

Protection and Multitasking -- 1 marks Questions

For a single task in protected mode, the 80386 can address-----Virtual memory the virtual memory of Virtual memory

- A) 32 GB
- B) 64 MB
- C) 32 TB
- D) 64 TB

Answer- D

Question- The mechanism to provide protection, that is accomplished with the help of read/write privileges is with the help of read/write

- A) restricted use of segments
- B) restricted accesses to segments
- C) privileged instructions
- D) privileged operations

Answer- A

Question- The mechanism that is accomplished using descriptor usages limitations, and rules of privilege check is

- A) privileged instruction check
- B) operation reference check
- C) segment load check
- D) none of the mentioned

Answer- B

Question- The mechanism that is executed at certain privilege levels, determined by CPL (Current Privilege Level) and I/O privilege level (IOPL) is

- A) restricted use of segments
- B) restricted accesses to segments
- C) privileged instructions or operations
- D) none of the mentioned

Answer- C

Question- The paging unit is enabled only in

- A) virtual mode
- B) addressing mode
- C) protected mode
- D) none of the mentioned

Answer- C

Question- The bit that is used for providing protection is

- A) User/Supervisor bit
- B) Read bit
- C) Write bit
- D) all of the mentioned

Answer- D

Question- To enter in protected mode,_____ bit should be at logic 1.

- A) PG
- B) ET
- C) PE
- D) NT

Question- In 80386, privilege levels are defined by _____

- A) DPL
- B) CPL
- C) RPL
- D) All of above

Question- How many privilege levels are available in 80386

- A) 1
- B) 2
- C) 3
- D) 4

Answer- D

Question- Which is highest privilege level in 80386

- A) 1
- B) 3
- C) 2
- D) 0

Answer- D

Question- Which is LOWEST privilege level in 80386

- A) 1
- B) 0
- C) 3
- D) 2

Answer- C

Question- The unit that provides a four level protection mechanism, for system's code and data against application program is

- A) central processing unit
- B) segmentation unit
- C) bus interface unit
- D) none of the mentioned

Answer- B

Question- In protected mode of 80386, the VM flag is set by using

- A) IRET instruction
- B) task switch operation
- C) IRET instruction or task switch operation
- D) none of the mentioned

Answer- C

Question- By using privilege mechanism the protection from unauthorised accesses is done to

- A) operating system
- B) interrupt handlers
- C) system softwares
- D) all of the mentioned

Question- The task privilege level at the instant of execution is called

- A) Descriptor privilege level (DPL)**
- B) Current privilege level (CPL)**
- C) Effective privilege level (EPL)**
- D) none of the mentioned**

Question- Once the CPL is selected, it can be changed by

- A) HOLD**
- B) transferring control using system descriptors**
- C) transferring control using gate descriptors**
- D) transferring control using interrupt descriptors**

Question- The data segments defined in GDT (global descriptor table) and the LDT (local descriptor table) can be accessed by a task with

- A) privilege level 0**
- B) privilege level 1**
- C) privilege level 2**
- D) privilege level 3**

Answer- A

Question- A task with privilege level 0, does not refer to all the lower level privilege descriptors in

- A) GDT (global descriptor table)**
- B) LDT (local descriptor table)**
- C) IDT (interrupt descriptor table)**
- D) none of the mentioned**

Question- The selector RPL that uses a less trusted privilege than the current privilege level for further use is known as

- A) Least task privilege level
- B) descriptor privilege level
- C) effective privilege level
- D) none of the mentioned

Question- The effective privilege level is

- A) maximum numeric of RPL and CPL
- B) minimum privilege of RPL and CPL
- C) numeric minimum and privilege maximum of RPL and CPL
- D) none of the mentioned

Question- The task requesting an access to a descriptor is allowed to access after checking the

- A) type of descriptor
- B) privilege level
- C) type of descriptor and privilege level
- D) corresponding segment

Question- A CALL instruction can reference only a code segment descriptor with

- A) DPL less privilege than CPL
- B) DPL equal privilege to CPL
- C) DPL greater privilege than CPL
- D) all of the mentioned

Question- The RPL of a selector that referred to the code descriptor must have

- A) less privilege than CPL
- B) greater privilege than CPL
- C) equal privilege than CPL

D) any privilege regarding CPL

Question- The instruction that refers to only code segment descriptors with DPL equal to or less than the task CPL is

- A) CALL**
- B) IRET**
- C) ESC**
- D) RET and IRET**

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Question- The mechanism that is executed at certain privilege levels, determined by CPL (Current Privilege Level) and I/O privilege level (IOPL) is

- A) restricted use of segments
- B) restricted accesses to segments
- C) privileged instructions or operations
- D) none of the mentioned

Question- If CPL is not of the required privilege level, then the instructions that get affected is

- A) IRET
- B) POPF
- C) IRET and POPF
- D) none of the mentioned

Question- If CPL is greater than zero, then the instruction that remains unaffected is

- A) IRET
- B) POPF
- C) IRET and POPF
- D) none of the mentioned

Question- The condition, "CPL not equals to zero" satisfies, when executing the instruction

- A) LIDT
- B) LGDT
- C) LTR
- D) all of the mentioned

Question- While executing the instruction IN/OUT, the condition of CPL is

- A) $CPL = 0$
- B) $CPL < IOPL$
- C) $CPL > IOPL$
- D) all of the mentioned

Question- The instruction that reads the segment limit into the register, if privilege rules and descriptor type allow is

- A) VERW
- B) APRL
- C) LSL
- D) LAR

Question- The instruction that adjusts the RPL (Requested Privilege Level) of the selector, to the numeric maximum of current selector RPL value is

- A) LAR
- B) VERR
- C) LSL
- D) APRL

Question- The selector RPL that uses a less trusted privilege than the current privilege level for further use is known as

- A) Least task privilege level
- B) descriptor privilege level
- C) effective privilege level
- D) none of the mentioned

Question- Amongst the given which is not a privilege instruction?

- A) CLTS
- B) TEST
- C) HLT
- D) LLDT

Answer- B

Question- Amongst the given which is a privilege instruction?

- A) LMSW
- B) TEST
- C) AND

D) STD

Answer- A

Question- Amongst the given which is a privilege instruction?

- A) AAA**
- B) OR**
- C) CLD**
- D) MOV CR3, EAX**

Answer- D

Question- What is the significance of setting R/W field of PDE in protected mode?

- A) (a) Write privileges are allowed from PL3 code**
- B) (b) Write privileges are allowed from PL2 code**
- C) (c) Write privileges are allowed from PL1 code**
- D) (d) Write privileges are allowed from PL0 code**

Answer- A

Question- What is the significance of setting R/W field of PTE in protected mode?

- A) (a) Write privileges are allowed from PL3 code**
- B) (b) Write privileges are allowed from PL2 code**
- C) (c) Write privileges are allowed from PL1 code**
- D) (d) Write privileges are allowed from PL0 code**

Answer- A

Question- What privilege level must be assigned to Kernel?

- A) PL0**
- B) PL1**
- C) PL2**
- D) PL3**

Answer- Question- For instruction HLT to be executed what must be the value of CPL?

- A) 0**
- B) 1**
- C) 2**
- D) 3**

Answer- A

Question-The on chip protection hardware performs which checks of the following ?

Type and Limit check

- A) Restriction of Procedure Entry points**

- B) Restriction of addressable DOMAIN**
- C) Restriction on Certain Instruction Execution**
- D) All of above**

Answer- D

Question- System services are implemented at Privilege level ----

- A) 0**
- B) 1**
- C) 2**
- D) 3**

Answer- B

Question- Custom routines to support special purpose system operations like Device Drivers are executed at Privilege level ----

- A) 0**
- B) 1**
- C) 2**
- D) 3**

Answer- C

Question- Conforming Code Segments conforms the privilege level of ----

- A) Caller – calling code**
- B) Callee – called code**
- C) Both A and B**
- D) None of above**

Answer- Question- Destination Selector field of a call gate is ----- bits long

- A) 8**
- B) 16**
- C) 32**
- D) 48**

Answer- B

Question- The task state segment descriptor for the designated task is checked for its ---- and -----

- A) Limit and Base**
- B) base and address**
- C) limit and presence**
- D) base and presence**

Answer- C

Question- The Task Register(TR) specify the ----- executing task by pointing to the task State Segment(TSS)

- A) Normal
- B) Currently
- C) (Multiple
- D) (Single

Answer- B

Question- What is the minimum size of TSS in 80386?

- A) 64 bytes
- B) 104 byte
- C) 4 KB
- D) 64 KB

Answer- B

Question- Multitasking is activated in -----mode of the Processor 80386?

- A) Real
- B) Protected
- C) Virtual
- D) V86

Answer- A

Question- How task switching can be obtained in 80386?

- A) The current task JMPs or CALLs a TSS descriptor
- B) The current task JMPs or CALLs a task gate
- C) An interrupt or exception selects a task gate
- D) All of above

Answer- D

Question- To return from a task, ____ instruction is used.

- A) RET
- B) IRET
- C) JMP
- D) CALL

Answer- B

Question-holds task environment

- A) TSS Descriptor

- B) TSS
- C) None of these
- D) TR

Question- TSS is not accessible to

- A) Program at PL0
- B) User program
- C) Both a & b
- D) None of these

[Hide Answer](#)

Answer- C

Question- To support multitaskingis used

- A) TSS
- B) TR
- C) Task Gate descriptor
- D) All of these

[Hide Answer](#)

Answer- D

Question- For task switching following is used

- A) Interrupts
- B) Exceptions
- C) A & B
- D) None of these

[Hide Answer](#)

Answer- C

Question- In TSS descriptor if bit B=1 then

- A) Task is busy
- B) Operand is 16-bit
- C) Operand is 32-bit
- D) Operand is byte

[Hide Answer](#)

Answer- A

Question- Size of Task state segment is

- A) 80 bytes
- B) 104 bytes
- C) 128 bytes
- D) 256 bytes

[Hide Answer](#)

Answer- B

Question- Maximum size of TSS is

- A) 64 KB
- B) 1MB
- C) 4GB
- D) 64 TB

[Hide Answer](#)

Answer- C

Question- Task register holds

- A) Base
- B) Limit
- C) Both a & b
- D) None of these

[Hide Answer](#)

Answer- D

Question-points to TSS to specify currently executing task

- A) TR
- B) TP
- C) TSSD
- D) None of these

[Hide Answer](#)

Answer- A

Question- Which field in TSS holds the 16-bit offset of the beginning of I/O permission bit map

- A) Bit map offset
- B) Back link
- C) CR 3
- D) EIP

[Hide Answer](#)

Answer- A

Question- To keep track of previous task 80386 uses

- A) Flags
- B) EIP
- C) Back link
- D) None of these

[Hide Answer](#)

Answer- C

Question- Which of following are static set fields of TSS?

- A) Selector of LDT
- B) PDBR

- C) T-bit
- D) All of these

Answer- D

Question- Which of following are static set fields of TSS?

- A) I/O map Offset
- B) Pointers to stack
- C) A & B
- D) none of these

Answer- C

Question- Privilege level of stack and code segment must be

- A) Same
- B) Greater than
- C) Less than
- D) Greater or equal

Answer- A

Question- Which of following are dynamic set fields of TSS?

- A) General purpose register
- B) Segment register
- C) Instruction pointer
- D) All of these

Answer- D

Question- Each isolated task can have

- A) Separate LDT and page directory
- B) Different logical to linear mapping
- C) Different linear to physical mapping
- D) All of these

Answer- D

Question- Each task have following mapping

- A) logical to linear mapping
- B) linear to physical mapping
- C) Sequential
- D) Both A & B

Answer- D

Question- Each task can have

- A) Separate LDT and page directory**
- B) Different logical to linear mapping**
- C) Different linear to physical mapping**
- D) All of these**

Answer- D

Question- Which bit shows the current task is child task

- A) NT**
- B) G**
- C) TS**
- D) B**

Answer- A

Question- 1. What is the long form of TSS in multitasking?

- A) Test Switch Segment**
- B) Task switch segment**
- C) Task selector segment**
- D) Test state segment**

Answer- B

Question- What is the size IOPL field?

- A) (a) 1-bit**
- B) (b) 2-bit**
- C) (c) 8-bit**
- D) (d) 4-bit**

Answer- B

Question- The parent task and child tasks are indicated by which fields of the TSS?

- A) (a) Back link field and NT field**
- B) (b) NT field and Back link field**
- C) (c) ESP and Back link field**
- D) (d) NT field and ESP**

Answer- A

Question- Which instruction is used to nest the tasks?

- A) (a) JMP**
- B) (b) CALL**
- C) (c) RET**
- D) (d) JBE**

Answer- B

Question- TSS descriptor appears in which descriptor table?

- A) (a) GDT and LDT
- B) (b) GDT
- C) (c) LDT
- D) (d) IDT

Answer- B

Question- Which portion of the task register is visible?

- A) (a) Selector
- B) (b) Segment descriptor
- C) (c) Selector and base address
- D) (d) Selector and segment limit

Answer- A

Answer- A

Question- Which descriptor table base address is present in task state segment?

- A) GDT
- B) IDT
- C) LDT
- D) None of these

Answer B

Question- What is the meaning of 'T' field in task state segment?

- A) Trap flag
- B) Task switch trap
- C) Task register
- D) Test register

Answer- B

Question- Amongst given which is a privilege instruction?

- A) LOOP
- B) XLAT
- C) TEST
- D) LTR

Answer- D

Question- What must be the CPL at the time of execution of LTR instruction?

- A) 0
- B) 1
- C) 2
- D) 3

Answer- A

Question- Which of the following instruction is used in protected mode only?

- A) AAA
- B) LTR
- C) STD
- D) CLD

Answer- B

Question- Amongst given which is not a privilege instruction?

- A) STR
- B) HLT
- C) OUT
- D) LTR

Answer- B

Question- What condition is needed to change the IOPL of any task?

- A) (a) If code is at PL3
- B) (b) If code is at PL2
- C) (c) If code is at PL1
- D) (d) If code is at PL0

Answer- D

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- A) (a) If code is at PL3
- B) (b) If code is at PL2
- C) (c) If code is at PL1
- D) (d) If code is at PL0

Answer- D

Question- Type field of Busy TSS Descriptor indicates value - -----

- A) S=0 and Type = 1001
- B) S=1 and Type = 1100
- C) S=0 and Type = 0100

D) None of above

Answer- A

Question- Type field of Available TSS Descriptor indicates value - -----

- A) S=0 and Type = 1001**
- B) S=1 and Type = 1100**
- C) S=0 and Type = 1011**
- D) None of above**

Question- Type field of task Gate Descriptor indicates value - -----

- A) S=0 and Type = 0101**
- B) S=1 and Type = 1100**
- C) S=0 and Type = 0100**
- D) None of above**

Answer- A