

**PRINCE OF SONGKLA UNIVERSITY
FACULTY OF ENGINEERING**

Final Examination : Semester II

Academic year : 2005

Date : February 23, 2006

Time : 13:30-16:30

Subject : 226-306 Tools Engineering

Room : R 300

ทูลจรตในการสอบ โทษซันต่ำปรบตกรในรายวชานัน
และพักรการเรยน 1 ภาคการศีกษา

Instruction :

- Answer all questions in the answer book.
- All notes, books and calculators are not allowed.
- Total score is 100 (50%).

Questions:

1. What is the major difference between fixed-limit gages and indicating gages? (3 marks)
2. How are unilateral tolerances applied to (a) plug gages and (b) ring gages ? (3 marks)
3. Explain the principle of pneumatic gaging. (3 marks)
4. Select the necessary gage blocks to check dimension of 1.2576 inch. (3 marks)
5. When is sight location used, and how is it accomplished? (3 marks)
6. What is a spherical washer, and when is it used? (3 marks)
7. What is the advantage of tumble jigs? (3 marks)
16. What is the advantage of pneumatic gaging? (3 marks)
17. What is meant by die clearance? (3 marks)
18. Is the die clearance placed on the punch or die opening for a blanking operation? Why? (3 marks)
19. What methods are used to reduce cutting forces? (3 marks)
20. What is the shut height of a die set? (3 marks)

8. Why is it often undesirable to use compressed air as a chip-removal medium? (3 marks)
9. How should jig feet be placed in relation to the drill bushings? (3 marks)
10. What is the ANSI classification of drill bushings, and how is each classification used? (3 marks)
11. What are indexing jigs and how are they used? (3 marks)
12. How can the accuracy of contact between bearing surfaces of the mill fixture and the workpiece resting upon it be checked? (3 marks)
13. How does clamping over unsupported surfaces produce nonparallel holes in bored workpieces? (3 marks)
14. What is a knock-off mandrel? (3 marks)
15. What is the bolster plate of a press? (3 marks)
16. How is the shut height of a mechanical press varied? (3 marks)
17. What is meant by die clearance? (3 marks)
18. Is the die clearance placed on the punch or die opening for a blanking operation? Why? (3 marks)
19. What methods are used to reduce cutting forces? (3 marks)
20. What is the shut height of a die set? (3 marks)
21. What is the difference between the feed distance and the advance distance of a progressive die? (3 marks)
22. What are the major advantages of compound dies? (3 marks)

