15. The minimum number of bits required to store the hexadecimal number FF is

(a) 2,

(b) 4,

(c) 8,

(d) 16

17.  A 20-bit **address bus** allows access to a memory of capacity (a) 1 Mb

(b) 2 Mb

(c) 32Mb

(d) 64 Mb

130. Which of the following is an illegal instruction

(a) MoV Ax, 30000

(b) iNc Al, 1

(c) aNd bx, bx

(d) add ax, 30

133. Given that the bl register contains ‘B’, the effect of the following instruction   
  
 or bl, 0010 0000  
is to

(a) clear bl

(b) store ‘b’ in bl

(c) store 0010 0000 in bl

(d) leave bl unchanged

133c. Given that the bl register contains ‘b’, which of the following instructions will change bl so that it contains 'B'

(a) or bl, 0010 0000

(b) and bl, 0010 0000

(c) or bl, 1101 1111 in bl

(d) and bl, 1101 1111

134. Which of the following is an illegal instruction

(a) MoV Ax, 30000

(b) iNc Al

(c) aNd bx, bx

(d) add ax 30

137. Given that the bl register contains 1111 0000, the effect of the following instruction

or bl, 0000 1111

is to

(a) clear bl

(b) store 1111 1111 in bl

(c) store 0000 1111 in bl

(d) leave bl unchanged

138. Which of the following is an illegal 8086 instruction

(a) mov 20, bx

(b) iNc Al

(c) aNd bx, bx

(d) add ax, 30

177. Given that al contains the ASCII code of an uppercase letter, it can be converted to lowercase by

(a) add al, 32

(b) or al, 0010 0000

(c) or al, 1101 1111

(d) and al, 0010 0000

178. Given that al contains the ASCII code of a lowercase letter, it can be converted to uppercase by

(a) add al, 32

(b) and al, 1101 1111

(c) or al, 1101 1111

(d) and al, 0010 0000

209. The cmp instruction modifies the (a) program counter (b) instruction register (c) flags register (d) segment register

213. The sp register is typically used for accessing (a) strings (b) memory (c) stack (d) data segment

1. The instruction, “INC” increases the contents of the specified register or memory location by

a) 2

b) 0

c) 1

d) 3

2. The instruction that subtracts 1 from the contents of the specified register/memory location is

a) INC

b) SUBB

c) SUB

d) DEC

5. In general, the source operand of an instruction can be

a) memory location

b) register

c) immediate data

d) all the above

6. In general, the destination operand of an instruction can be

a) memory location

b) register

c) immediate data

d) memory location and register

7. The instruction, CMP to compare source and destination operands it performs

a) addition

b) subtraction

c) division

d) multiplication

8. During comparison operation, the result of comparing or subtraction is stored in

a) memory

b) registers

c) stack

d) no where

14. The ROR instruction rotates the contents of the destination operand to

a) left

b) right

c) left and then right

d) right and then left

1. Answer: c

Explanation: this instruction adds 1 to the contents of the operand and so increments by 1

2. Answer: d

Explanation: the DEC instruction decrements the contents of specified register/memory location by 1

5. Answer: d

Explanation: the source operand is the element which is data or data stored memory location on which operation is performed.

6. Answer: d

Explanation: Since the destination should be able to store the data, immediate data cannot be considered as destination operand.

7. Answer: b

Explanation: For comparison, the instruction CMP subtracts source operand from destination operand.

8. Answer: d

Explanation: the result of subtraction operation is not stored anywhere during comparison.

14. Answer: b

Explanation: ROR stands for Rotate Right without carry.so, the instruction rotates right.