



B.Tech-II(R16) - CO- UNIT-II MODEL QUESTIONS

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

2. (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



B.Tech-II(R16) - CO- UNIT-II MODEL QUESTIONS

3.(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?

4.(a) How to detect an overflow?

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

(i) $+6+5$

(ii) $-7-4$

5.(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 briefly?



B.Tech-II(R16) - CO- UNIT-II MODEL QUESTIONS

6. (a) Define the terms (1) word (2) word length
(b) For a k-bit address, how many address locations constitutes that memory explain briefly ?
(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 formats?
(b) What is register transfer notation ? Explain with some examples?
8. (a) Explain how data is represented in little and endian formats?
(b) What is assembly language notation. Explain the and syntax to all.



B.Tech-II(R16) - CO- UNIT-II MODEL QUESTIONS

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



B.Tech-II(R16) - CO- UNIT-II MODEL QUESTIONS

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

Pc=1000
R1=500
XR=200
AC=?

Address

200	Load to AC/mode
201	Address=700
202	Next increment
499	
500	350
	700
700	
800	800
900	900
	325
1100	300



B.Tech-II(R16) - CO- UNIT-II MODEL QUESTIONS

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

Pc=500
R1=600
XR=400
AC=?

Address

400	Load to AC/mode
401	Address=500
402	Next increment
599	
600	250
	200
700	
800	700
900	
	500
1000	
	325
1100	
	100