**II-BTECH(R16) - CO MODEL QUESTIONS(2ND UNIT)**

1. (a)How negative number in binary system are represented? Give their relative merits and demerits ?

 (b) Perform the following 2’s complement addition :

(i)+7 – 2

(ii)+2-7

1. (a)What are the different ways of representing a negative number and explain advantages(if any) and disadvantages (if any) of each method?

(b)perform the following 2’s complement addition:

(i)+2+13

 (ii) +2 – 13

1. (a) What is a difference between overflow and carry? Give an example for overflow in binary arithmetic?

(b) Perform the following 2’s complement addition:

 (i) -17+4

 (ii) +2-13

 without overflow?

1. (a)How to detect an overflow?

(b)Perform the following 2’s complement addition:

(i)+6+5

(ii)-7-4

1. (a) Define the terms (1)Address (2)Address space?

(b) For an n-bit signed integer representation, what is the range of numbers that can be represented?Explain breifly?

6. (a)Define the terms (1)word (2)word length

 (b) For a k-bit address, how many address locations constitutes that memory explain breifly?

 (c)If the address bus has n address lines and data has k data lines then what is the maximum capacity of memory that can be addressed?

7.(a) Explain how data is represented in big endian format?

 (b) What is register transfer notation ?Explain with some examples?

 8.(a)Explain how data is represented in little endian format?

 (b) What is assembly language notation. Explain the

 and syntax to all.

9(a)Why we meant by straight line sequencing of instructions. Explain

 with examples?

 (b) Explain the purpose of N, Z condition codes

10(a) Explain the purpose of branching with an example.

 (b)Explain the purpose of V,C condition codes.

11.Explain how stacks are used in a program in program execution.

12. How queues are different from stacks in execution of a computer

 program

13. How the effective address(EA) and operand value are calculated for various addressing modes for the given data:

|  |
| --- |
| Load to AC/mode |
| Address=700 |
| Next increment |
|  |
| 350 |
| 700 |
|  |
| 800 |
|  |
| 900 |
|  |
| 325 |
|  |
| 300 |

 Address

 200

 201

 202

 499

 500

700

800

900

 1100

 Pc=1000

 R1=500

XR=200

AC=?

14. How the effective address(EA) and operand value are calculated for various addressing modes for the given data

|  |
| --- |
| Load to AC/mode |
| Address=500 |
| Next increment |
|  |
| 250 |
| 200 |
|  |
| 700 |
|  |
| 500 |
|  |
| 325 |
|  |
| 100 |

 Address

 400

 401

 402

 599

 600

700

800

900

1000

 1100

 Pc=500

 R1=600

XR=400

AC=?