1. Dado el siguiente diario:

[CHECKPOINT,0,[]] [START\_TRANSACTION,T1,10] [START\_TRANSACTION,T2,20] [WRITE,T1,A1,30,35,30]

[WRITE,T2,A2,35,40,40] [START\_TRANSACTION,T3,50] [WRITE,T1,B1,45,35,60]

[WRITE,T3,A3,40,45,70]

[WRITE,T2,B2,40,30,80] [START\_TRANSACTION,T4,90] [WRITE,T1,C1,90,105,100] [WRITE,T3,B3,35,25,110]

[WRITE,T4,A4,45,50,120] [WRITE,T1,D1,120,115,130] [END\_TRANSACTION,T1,140]

[WRITE,T2,C2,100,115,150] [WRITE,T2,D2,110,105,160] [WRITE,T3,C3,110,125,170] [END\_TRANSACTION,T2,180] [COMMIT,T1,190] [WRITE,T4,B4,30,20,200] [ROLLBACK,T2,210] [WRITE,T3,D3,100,95,220] [CHECKPOINT,230,AT] [END\_TRANSACTION,T3,240] [WRITE,T4,C4,120,135,250] [COMMIT,T3,260] [WRITE,T4,D4,90,85,270] [END\_TRANSACTION,T4,280] [COMMIT,T4,290]

Considera las siguientes opciones:

* Fallo en los instantes de tiempo 75, 155, 225 o 285.
* Tamaño de bloque: 3, 5 u 8 entradas.
* Actualización del diario: diferida o inmediata.
* Actualización de la base de datos: diferida o inmediata.

Indica y justifica adecuadamente qué acciones debería realizar el sistema de recuperación en cada uno de los casos posibles. Entre otras cuestiones, indica el algoritmo que estás usando en caso y cómo se aplica paso por paso.

ACTUALIZACION DIARIO: INMEDIATA

ACTUALIZACION BD: DIFERIDA.

FALLO INSTANTE 75

1. Activas{} Confirmadas{}
2. Activas{}
   1. Activas{T1,T2,T3}
   2. Confirmadas{}
3. No hay ninguna confirmada luego no se hace nada.
   1. /
   2. T1, T2, T3 REINICIAR

ACTUALIZACION DIARIO: INMEDIATA

ACTUALIZACION BD: DIFERIDA.

FALLO INSTANTE 155

1. Activas{} Confirmadas{}
2. Activas{}
3. 1. Activas{T1,T2,T3,T4}
   2. Confirmadas{}
4. 1. /
   2. T1,T2,T3,T4 REINICIAR

ACTUALIZACION DIARIO: INMEDIATA

ACTUALIZACION BD: DIFERIDA.

FALLO INSTANTE 285

1. ACTIVAS{} CONFIRMADAS{}
2. ACTIVAS{T3,T4} CONFIRMADAS{}
3. 1. ACTIVAS{T3,T4} CONFIRMADAS{}
   2. ACTIVAS{T4} CONFIRMADAS{T3}
4. 1. WRITE A3 45, B3 25, C3 125, D3 95
   2. REINCIAR T4

ACTUALIZACION DIARIO: INMEDIATA

ACTUALIZACION BD: DIFERIDA.

FALLO INSTANTE 225

1. ACTIVAS{} CONFIRMADAS{}
2. ACTIVAS{} CONFIRMADAS{}
3. 1. ACTIVAS{T1,T2,T3,T4} CONFIRMADAS{}
   2. ACTIVAS{T3,T4} CONFIRMADAS{T1}
4. 1. WRITE A1 35, B1 35, C1 105, D1 115
   2. REINCIAR T3,T4
5. Dado el siguiente diario:

[CHECKPOINT,0,[]] [START\_TRANSACTION,T6,10] [START\_TRANSACTION,T3,20] [START\_TRANSACTION,T4,30] [START\_TRANSACTION,T2,40] [START\_TRANSACTION,T7,50] [START\_TRANSACTION,T8,60] [WRITE,T3,H,44,36,70]

[WRITE,T2,D,171,100,80]

[WRITE,T3,I,116,96,90]

[WRITE,T8,W,30,8,100] [CHECKPOINT,110,AT1] [WRITE,T7,T,58,105,120]

[WRITE,T3,J,33,19,130]

[WRITE,T6,Q,69,67,140] [COMMIT,T3,150] [WRITE,T4,K,26,129,160]

[WRITE,T7,U,79,140,170] [START\_TRANSACTION,T1,180] [WRITE,T1,A,101,6,190]

[WRITE,T6,R,61,14,200]

[WRITE,T1,B,22,190,210]

[WRITE,T7,V,169,120,220] [CHECKPOINT,230,AT2] [WRITE,T4,L,38,20,240]

[WRITE,T6,S,57,99,250] [ROLLBACK,T7,260] [WRITE,T1,C,27,105,270] [START\_TRANSACTION,T5,280] [WRITE,T5,N,71,112,290]

[WRITE,T8,X,177,27,300]

[WRITE,T2,F,84,189,310] [WRITE,T5,O,101,187,320] [WRITE,T4,M,105,25,330] [COMMIT,T4,340] [CHECKPOINT,350,AT3] [WRITE,T5,P,125,195,360] [COMMIT,T5,370] [COMMIT,T6,380] [COMMIT,T1,390] [WRITE,T2,G,86,82,400] [COMMIT,T2,410] [WRITE,T8,Y,74,74,420] [COMMIT,T8,430]

Considera las siguientes opciones:

* Fallo en los instantes de tiempo 205, 305 o 405.
* Tamaño de bloque: 4, 6 u 9 entradas.
* Actualización del diario: diferida o inmediata.
* Actualización de la base de datos: diferida o inmediata.

Indica y justifica adecuadamente qué acciones debería realizar el sistema de recuperación en cada uno de los casos posibles. Entre otras cuestiones, indica el algoritmo que estás usando en caso y cómo se aplica paso por paso.

ACT. DIARIO INMEDIATA

ACT BD DIFERIDA

FALLO 405

1. ACTIVAS{} CONFIRMADAS {}
2. ACTIVAS{T6,T2,T8,T1,T5}
3. .
   1. ACTIVAS{ T2,T8}
   2. CONFIRMADAS{T5,T6,T1}
4. .
   1. WRITE Q 67, A 101, R 14,B 190, S 99, C 105, N 112, O 187
   2. REINICIAR T2,T8

ACT DIARIO DIFERIDO, TAM BLOQUE 3 ULT ENT DIARIO 390

ACT BD INMEDIATA -> DESHACER/REHACER

FALLO 405

1. ACTIVAS{} CONFIRMADAS{}
2. ACTIVAS{T6,T2,T8,T1,T5}
3. .
   1. ACTIVAS{T2,T8}
   2. CONFIRMADAS{T5,T6,T1}
4. .
   1. WRITE F 84, X 177, W 30, D 171
   2. WRITE Q 67,A 6,R 14,B 190, S 99, C 105, N 112, O 187, P 105
   3. REINICIAR T2,T8

ACT DIARIO DIFERIDO TAM.BLOQ: 9 ULT ENT DIARIO:105

ACT DB DIFERIDO NO-DESHACER/REHACER

FALLO 205

1. ACTIVAS{} CONFIRMADAS{}
2. ACTIVAS{T6,T3,T4,T2,T7,T8}
3. .
   1. ACTIVAS{T6,T4,T2,T7,T8}
   2. CONFIRMADAS{T3}
4. .
   1. WRITE H 36, I 96, J 19
   2. REINICIAR T6,T4,T2,T7,T8
5. Dado el siguiente diario:

[CHECKPOINT,0,[]] [START\_TRANSACTION,T3,10] [WRITE,T3,H,44,36,20] [START\_TRANSACTION,T2,30] [WRITE,T2,D,171,100,40] [START\_TRANSACTION,T8,50] [WRITE,T3,I,116,96,60]

[WRITE,T8,W,30,8,70] [CHECKPOINT,80,AT1] [START\_TRANSACTION,T7,90] [WRITE,T7,T,58,105,100] [START\_TRANSACTION,T1,110] [WRITE,T1,A,101,6,120] [START\_TRANSACTION,T4,130] [WRITE,T3,J,33,19,140] [COMMIT,T3,150] [START\_TRANSACTION,T6,160] [WRITE,T4,K,26,129,170]

[WRITE,T6,Q,69,67,180] [CHECKPOINT,190,AT2] [WRITE,T1,B,22,190,200]

[WRITE,T7,U,79,140,210]

[WRITE,T6,R,61,14,220]

[WRITE,T1,C,27,105,230] [ROLLBACK,T1,240] [WRITE,T7,V,169,120,250] [WRITE,T4,L,38,20,260]

[WRITE,T6,S,57,99,270] [COMMIT,T7,280] [START\_TRANSACTION,T5,290] [WRITE,T5,N,71,112,300] [COMMIT,T6,310] [WRITE,T8,X,177,27,320]

[WRITE,T2,F,84,189,330] [WRITE,T5,O,101,187,340] [WRITE,T4,M,105,25,350] [COMMIT,T4,360] [CHECKPOINT,370,AT3] [WRITE,T5,P,125,195,380] [ROLLBACK,T5,390] [WRITE,T2,G,86,82,400] [COMMIT,T2,410] [WRITE,T8,Y,74,74,420] [COMMIT,T8,430]

Considera las siguientes opciones:

* Fallo en los instantes de tiempo 255, 355 o 405.
* Tamaño de bloque: 3, 4 u 7 entradas.
* Actualización del diario: diferida o inmediata.
* Actualización de la base de datos: diferida o inmediata.

Indica y justifica adecuadamente qué acciones debería realizar el sistema de recuperación en cada uno de los casos posibles. Entre otras cuestiones, indica el algoritmo que estás usando en caso y cómo se aplica paso por paso.

ACT DIARIO: DIFERIDA TAM BLOQ: 7 ULT ENT DIARIO:310

ACT DB: INMEDIATA DESHACER/REHACER

FALLO 355

1. ACTIVAS{} CONFIRMADAS{}
2. ACTIVAS{T2,T8,T7,T1,T4,T6}
3. .
   1. ACTIVAS{T2,T8,T4,T5}
   2. CONFIRMADAS{T7,T6}
4. .
   1. WRITE N 71,L 38, K 26, W 30, D 171
   2. WRITE T, 105, Q 67, U 140, R 14, V 120, S 99
   3. REINICIAR T2,T8,T4,T5
5. Dado el siguiente diario:

[CHECKPOINT,[],0] [START\_TRANSACTION,T7,10] [START\_TRANSACTION,T1,20] [WRITE,T1,A,34,44,30]

[WRITE,T7,S,75,118,40] [START\_TRANSACTION,T5,50] [START\_TRANSACTION,T8,60] [WRITE,T8,V,116,39,70]

[WRITE,T1,B,90,27,80]

[WRITE,T5,M,130,70,90] [START\_TRANSACTION,T2,100] [START\_TRANSACTION,T3,110] [WRITE,T8,W,171,91,120]

[WRITE,T3,G,19,68,130]

[WRITE,T3,H,59,7,140] [START\_TRANSACTION,T6,150] [WRITE,T8,X,138,18,160]

[WRITE,T5,N,70,128,170]

[WRITE,T2,D,13,51,180]

[WRITE,T6,P,66,9,190]

[WRITE,T5,O,4,119,200] [COMMIT,T8,210]

[WRITE,T7,T,136,189,220] [WRITE,T3,I,173,142,230] [CHECKPOINT,AT1,240] [WRITE,T7,U,29,122,250] [ROLLBACK,T3,260] [START\_TRANSACTION,T4,270] [WRITE,T6,Q,73,130,280] [COMMIT,T5,290] [COMMIT,T7,300] [WRITE,T1,C,165,124,310] [WRITE,T6,R,21,103,320] [WRITE,T4,J,158,144,330] [WRITE,T4,K,58,92,340] [CHECKPOINT,AT2,350] [WRITE,T2,E,164,26,360] [COMMIT,T1,370] [WRITE,T2,F,175,190,380] [ROLLBACK,T6,390] [COMMIT,T2,400] [WRITE,T4,L,111,19,410] [COMMIT,T4,420]

Considera las siguientes opciones:

* Fallo en los instantes de tiempo 235, 345 o 415.
* Tamaño de bloque: 4, 5 u 8 entradas.
* Actualización del diario: diferida o inmediata.
* Actualización de la base de datos: diferida o inmediata.

Indica y justifica adecuadamente qué acciones debería realizar el sistema de recuperación en cada uno de los casos posibles. Entre otras cuestiones, indica el algoritmo que estás usando en caso y cómo se aplica paso por paso.