

PRINCE OF SONGKLA UNIVERSITY

FACULTY OF ENGINEERING

Final Examination : Semester 1

Academic Year : 2004

Date :10 October 2004

Time : 09.00-12.00

Subject : 226-316 FOUNDRY ENGINEERING

Room :R300

**ทฤษฎีในการสอบ โทษขั้นต่ำปรับตกในรายวิชานั้น
และพักการเรียน 1 ภาคการศึกษา โทษสูงสุดให้ออก**

Instruction:

1. Do all of 21 questions.
2. The score of each one is 4 except no.13, it is 20.
3. Total score is 100.
4. Books notes and calculator are allowed.

ผศ.เสน่ห์ ธัญชาดลักษณ์

ผู้ออกข้อสอบ

Supat

ลำดับที่.....ชื่อ-สกุล.....รหัส.....

1. There are 2 castings of steel with equal mass but different surface area. The surface area of A and B are 1 and 1.2 square feet. Which one is shorter of freezing time?
Why?.....(4)
2. What is the difference of cooling curve between normal alloy and pure metal ?.....(4)
3. How does molten alloy contact after pouring?.....(4)
4. What is modulus of solidification?.....(4)
5. What is freezing range?.....(4)
6. After pouring molten alloy, how many zones are there during solidification? What are they?.....(4)
7. What is the feeding distance?.....(4)
8. Why should we make a riser for mold?.....(4)
9. Tell me the difference between bind riser and open riser?.....(4)
10. What does risering system mean?.....(4)
11. Normally where should we locate a riser?.....(4)
12. What is the progressive solidification?.....(4)
13. A carbon steel casting with diameter of 7" inside and 9" outside. The thickness is 1.5 inches. Given $H/D = \frac{3}{4}$. Find the risering system.(20)
14. What gas does it occur during Al-alloy melting?.....(4)
15. What is crucible furnace?.....(4)
16. Tell me 3 differences between Al-alloy and Cu-alloy.....(4)
17. What do you know about cupola?.....(4)
18. What is ceroxide?.....(4)
19. How do you produce a nodular iron casting?.....(4)
20. What is the difference between nodular iron and malleable iron?.....(4)
21. What is arc furnace?.....(4)

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