Grade **11.00** out of 15.00 (**73.33**%)

Question **1**

Correct

Mark 1.00 out of 1.00

Flag question

In which program is a dangling pointer being dereferenced ?

a. int main() { int *p = NULL, *q, i, j = 20; q = &i, i = 30; p = q; }

b. int main() { int *p = NULL, *q, i, j = 20; q = &j, *p = *q; *q = 30; } ✔

c. int main() { int *p = NULL, *q, i, j = 20; q = &j, *q = 30; p = 30; }

d. int main() { int *p = NULL, *q, i, j = 20; q = &j, p = q; *p = 30; }

The correct answer is: int main() { int *p = NULL, *q, i, j = 20; q = &j, *p = *q; *q = 30; }

Question **2**

Incorrect

Mark 0.00 out of 1.00

Flag question

In which program here do you have a dangling pointer at the end of program?

a. int main() { int *p, *q, i, j; p = &i; i = j = 20; *p = 30; }

b. int main() { int *p = NULL, *q = NULL, i, j; p= &j; i = 20;} ✖

c. int main() { int *p, *q, i, j; p = &i; q= &j; j = 20;}

d. int main() { int *p, *q, i, j; q = &i; p= &j; i = 20;}

The correct answer is: int main() { int *p, *q, i, j; p = &i; i = j = 20; *p = 30; }

Question **3**

Correct

Mark 1.00 out of 1.00

Flag question

What is garbage memory ?

a. Memory allocated to a program, but freed

b. Memory allocated to a program, but freed and reallocated

c. Memory allocated to a program, but without any pointer pointing to it in the program ✔

d. Memory containing garbabe values

e. Memory allocated to a program, but reallocated

f. Corrupt memory cells

The correct answer is: Memory allocated to a program, but without any pointer pointing to it in the program

Question **4**

Correct

Mark 1.00 out of 1.00

Flag question

Does this program segfault?

```
int main() {
int *p = NULL, j;
j = 30;
*p = 100;
p = &j;
}
```

a. No

b. Yes ✔

The correct answer is: Yes

Question 5

Correct

Mark 1.00 out of 1.00

Flag question

Does this program segfault?

```
int main() {
int *p = NULL, j;
j = 30;
p = &j;
*p = 100;
}
```

- a. No ✔
- b. Yes

The correct answer is: No

Question 6

Correct

Mark 1.00 out of 1.00

Flag question

Map the name with OS or kernel

GNU Hurd	Kernel ✔
Mach	Kernel ✔
Ubuntu	OS ✔
Linux	Kernel ✔
macOS	OS ✔

The correct answer is: GNU Hurd → Kernel, Mach → Kernel, Ubuntu → OS, Linux → Kernel, macOS → OS

Question 7

Correct

Mark 1.00 out of 1.00

Flag question

In which program is a illegal memory access happening ?

- a. int main() { int *p = NULL, j; p = &j; *p = 20; }
- b. int main() { int *p = NULL, j; *p = 20; j = *p; } ✔
- c. int main() { int *p = NULL, j; p = &j; p = 20; }
- d. int main() { int *p = NULL, j; p = &j; j = 20; }

The correct answer is: int main() { int *p = NULL, j; *p = 20; j = *p; }

Question 8

Correct

Mark 1.00 out of 1.00

Flag question

What is program counter?

- a. A counter that counts how many programs have been executed
- b. A counter that counts how many programs are pending for execution in CPU
- c. A register in CPU that stores address of next instruction in CPU
- d. A register in CPU that stores address of next instruction in Memory ✔
- e. A register in CPU that stores VALUE of next operand

Your answer is correct.

The correct answer is: A register in CPU that stores address of next instruction in Memory

Question 9

Correct

Mark 1.00 out of 1.00

Flag question

Select the correct statement about FLAGS register

- a. values in the FLAGS register are set automatically by kernel depending on result of the previous machine instruction
- b. values in the FLAGS register are set automatically in hardware depending on result of the current machine instruction
- c. values in the FLAGS register are set automatically by kernel depending on result of the current machine instruction
- d. values in the FLAGS register are set automatically in hardware depending on result of the previous machine instruction

The correct answer is: values in the FLAGS register are set automatically in hardware depending on result of the prev machine instruction

Question **10**

Correct

Mark 1.00 out of 1.00

Flag question

Select the option which best describes what the CPU does during it's powered ON lifetime

a. Fetch instructions specified by location given by PC, Decode and Execute it, during execution increment PC change PC as per the instruction itself, Ask the User or the OS what is to be done next, repeat

b. Fetch instructions specified by location given by PC, Decode and Execute it, during execution increment PC change PC as per the instruction itself, Ask OS what is to be done next, repeat

c. Fetch instructions specified by location given by PC, Decode and Execute it, during execution increment PC or change PC as per the instruction itself, repeat

d. Ask the OS what is to be done, and execute that task

e. Fetch instruction specified by OS, Decode and execute it, repeat

f. Ask the user what is to be done, and execute that task

The correct answer is: Fetch instructions specified by location given by PC, Decode and Execute it, during execution increment PC or change PC as per the instruction itself, repeat

The correct answer is: Fetch instructions specified by location given by PC, Decode and Execute it, during execution increment PC or change PC as per the instruction itself, repeat

Question **11**

Incorrect

Mark 0.00 out of 1.00

Flag question

In which program here do you have a dangling pointer at the end of program?

a. `int main() { int *p, j; j = 20; }`

b. `int main() { int *p = NULL, j; p = &j; *p = 20; }` ✖

c. `int main() { int *p = NULL, j; p = &j; }`

The correct answer is: `int main() { int *p, j; j = 20; }`

Question **12**

Correct

What does a compiler do ?

Question 12

Correct

Mark 1.00 out of 1.00

Flag question

What does a compiler do ?

- a. converts the source code into machine code, and executed the program.
- b. converts the source code into machine code, and saves machine code in a file on hard disk. The output file has formatting determined by the OS+processor. ✔
- c. Reports syntax errors if any in the program.
- d. converts the source code into machine code, and saves machine code in processor.
- e. converts the source code into machine code, and gives it to the OS to execute.
- f. converts the source code into machine code, and saves machine code in a file on hard disk. The output file has formatting determined by the processor.

The correct answer is: converts the source code into machine code, and saves machine code in a file on hard disk. The output file has formatting determined by the OS+processor.

Question 13

Incorrect

Mark 0.00 out of 1.00

Flag question

Why does 8086 have segments?

- a. A program is divided into segments, hence to support it the processor has segment registers ✖
- b. Processor manufacturers wanted to do something different from competitors
- c. Processor manufacturers wanted system developers to visualize a program divided into "segments", each segment addressed by a segment register
- d. The OS is divided into segments, hence to support it the processor has segment registers

The correct answer is: Processor manufacturers wanted system developers to visualize a program divided into "segments", each segment addressed by a segment register

Question 14

Correct

Mark 1.00 out of 1.00

Flag question

What is a dangling pointer ?

- a. A pointer which is neither NULL nor having a value
- b. A pointer which has a random value
- c. A pointer which is neither NULL nor pointing to an address within address space of the program ✔
- d. A pointer which is not pointing to an address within address space of the program
- e. A pointer which is NULL

The correct answer is: A pointer which is neither NULL nor pointing to an address within address space of the program

Question **14**

Correct

Mark 1.00 out of 1.00

Flag question

What is a dangling pointer ?

- a. A pointer which is neither NULL nor having a value
- b. A pointer which has a random value
- c. A pointer which is neither NULL nor pointing to an address within address space of the program ✔
- d. A pointer which is not pointing to an address within address space of the program
- e. A pointer which is NULL

The correct answer is: A pointer which is neither NULL nor pointing to an address within address space of the program

Question **15**

Incorrect

Mark 0.00 out of 1.00

Flag question

Select correct statement about memory address translation on 8086

- a. size of address space is configurable
- b. size of address space is 1 MB
- c. size of address space is 64 KB
- d. size of address space is 2 MB ✖

The correct answer is: size of address space is 1 MB