

## **MP Unit-4 Input-Output, Exceptions and Interrupts MCQ's PART-B (1 Marks Questions)**

**Question-** This type of interrupts cannot be avoided by processor.

- A) Non Maskable**
- B) Maskable**
- C) Exceptions**
- D) All the above**

**Answer-** A

**Question-** Interrupts are the \_\_\_\_\_ events

- A) External**
- B) Internal**
- C) Both A and B**
- D) None of the above**

**Answer-** C

**Question-** In 80386, we can give interrupt to the machine by giving signals on

- A) INTR**
- B) NMI**
- C) INTA**
- D) Both A and B**

**Answer-** D

**Question-** Which interrupts used in critical condition?

- A) INTR**
- B) Single step**
- C) NMI**
- D) All the above**

**Answer-** C

**Question-** The interrupt can be disabled by using instruction \_\_\_\_\_

- A) CLD**

- B) STI
- C) CLI
- D) STI

Answer- C

**Question- Interrupts can be of \_\_\_\_\_**

- A) Hardware
- B) Software
- C) Both A and B
- D) None of the above

Answer- C

**Question- Which is the following interrupt having lowest priority?**

- A) NMI
- B) INTR
- C) Faults
- D) Single step

Answer- D

**Question- Which is the interrupt having highest priority?**

- A) INTO
- B) NMI
- C) Single Step
- D) INTA

Answer- A

**Question- This \_\_\_\_\_ masks NMI interrupt**

- A) IF
- B) INTR
- C) NMI
- D) None of the above

Answer- C

**Question- If IF=0, then it will masks**

- A) INTR interrupt
- B) NMI interrupt
- C) RF interrupt
- D) None of the above

Answer- A

**Question- STI and CLI instructions will be executed only when**

- A)  $CPL = IOPL$
- B)  $CPL \geq IOPL$
- C)  $CPL < IOPL$
- D) Both A and C

Answer- D

**Question- This \_\_\_\_ will mask debug faults in 80386**

- A) INTA
- B) TF
- C) RF
- D) NMI

Answer- C

**Question- 80386 support \_\_\_\_ number of interrupts.**

- A) 0
- B) 1
- C) 256
- D) 255

Answer- C

**Question- Exceptions are generated by**

- A) Internal events
- B) External events
- C) Both A and B
- D) Hardware failures

Answer- A

**Question- These exceptions are detected and serviced before the executions of Instructions**

- A) Traps
- B) Faults
- C) Aborts
- D) All the above

Answer- B

**Question- INT 2 interrupts belong to the \_\_\_\_**

- A) Faults
- B) Traps

- C) **Non maskable interrupts**
- D) **None of the above**

Answer- B

**Question- INT 8 belongs to the \_\_\_\_**

- A) **Traps**
- B) **Aborts**
- C) **Faults**
- D) **None of the above**

Answer- B

**Question- The event such as illegal values comes under the category of \_\_\_\_\_**

- A) **Interrupt**
- B) **Trap**
- C) **Debug faults**
- D) **aborts**

Answer- D

**Question- This event related to exception of type fault.**

- A) **Hardware error**
- B) **Segment overruns**
- C) **Both A and B**
- D) **None of the above**

Answer- B

**Question- Which exception generates page fault exception?**

- A) **Exception 9**
- B) **Exception 11**
- C) **Exception 14**
- D) **Exception 15**

Answer- C

**Question- Non maskable interrupts assigned at vector number**

- A) **1**
- B) **2**
- C) **3**
- D) **5**

Answer- B

**Question- This instruction needs to be executed to find old state of machine**

- A) RET**
- B) IRET**
- C) INT**
- D) All the above**

**Answer- B**

**Question- IDT contain \_\_\_\_ number of gate descriptors.**

- A) 1024**
- B) 512**
- C) 256**
- D) 255**

**Answer- C**

**Question- For storing the information about segments how many bytes are needed in Descriptor table?**

- A) 6**
- B) 7**
- C) 8**
- D) None of the above**

**Answer- C**

**Question- The size of GDT table is \_\_\_\_**

- A) 1 GB**
- B) 1024 KB**
- C) 64 KB**
- D) None of the above**

**Answer- C**

**Question- One GDT can contain many**

- A) GDT**
- B) IDT**
- C) GATE**
- D) None of the above**

**Answer- D**

**Question- The descriptor which is not used in IDT is**

- A) Trap gate descriptor**
- B) Interrupt gate descriptor**
- C) Task gate descriptor**
- D) None of the above**

Answer- D

**Question- Trap gate descriptor defined in\_\_\_\_\_**

- A) LDT
- B) IDT
- C) TASK
- D) GDT

Answer- B

**Question- The first 16 bits from LSB in trap gate defines**

- A) Base address
- B) Limit
- C) Segment selector
- D) None of the above

Answer- D

**Question- Exception 11 or 14 generated, when**

- A) P bit marked present
- B) P bit not marked present
- C) P bit marked reserved
- D) None of the above

Answer- B

**Question- \_\_\_\_\_gate contain a selector to a TSS of new task and access right byte**

- A) Trap
- B) Task
- C) IDT
- D) None of the above

Answer- B

**Question- LIDT loads IDT register with the**

- A) Physical address of memory operand and offset
- B) Logical address of an operand
- C) Linear address and limit
- D) None of the above

Answer- C

**Question- The processor sets the \_\_\_\_\_if the index portion of the error code refers to a gate descriptor in the IOT.**

- A) P bit
- B) I-bit
- C) X bit
- D) None of the above

Answer- B

**Question- Interrupt 1 not refers to**

- A) General detect fault.
- B) Single-step trap
- C) Task-switch breakpoint trap.
- D) None of the above

Answer- D

**Question- Bounds Check fault when occurs generates\_\_\_\_\_**

- A) Exception 4
- B) Exception 5
- C) Exception 21
- D) Exception 6

Answer- B

**Question- Interrupt 7 generated means error is**

- A) Invalid Opcode
- B) Double Fault
- C) Coprocessor Not Available
- D) None of these

Answer- C

**Question- Coprocessor Not Available exception generates when**

- A) The processor encounters an ESC (escape) instruction, and the EM (emulate) bit of CRO (control register zero) is set.
- B) The processor encounters either the WAIT instruction or an ESC instruction and both the MP (monitor coprocessor) and TS (task switched) bits of CRO are set.
- C) Both A and B
- D) None of these

Answer- C

**Question- The error code is always\_\_\_, when processor pushes error code onto stack Of double fault handler.**

- A) 0
- B) 1
- C) Undefined

**D) None of these**

Answer- A

**Question- If any other exception occurs while attempting to invoke the double-fault handler\_\_\_\_**

- A) The processor restarted**
- B) The processor shuts down.**
- C) Processor restarts execution of instruction**
- D) None of these**

Answer- B

**Question- Which is not in the category of benign double fault exception?**

- A) 0**
- B) 1**
- C) 2**
- D) 6**

Answer- A

**Question- Contributory double fault exception when occurs generates exception**

- A) 1**
- B) 14**
- C) 6**
- D) None of these**

Answer- D

**Question- When Contributory double fault exception 12 generates means the error is,**

- A) Invalid TSS**
- B) Stack exception**
- C) Page fault**
- D) None of these**

Answer- B

**Question- When Contributory double fault exception 14 generates means the error is,**

- A) Invalid TSS**
- B) Stack exception**
- C) Page fault**
- D) None of these**



Answer- C

**Question- Interrupt \_\_\_\_ occurs if during a task switch the new TSS is invalid**

- A) 7
- B) 8
- C) 10
- D) 14

Answer- C

**Question- This error code SS id + EXT indicates condition \_\_\_\_\_**

- A) The limit in the TSS descriptor is less than 103
- B) Stack segment selector is outside table limit
- C) Invalid LDT selector or LDT not present
- D) All the above

Answer- B

**Question- Exception \_\_\_\_ occurs when the processor detects that the present bit of a descriptor is zero.**

- A) 10
- B) 11
- C) 12
- D) 13

Answer- B

**Question- Interrupt 11, generated when**

- A) Segment not present
- B) Invalid segment
- C) Both A and B
- D) None of these

Answer- A

**Question- The processor generates exception 11, because processor**

- A) Attempting to load the CS
- B) Attempting to load the DS
- C) Attempting to load the ES
- D) All of these

Answer- D

**Question- Attempting to load the LDT register with an LLDT instruction; causes exception \_\_\_\_\_**

- A) Segment not present
- B) Invalid TSS
- C) Invalid LDT
- D) None of these

Answer- B

**Question- I-bit is set if**

- A) if the error code refers to an IDT entry
- B) if the error code refers to an IDTR
- C) if the error code refers to an GDT entry
- D) None of these

Answer- A

**Question- Which exception generated by the processor to implement virtual memory at the segment level**

- A) Segment invalid
- B) Segment not defined
- C) Segment not present
- D) Both B or C

Answer- D

**Question- A stack fault occurs; by using the instructions**

- A) ADD
- B) LEAVE
- C) INC
- D) None of the above

Answer- B

**Question- A stack fault occurs due to the instruction**

- A) PUSH
- B) POP
- C) Enter
- D) All of the above

Answer- D

**Question- MOV AX, [BP+6]). ENTER causes this stack fault due to**

- A) Stack is empty
- B) Stack is small
- C) Memory is not initialized
- D) None of these

Answer- B

**Question- This instruction is not going to cause stack fault**

- A) LSS
- B) MOV
- C) POP
- D) None of the above

Answer- D

**Question- Which is not the cause of exception 13?**

- A) Exceeding segment limit when using CS, DS, ES, FS, or GS
- B) Exceeding segment limit when referencing a descriptor table
- C) Transferring control to a segment that is not executable
- D) None of these

Answer- D

**Question- Switching to a busy task, generates**

- A) General Protection Exception
- B) Stack Exception
- C) Segment Not Present
- D) None of these

Answer- A

**Question- Loading eRO with PG= 1 and PE=0, generates exception\_\_**

- A) 10
- B) 11
- C) 12
- D) 13

Answer- D

**Question- Writing into a read-only data segment or into a code segment; generates exception**

- A) General Protection Exception
- B) Stack Exception
- C) Segment Not Present
- D) None of these

Answer- A

**Question- Page fault refers to exception**

- A) 12
- B) 13
- C) 14
- D) 15

Answer- C

**Question- Page fault exception occurs when**

- A) PG=1
- B) PG=0
- C) Both A and B
- D) None of these

Answer- A

**Question- The U/S=0 field in Page-Fault Error Code Format indicates**

- A) The access causing the fault originated when the processor is in user mode
- B) The access causing the fault originated when the processor is in supervisor mode
- C) Reserved bit
- D) All of the above

Answer- B

**Question- The first bit from LSB in Page-Fault Error Code Format indicates**

- A) U/S
- B) W/R
- C) P
- D) R

Answer- C

**Question- A page fault can result from accessing any of these segments\_\_\_\_\_**

- A) TSS
- B) GDT
- C) LDT
- D) All of these

Answer- D

**Question- The processor stores in\_\_\_\_\_ the linear address used in the access that caused page fault exception**

- A) CR0
- B) CR1
- C) CR2
- D) CR3

Answer- C

**Question- Interrupt 16 is**

- A) Device not available**
- B) Device is missing**
- C) Coprocessor Error**
- D) All of these**

Answer- D

**Question- The processor generates coprocessor error by receiving signal on\_\_\_\_\_**

- A) ERROR**
- B) ERROR#**
- C) NMI**
- D) INTR**

Answer- B

**Question- Interrupt type 15 is\_\_\_\_\_**

- A) Page fault**
- B) Reserved**
- C) Floating point check**
- D) None of these**

Answer- B

**Question- The ERROR# pin on 80387 causes which fault\_\_\_\_\_**

- A) Data point error**
- B) Floating point error**
- C) Device not available**
- D) None of these**

Answer- B

**Question- The \_\_\_\_bit must be set in order to enable alignment checking**

- A) EM**
- B) AM**
- C) AC**
- D) None of the above**

Answer- B

**Question- If \_\_\_\_\_flag set at CPL\_\_\_\_, then alignment check exception generated**

- A) AC and 3**

- B) AM and 0**
- C) AF and 3**
- D) None of the above**

Answer- A

**Question- The instruction \_\_\_\_\_ used to indicate status of machine check.**

- A) CUID**
- B) GPUID**
- C) CPUI**
- D) None of these**

Answer- A

**Question- The interrupt for which the processor has highest priority among all the external interrupts is**

- A) Mouse interrupt**
- B) keyboard interrupt**
- C) NMI**
- D) INT**

Answer- C

**Question- In case of string instructions, the NMI interrupt will be served only after**

- A) initialisation of string**
- B) the occurrence of the interrupt**
- C) complete string is manipulated**
- D) execution of some part of the string**

Answer- C

**Question- The NMI pin should remain high for atleast**

- A) 4 clock cycles**
- B) 2 clock cycles**
- C) 1 clock cycles**
- D) None of these**

Answer- B

**Question- The INTR signal can be masked by resetting the**

- A) TRAP flag**
- B) INTERRUPT flag**
- C) MASK flag**
- D) DIRECTION flag**

Answer- B

**Question- For the INTR signal, to be responded to in the next instruction cycle, it must go ..... in the last clock cycle of the current instruction**

- A) high
- B) Low
- C) High or low
- D) Unchanged

Answer- A

**Question- Once the processor responds to an INTR signal, the IF is automatically**

- A) set
- B) reset
- C) High
- D) None of above

Answer- B

**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

Answer- C

**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- 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

Answer- C

**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

Answer- B

**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

Answer- C

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

- A) CALL
- B) RET
- C) ESC
- D) RET & IRET

Answer- D

**Question-** An exception is generated when

- A) privilege test is negative
- B) an improper segment is referenced
- C) referenced segment is not present in physical memory
- D) All the above

Answer- D

**Question-** Which of the following is a system segment register?

- A) GDTR
- B) LDTR
- C) IDTR
- D) None of above

Answer- B

**Question-** The registers that are together, known as system address registers are

- A) GDTR and IDTR
- B) IDTR and LDTR
- C) TR and GDTR
- D) LDTR and TSR



Answer- A

**Question- The descriptor table that the 80386 supports is**

- A) GDT (Global descriptor table)
- B) IDT (Interrupt descriptor table)
- C) LDT (Local descriptor table)
- D) All the above

Answer- D

**Question- The RF is not automatically reset after the execution of**

- A) IRET
- B) POPA
- C) IRET and POPF
- D) IRET and PUSHF

Answer- C

**Question- During the instruction cycle of 80386, any debug fault can be ignored is**

- A) VM flag is set
- B) VM flag is cleared
- C) RF is cleared
- D) RF is set

**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- D

**Question- The gate descriptor contains the information of**

- A) destination of control transfer
- B) stack manipulations
- C) privilege level
- D) All the mentioned

Answer- D

**Question- The gate that is used to specify corresponding service routine is**

- A) call gate and trap gate
- B) task gate and interrupt gate
- C) interrupt gate and trap gate
- D) task gate and trap gate

Answer- C

**Question- Which pin is used to differentiate between memory and I/O operations**

- A) M/IO#**
- B) IN**
- C) OUT**
- D) None of the above**

**Answer- A**

**Question- I/O instructions do not go through the segmentation and paging unit**

- A) Yes**
- B) No**
- C) Both A & B**
- D) None of these**

**Answer- A**

**Question- IN and OUT instruction drives the 80386 M/IO# pin -----**

- A) high**
- B) low**
- C) Both A & B**
- D) None of the above**

**Answer- B**

**Question- From I/O port address which pins are used to select a byte, word, double word of I/O data**

- A) BL3# - BL0#**
- B) A2 and A1**
- C) A1 and A0**
- D) None of the above**

**Answer- A**

**Question- If memory mapped I/O is used then number of I/O locations can be upto -----**

- A) 4GB**
- B) 2GB**
- C) 1GB**
- D) 8GB**

**Answer- A**

**Question- The I/O system is divided into how many banks?**

- A) 1**

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

Answer- D

**Question- Which instruction is used to copy data from port**

- A) IN
- B) INS
- C) OUTS
- D) OUT

Answer- A

**Question- Which instruction is used to input string from port**

- A) IN
- B) INS
- C) OUTS
- D) OUT

Answer- B

**Question- Which instruction is used to output string to port**

- A) IN
- B) INS
- C) OUTS
- D) OUT

Answer- C

**Question- Which instruction is used to output to port**

- A) IN
- B) INS
- C) OUTS
- D) OUT

Answer- D

**Question- Which instruction is used to take input string from port as Byte?**

- A) INSB
- B) INSW
- C) INSD
- D) None of these

Answer- A

**Question- Which instruction is used to take input string from port as Word?**

- A) **INSB**
- B) **INSW**
- C) **INSD**
- D) **None of these**

Answer- B

**Question- Which instruction is used to take input string from port as Double Word?**

- A) **INSB**
- B) **INSW**
- C) **INSD**
- D) **None of these**

Answer- C

**Question- Which instruction is used to output string to port as Byte?**

- A) **OUTSB**
- B) **OUTSW**
- C) **OUTSD**
- D) **None of these**

Answer- A

**Question- Which instruction is used to output string to port as Word?**

- A) **OUTSB**
- B) **OUTSW**
- C) **OUTSD**
- D) **None of these**

Answer- B

**Question- Which instruction is used to output string to port as Double word?**

- A) **OUTSB**
- B) **OUTSW**
- C) **OUTSD**
- D) **None of these**

Answer- C

**Question- Which instruction is used to output string to port as Double word?**

- A) OUTSB
- B) OUTSW
- C) OUTSD
- D) None of these

Answer- C

**Question- I/O protection can be achieved using -----**

- A) I/O privilege level
- B) I/O permission bitmap
- C) Both of these
- D) None of these

Answer- C

**Question- Which is not I/O sensitive instruction?**

- A) IN
- B) INS
- C) IOPL
- D) None of the above

Answer- C

**Question- Which is not I/O sensitive instruction?**

- A) OUT
- B) OUTS
- C) IOPL
- D) None of the above

Answer- C

**Question- Which is/are I/O sensitive instruction?**

- A) CLI
- B) STI
- C) All of the above
- D) None of the above

Answer- C

**Question- What is the condition for I/O instruction?**

- A)  $CPL \leq IOPL$
- B)  $CPL < IOPL$

- C)  $CPL > IOPL$
- D)  $CPL = IOPL$

Answer- A

**Question- If  $CPL > IOPL$ , then what will happen?**

- A) instruction will be executed
- B) General protection violation exception
- C) None of these
- D) Both A and B

Answer- B

**Question- Which exception is generated if Code is not at PL0**

- A) Exception 13
- B) Exception 11
- C) Exception 12
- D) Exception 14

Answer- A

**Question- Where I/O permission bitmap is Present?**

- A) TSS top portion
- B) TSS bottom portion
- C) IOPL
- D) None of these

Answer- A

**Question- The size of I/O permission bitmap is**

- A) Fixed
- B) Variable
- C) Both
- D) None of the above

Answer- B

**Question- What is the address for bank 0 in I/O organization?**

- A) 0000 to FFFC
- B) 0000 to F000
- C) 0000 to 9999
- D) None of the above

Answer- A

**Question- Which of the instruction is not used for input?**

- A) IN
- B) INS
- C) INS
- D) OUT

Answer- D

**Question- Which of the instruction is not used for input?**

- A) IN
- B) INS
- C) INS
- D) OUTS

Answer- D

**Question- Which of the instruction is not used for input?**

- A) IN
- B) INS
- C) INS
- D) OUTSB

Answer- D

**Question- Which of the instruction is not used for input?**

- A) IN
- B) INS
- C) INS
- D) OUTSW

Answer- D

**Question- Which of the instruction is not used for input?**

- A) IN
- B) INS
- C) INS
- D) OUTSD

Answer- D

**Question- Which of the instruction is not used for output?**

- A) OUT**
- B) OUTSB**
- C) OUTS**
- D) IN**

**Answer- D**

**Question- Which of the instruction is not used for output?**

- A) OUT**
- B) OUTSB**
- C) OUTS**
- D) INS**

**Answer- D**

**Question- Which of the instruction is not used for output?**

- A) OUT**
- B) OUTSB**
- C) OUTS**
- D) INSB**

**Answer- D**

**Question- Which of the instruction is not used for output?**

- A) OUT**
- B) OUTSB**
- C) OUTS**
- D) INSW**

**Answer- D**

**Question- Which of the instruction is not used for output?**

- A) OUT**
- B) OUTSB**
- C) OUTS**
- D) INSD**

**Answer- D**

**Question- Which fields are considered during I/O instructions?**

- A) CPL**
- B) IOPL**
- C) Both A and B**
- D) None of these**



Answer- C

**Question- Which condition is required for IN instruction?**

- A)  $CPL = IOPL$
- B)  $CPL \leq IOPL$
- C)  $CPL > IOPL$
- D) None of these

Answer- B

**Question- Which condition is required for INS instruction?**

- A)  $CPL = IOPL$
- B)  $CPL \leq IOPL$
- C)  $CPL > IOPL$
- D) None of these

Answer- B

**Question- Which condition is required for INSB instruction?**

- A)  $CPL = IOPL$
- B)  $CPL \leq IOPL$
- C)  $CPL > IOPL$
- D) None of these

Answer- B

**Question- Which condition is required for INSW instruction?**

- A)  $CPL = IOPL$
- B)  $CPL \leq IOPL$
- C)  $CPL > IOPL$
- D) None of these

Answer- B

**Question- Which condition is required for INSD instruction?**

- A)  $CPL = IOPL$
- B)  $CPL \leq IOPL$
- C)  $CPL > IOPL$
- D) None of these

Answer- B

**Question- 1**

**A) Which condition is required for OUT instruction?**

- B)  $CPL = IOPL$
- C)  $CPL \leq IOPL$
- D)  $CPL > IOPL$

Answer- None of these

Question- Which condition is required for OUTS instruction?

- A)  $CPL = IOPL$
- B)  $CPL \leq IOPL$
- C)  $CPL > IOPL$
- D) None of these

Answer- B

Question- Which condition is required for OUTSB instruction?

- A)  $CPL = IOPL$
- B)  $CPL \leq IOPL$
- C)  $CPL > IOPL$
- D) None of these

Answer- B

Question- Which condition is required for OUTSW instruction?

- A)  $CPL = IOPL$
- B)  $CPL \leq IOPL$
- C)  $CPL > IOPL$
- D) None of these

Answer- B

Question- Which condition is required for OUTSD instruction?

- A)  $CPL = IOPL$
- B)  $CPL \leq IOPL$
- C)  $CPL > IOPL$
- D) None of these

Answer- B

Question- Which condition is generating exception for IN instruction?

- A)  $CPL = IOPL$
- B)  $CPL \leq IOPL$
- C)  $CPL > IOPL$
- D) None of these

Answer- C

Question- Which condition is generating exception for INS instruction?

- A)  $CPL = IOPL$

- B)  $CPL \leq IOPL$
- C)  $CPL > IOPL$
- D) None of these

Answer- C

**Question- Which condition is generating exception for INSB instruction?**

- A)  $CPL = IOPL$
- B)  $CPL \leq IOPL$
- C)  $CPL > IOPL$
- D) None of these

Answer- C

**Question- Which condition is generating exception for INSW instruction?**

- A)  $CPL = IOPL$
- B)  $CPL \leq IOPL$
- C)  $CPL > IOPL$
- D) None of these

Answer- C

Answer- C

**Question- Which condition is generating exception for OUT instruction?**

- A)  $CPL = IOPL$
- B)  $CPL \leq IOPL$
- C)  $CPL > IOPL$
- D) None of these

Answer- D

**Question- Which condition is generating exception for INSD instruction?**

- A)  $CPL = IOPL$
- B)  $CPL \leq IOPL$
- C)  $CPL > IOPL$
- D) None of these

Answer . C

**Question- Which condition is generating exception for OUTS instruction?**

- A)  $CPL = IOPL$
- B)  $CPL \leq IOPL$
- C)  $CPL > IOPL$
- D) None of these

Answer- C

**Question- Which condition is generating exception for OUTSB instruction?**

- A)  $CPL = IOPL$
- B)  $CPL \leq IOPL$
- C)  $CPL > IOPL$
- D) None of these

Answer- C

**Question- Which condition is generating exception for OUTSW instruction?**

- A)  $CPL = IOPL$
- B)  $CPL \leq IOPL$
- C)  $CPL > IOPL$
- D) None of these

Answer- C

**Question- Which condition is generating exception for OUTSD instruction?**

- A)  $CPL = IOPL$
- B)  $CPL \leq IOPL$
- C)  $CPL > IOPL$
- D) None of these

Answer- C

**Question- IN and OUT instruction drives the 80386 M/IO# pin low**

- A) True
- B) false
- C) Both A & B
- D) None of the above

Answer- A

**Question- IN and OUT instruction drives the 80386 M/IO# pin high**

- A) True
- B) false
- C) Both A & B
- D) None of the above

Answer- B

**Question- M/IO# pin is used to differentiate between memory and I/O**

**operations**

- A) True**
- B) False**
- C) Both A & B**
- D) None of the above**

Answer- A

**Question- I/O instructions do not go through the segmentation and paging unit**

- A) True**
- B) False**
- C) Both A & B**
- D) None of these**

Answer- A

**Question- CPL  $\leq$  IOPL condition is required for IN instruction?**

- A) No**
- B) Yes**
- C) Both A & B**
- D) None of these**

Answer- B

**Question- CPL  $\leq$  IOPL condition is required for INS instruction?**

- A) No**
- B) Yes**
- C) Both A & B**
- D) None of these**

Answer- B

**Question- CPL  $\leq$  IOPL condition is required for INSB instruction?**

- A) No**
- B) Yes**
- C) Both A & B**
- D) None of these**

Answer- B

**Question- CPL  $\leq$  IOPL condition is required for INSW instruction?**

- A) No**
- B) Yes**
- C) Both A & B**
- D) None of these**

Answer- B

**Question- CPL  $\leq$  IOPL condition is required for INSD instruction?**

- A) No
- B) Yes
- C) Both A & B
- D) None of these

Answer- B

**Question- 1**

**A) CPL  $\leq$  IOPL condition is required for OUT instruction?**

- B) No
- C) Yes
- D) Both A & B

Answer- None of these

**Question- CPL  $\leq$  IOPL condition is required for OUTS instruction?**

- A) No
- B) Yes
- C) Both A & B
- D) None of these

Answer- B

**Question- CPL  $\leq$  IOPL condition is required for OUTSB instruction?**

- A) No
- B) Yes
- C) Both A & B
- D) None of these

Answer- B

**Question- CPL  $\leq$  IOPL condition is required for OUTSW instruction?**

- A) No
- B) Yes
- C) Both A & B
- D) None of these

Answer- B

**Question- CPL  $\leq$  IOPL condition is required for OUTSD instruction?**

- A) No

- B) Yes**
- C) Both A & B**
- D) None of these**

Answer- B

**Question- What is the size of IVT?**

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

Answer- A

**Question- What is the byte size of single IVT entry?**

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

Answer- D

**Question- What is pair is used to point IVT entry?**

- A) CS:IP**
- B) DS:IP**
- C) ES:IP**
- D) FS:IP**

Answer- A

**Question- 8 bit vector is shifted by how many bits?**

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

Answer- B

**Question- Which table is used in protected mode for interrupts and exception?**

- A) IDT**
- B) LDT**
- C) GDT**
- D) None of the above**

Answer- A

**Question- The IDT comprises of 8 byte gate descriptor for task, trap or interrupt gates**

- A) True**
- B) False**
- C) Both A & B**
- D) None of the above**

Answer- A

**Question- The IDT comprises of ----- gate descriptor for task, trap or interrupt gates**

- A) 8 byte**
- B) 4 byte**
- C) 2 byte**
- D) 1 byte**

Answer- A

**Question- The IDT comprises of 8 byte gate descriptor for -----**

- A) Task**
- B) trap**
- C) interrupt gates**
- D) all of the above**

Answer- D

**Question- The IDT has maximum size of ----- descriptors**

- A) 255**
- B) 256**
- C) 257**
- D) None of the above**

Answer- B

**Question- IDTR stands for -----**

- A) Interrupt Descriptor Table register**
- B) Interrupt definition table register**
- C) Interrupt default table register**
- D) None of the above**

Answer- A

**Question- IDT stands for -----**

- A) Interrupt Descriptor Table**
- B) Interrupt definition table**
- C) Interrupt default table**



**D) None of the above**

Answer- A

**Question- IDT contains -----**

- A) Vectors**
- B) Gate descriptors**
- C) Gates**
- D) Tasks**

Answer- B

**Question- IDTR register is how many bits?**

- A) 32 bits**
- B) 64 bits**
- C) 48 bits**
- D) None of the above**

Answer- C

**Question- Where IDT will reside?**

- A) Anywhere in physical memory**
- B) Anywhere in virtual memory**
- C) Both A & B**
- D) None of the above**

Answer- A

**Question- IDTR consist of base address of ----**

- A) 8 bits**
- B) 16 bits**
- C) 24 bits**
- D) 32 bits**

Answer- D

**Question- IDTR consists of Limit size of ----**

- A) 8 bits**
- B) 16 bits**
- C) 24 bits**
- D) 32 bits**

Answer- B

**Question- Which instruction is used to load interrupts?**

- A) LLDT
- B) LGDT
- C) LIDT
- D) None of the above

Answer- C

**Question- Which instruction is used to store interrupts?**

- A) SLDT
- B) SGDT
- C) SIDT
- D) None of the above

Answer- C

## **MP Unit-4 Input-Output, Exceptions and Interrupts MCQ's PART-B (2 Marks Questions)**

**Question- The size of segment selector in interrupt gates is**

- A) 20 bits
- B) 16 bits
- C) 32 bits
- D) None of the above

Answer- B

**Question- Upon execution of IRET instruction,**

- A) EFLAGS will be reset
- B) EFLAGS will be set
- C) EFLAGS will be popped from stack
- D) A or B

Answer- C

**Question- When IF flag cleared in interrupt gate descriptor, then**

- A) 80386 POP status of EFLAG
- B) 80386 returns to the main program
- C) 80386 masks further hardware initiated interrupts
- D) None of the above

Answer- C

**Question- Which is not the type of IDT descriptors?**

- A) Trap gates
- B) System gates
- C) Task gates
- D) Interrupt gate

Answer- B

**Question- Which gate gives information regarding privilege level violation exception**

- A) Trap
- B) Task
- C) IDT
- D) None of the above

Answer- B

**Question- The task can be invoked indirectly by jumping or calling gate, only when**

- A) CPL is higher than DPL
- B) RPL is higher than CPL
- C) RPL is lower than DPL
- D) None of the above

Answer- B

**Question- If all 256 descriptor are not required the limit can be set to ----**

- A) 7FF H
- B) FFF H
- C) 6FF H
- D) None of the above

Answer- A

**Question- The address range for memory bank is from ----- to -----**

- A) 0000 to FFFF
- B) 000A to FFFF
- C) 0001 to FFFE
- D) 0001 to 000F

Answer- A

**Question-** The address range for 80386 to 80387 is from ----- to -----

- A) 0000 to FFFF
- B) 800000F8 to 800000FF
- C) 8000 to 8FFF
- D) 8000 to 800F

Answer- B

**Question-** The address range for memory bank is from ----- to -----

- A) 0000 to FFFF
- B) 000 to FFF
- C) 00 to FF
- D) 0 to F

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 given

Answer- B

**Question-** processor detects following condition while translating a linear address to a physical address

- A) The page-directory or page-table entry needed for the address translation has zero in its present bit
- B) The current procedure does not have sufficient privilege to access the indicated page.
- C) Both A and B
- D) B only

Answer- C

**Question-** In page fault error code tells the exception handler

- A) Whether the exception was due to a not present page or to an access rights violation.
- B) Whether the processor was executing at user or supervisor level at the time of the exception
- C) Whether the memory access that caused the exception was a read or write.
- D) All of these

Answer- D

**Question-** To insure a proper TSS to process it, the handler for exception 10 must be a task

**invoked**

**Via \_\_\_\_\_.**

- A) Trap gate**
- B) System gate**
- C) Task gate**
- D) None of these**

**Answer- C**

**Question- This error code CS id + EXT not indicates condition \_\_\_\_\_**

- A) Stack segment selector RPL < > CPL**
- B) Stack segment selector is outside table limit**
- C) Code segment selector is not outside table limit**
- D) None of these**

**Answer- D**

**Question- To determine when two faults are to be signaled as a double fault, the 80386 divides the exceptions into \_\_\_\_ types**

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

**Answer- C**

**Question- Which is not the class of double fault exception?**

- A) benign exceptions**
- B) contributory exceptions**
- C) page faults**
- D) None of these**

**Answer- D**

**Question- Interrupt 4- occurs after execution of \_\_\_\_\_ instruction**

- A) INTO**
- B) OF**
- C) IF**
- D) Both A and B**

**Answer- D**

**Question- The processor sets the \_\_\_\_ bit if an event external to the program caused the exception.**

- A) RST**
- B) EXT**

- C) ERR**
- D) None of the above**

Answer- B

**Question- Which instruction used to access interrupt descriptor table?**

- A) LGDT**
- B) IIDT**
- C) SIDT**
- D) All the above**

Answer- C