



Unit 12 - Week 11

Course outline

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Week 11

- Lecture 45 : Ternary Phase Diagram and Tie Line Construction - I
- Lecture 46 : Ternary Phase Diagram and Tie Line Construction - II
- Lecture 47 : Ternary Phase Diagram and Tie Line Construction - III
- Lecture 48 : Ternary Isomorphous Phase Diagram
- Lecture 49 : Ternary Three

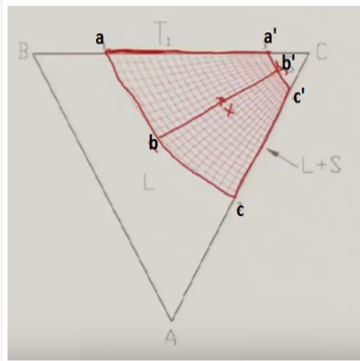
Week 11 Assignment 11

The due date for submitting this assignment has passed. **Due on 2016-04-05, 23:55 IST.**

Submitted assignment

1) In the following ternary isomorphous system which lines are ternary tie lines?

2 points



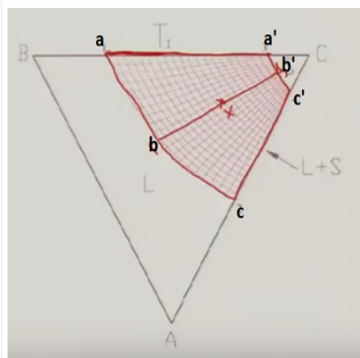
- aa'
- bb'
- cc'
- none

No, the answer is incorrect. Score: 0

Accepted Answers: bb'

2) In the following ternary isomorphous system which lines are binary tie lines?

2 points



- aa'
- bb'

Phase Equilibria

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Solutions

- cc'
- none

No, the answer is incorrect.

Score: 0

Accepted Answers:

aa'
cc'

3) The statement "In ternary phase diagram, the binary tie line intersect at the corner of the triangle" 2 points

- True
- False

No, the answer is incorrect.

Score: 0

Accepted Answers:

True

4) The statement "In ternary phase diagram, the ternary tie line intersect at the corner of the triangle, when the all three component have some solid solubility." 2 points

- True
- False

No, the answer is incorrect.

Score: 0

Accepted Answers:

False

5) Choose the correct match. 2 points

- Vertical section-Isopleths
- Horizontal section-Isotherms
- Vertical section- Isotherms
- Horizontal section- Isopleths

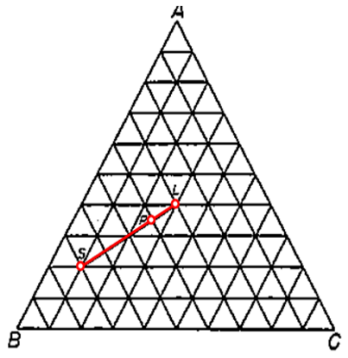
No, the answer is incorrect.

Score: 0

Accepted Answers:

Vertical section-Isopleths
Horizontal section-Isotherms

6) Find out the composition at point P. where one part of S mix with 3 parts of L. 2 points



- 35%A 40%B 25%C
- 40 %A 35%B 25%C
- 40 %A 25%B 35%C
- 25%A 40%B 35%C

No, the answer is incorrect.

Score: 0

Accepted Answers:
 35%A 40%B 25%C

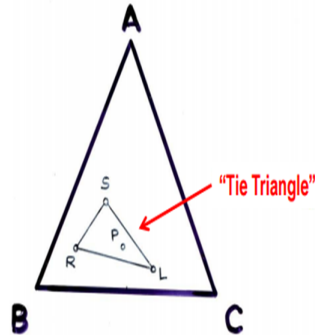
7) Calculate the composition at point P. **2 points**

Where - P is mixture of 2 parts of R, 3 parts of S, 5 parts of L.

R = 20%A 70%B 10%C

S = 40%A 40%B 20%C

L = 10%A 30%B 60%C

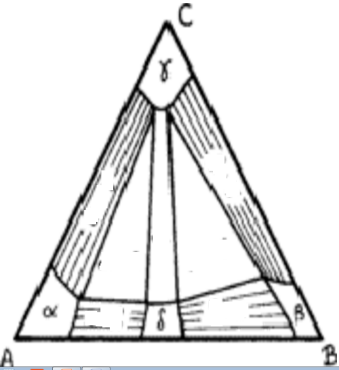


- 21%A 41%B 38%C
- 41%A 21%B 38%C
- 21%A 38%B 41%C
- 38%A 41%B 21%C

No, the answer is incorrect.
Score: 0

Accepted Answers:
 21%A 41%B 38%C

8) The following ternary phase diagram showing four solid solution alpha, beta, gamma and **2 points**



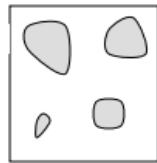
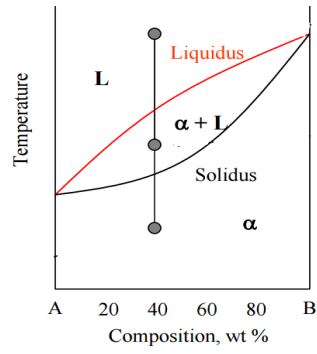
delta. Count the number of two and three phase region

- 5 two phase and 2 three phase
- 4 two phase and 2 three phase
- 3 two phase and 3 three phase
- 6 two phase and 4 three phase

No, the answer is incorrect.
Score: 0

Accepted Answers:
 5 two phase and 2 three phase

9) In the following isomorphous diagram. which microstructure corresponding to solidus? **2 points**



none

No, the answer is incorrect.
Score: 0

Accepted Answers:



10) Which statement true for binary isomorphous system tie line?

2 points

- Tie lines always parallel to horizontal axis
- Tie lines rotate with temperature
- cannot say
- none

No, the answer is incorrect.
Score: 0

Accepted Answers:

Tie lines always parallel to horizontal axis

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