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中南民族大学 2018 -2019 学年第 二 学期 期末考试试卷

课程名称:汇编语言与计算机组成 试卷类型: A卷 共10页

考试形式: 闭卷 考试

适用范围: 计算机科学学院 2018 级软工实验班 本科

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得分							
评卷人							

得分

1. Identify the addressing mode of each operand in the following instructions from the correct choices like immediate, register, direct, or register indirect.(10 points)

CR EQU 0DH

.DATA

MycourseA BYTE 'asm',0

XWA Word ?

YDA Dword?

			destination operand	source operand
(1)	ADD	YDA,EAX		
(2)	LEA	EAX,XWA		
(3)	SUB	[EBX], CX		
(4)	MOV	XWA, CX		
(5)	CMP	MycourseA CR		

- 1. 考生将姓名、学号等信息写在试卷相应位置;
- 2. 必须使用蓝(黑)色钢笔或签字笔在规定位置答题;
- 3. 注意字迹清楚,保持卷面整洁。



á	得分			sing two		_	,	by supplying ed number.	_
	Не	exadecii	mal		Decima	al		2's Complem	ent
(1)					-57				
(2)		65							
(3)								10111001	[
(4)		C8					_		
(5)								01000110)
	等分 ——	DA	gen	erate for	each dir	ective be		assembler w 0 points)	ʻill
	(1)			-	(4 dup (0)),:)			
	(2)		•	-190,	- 880,118H	[,0,?			
		Total	bytes:		_				
	(3)	BA1	BYTE	100000	10B, 0CF	FH, -3,23			
		Total	bytes:		_				
	(4)	BA2	BYTE	'STUD	ENT', 0				
		Total	bytes:		_				
	(5)	RA3	RYTE	43H 'X	ζ' 6 dun('B') ?			

Total bytes:

	4、	J
得分	is	r
	br	a

4. Judge whether the following assembly instruction is right or not, write \checkmark in the corresponding bracket if it is right and \times if it is wrong.(10 points)

Assume that the instructions are in a program also containing the code:

cr EQU 0dh

If EQU 0ah

.DATA

Prompt byte 'Input a number:',0
wnum word ?
bnum byte ?

- (1) mov es, ax (
- (2) mov al, prompt ()
- (3) lea eax, bnum (
- (4) in dl, 70h ()
- (5) mov [edi], prompt (
- (6) mov al, 300 ()
- (7) mov cl, bnum ()
- (8) cmp eax, wnum ()
- (9) and wnum, bx (
- (10) sub cl, lf (

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得分	
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Reading the following programs and fill in the 5、 blanks with right answers. (28 points)

(1) Assume that the data segment contains:

"jike@scuec.edu.cn",0 StringA BYTE Suppose that the following instructions are executed:

> al, "@" mov lea edi, StringA cld ecx, 17 mov repne scasb

Assuming that StringA starts at 0400C000H, give the following "after" values (in Hexadecimal).

EDI				ECX			ZF		

(2) (a) What will be the output of the following program?

(b) What function does the procedure MathFunc realize?

.386

.MODEL FLAT

ExitProcess PROTO NEAR32 stdcall, dwExitCode:DWORD INCLUDE io.h

; header file for input/output cr 0dh ; carriage return character

equ

Lf 0ah ; line feed equ

```
END
OP mod
         MACRO number, power
                  eax, number
         mov
                 cl, power
         mov
         shl
                 eax, cl
         and
                 ecx, 0fh
         and
                 eax, ecx
```

ENDM

Assume the value in EDX is 79H. Assume that in num references a dword in the data segment, and the value in in num is OffH. Please give the value in EAX and ECX after the following macro call is executed.

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(a)	OP_mod	EDX,2			
The after	value in E	AX is			
The after	value in E	CX is			
(b)	OP_mod	in_num,3			
The after	value in E	AX is			
The after	value in E	CX is			
(4) WI	hat will be t	he output o	f the following p	orogram?	
ExitP INCL cr Lf .STA	LUDE io.h equ equ CK 4096 'A ringA BY DE	OTO NEAI Odh Oah	; carriage re ; line feed ; reserve ² ; global da ABBBEfgh', c	e for input/out eturn character 4096-byte stack ata	put
		esi, Mystri ecx, 3	ıngA+3		
rep_d		cca, s			
	INC loop	byte ptr [6 esi rep_dec Mystring	,		
PUBI		t	ocess, 0; exit	with return codentry point pub	

得分

6 \ Please complete the following program, procedure and macro definition.(32 points)

(1) Write a complete 80x86 assembly language program: input 10 signed numbers from keyboard and report the max value of the numbers .

.386

.MODEL FLAT

ExitProcess PROTO NEAR32 stdcal, dwExitCode:DWORD INCLUDE io.h

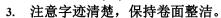
cr EQU 0dH

LF EQU 0ah

.STACK 4096

.DATA

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.CODE ;start of main program code

_start:

INVOKE ExitProcess,0 ;exit with return code 0

PUBLIC _start ;make entry point public

END

(2) Define a procedure named MYTEST, it is assumed an input parameters (word size) have been passed in AX before calling the procedure. The procedure will check the number in AX, when the number is a positive number or zero, it will replace 10 in AX register, and if it is a negative number, -10 will be replaced in AX as an output parameter.

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(3) Define a macro named N2A which has a formal parameter, the address of a byte in memory. The macro will check the byte, and if it is through 0 to 9, the corresponding character (this byte+30H) will replace it.