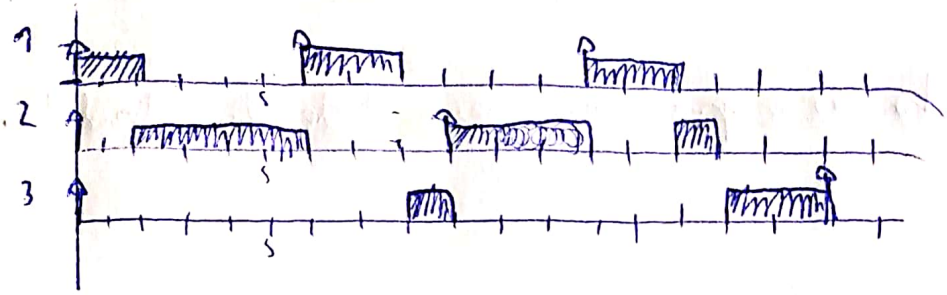
T_1: $R_1^0 = 2$, $R_1^1 = 2$ $\quad 5 \leq 6$ OK

T_2:
$R_2^0 = 4$
$R_2^1 = 4 + \left\lceil \frac{R_i}{T_1} \right\rceil \cdot c_2 = 4 + \left\lceil \frac{4}{6} \right\rceil \cdot 2 = 6$
$R_2^2 = 4 + \left\lceil \frac{6}{6} \right\rceil \cdot 2 = 6$ $\quad 6 \leq 9$ OK

T_3:
$R_3^0 = 3$
$R_3^1 = 3 + \left\lceil \frac{3}{9} \right\rceil \cdot 4 + \left\lceil \frac{3}{6} \right\rceil \cdot 2 = 9$
$R_3^2 = 3 + \left\lceil \frac{9}{9} \right\rceil \cdot 4 + \left\lceil \frac{9}{6} \right\rceil \cdot 2 = 11$
$R_3^3 = 3 + \left\lceil \frac{11}{9} \right\rceil \cdot 4 + \left\lceil \frac{11}{6} \right\rceil \cdot 2 = 15$
$R_3^4 = 3 + \left\lceil \frac{15}{9} \right\rceil \cdot 4 + \left\lceil \frac{15}{6} \right\rceil \cdot 2 = 17$
$R_3^5 = 3 + \left\lceil \frac{17}{9} \right\rceil \cdot 4 + \left\lceil \frac{17}{6} \right\rceil 2 = 17$

OK

(B)



OK

(5)

	C	T
1	2	6
2	4	10
3	3	15

(a)

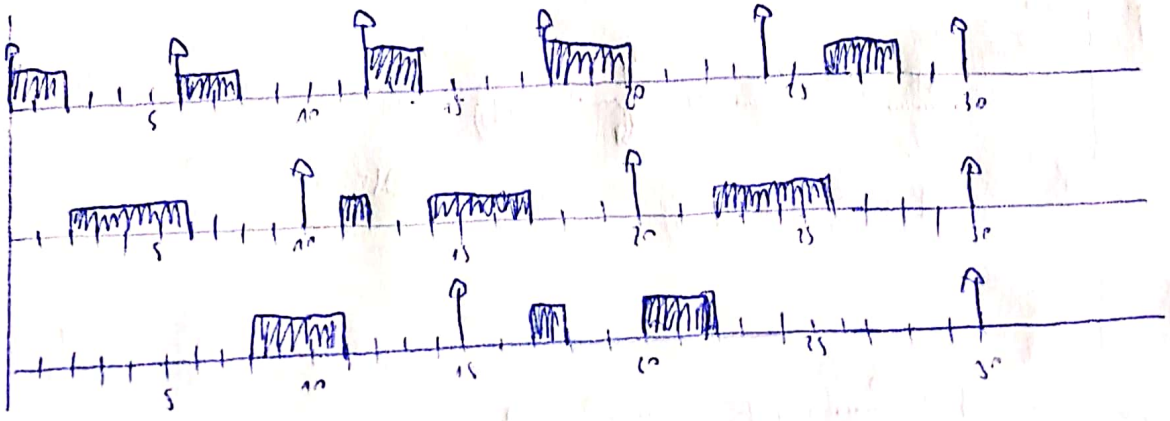
1 | $R_1^0 = 0$ OK
$R_1^1 = 0$

2 | $R_2^0 = 4$
$R_2^1 = 4 + \left\lceil \frac{2}{6} \right\rceil \cdot 2 = 6$ OK
$R_2^2 = 4 + \left\lceil \frac{6}{6} \right\rceil \cdot 2 = 6$

3 | $R_3^0 = 3$
$R_3^1 = 3 + \left\lceil \frac{3}{10} \right\rceil \cdot 4 + \left\lceil \frac{3}{6} \right\rceil \cdot 2 = 9$
$R_3^2 = 3 + \left\lceil \frac{7}{10} \right\rceil \cdot 4 + \left\lceil \frac{9}{6} \right\rceil \cdot 2 = 11$
$R_3^3 = 3 + \left\lceil \frac{11}{10} \right\rceil \cdot 4 + \left\lceil \frac{11}{6} \right\rceil \cdot 2 = 17$ $17 \neq 15$

No es planificable ya que la tarea 3 incumple su deadline

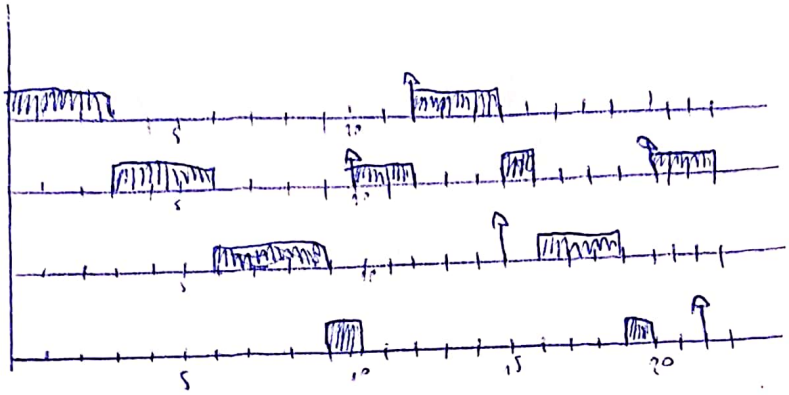
(b)



(6)

(a) Estamos de acuerdo que $D \leq T$

(B)



(C) $R_1 = 3$, $R_2 = 6$, $R_3 = 7$, $R_4 = 20$

(7)

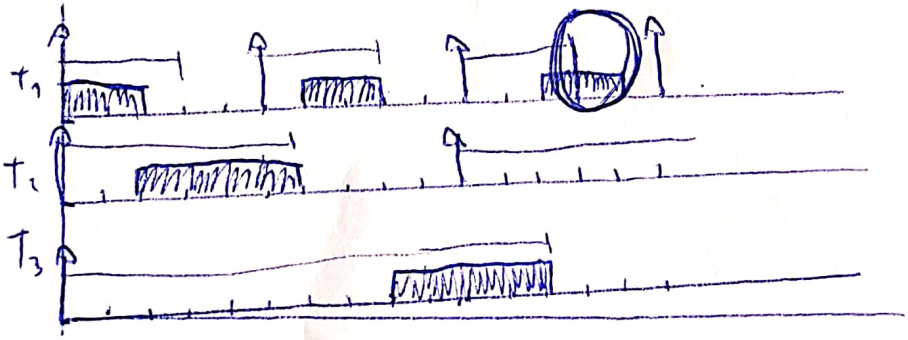
(a)

	C	T	D	U
1	2	5	3	0,667
2	4	10	6	1
3	4	15	12	0,733

$1,667 \not\leq 1$ test falla

no podemos garantizar la planificabilidad.

(B)



No planificable

T_1 se pasa del Deadline se pierde 1 unidad de tiempo