

Prince of Songkla University

The Faculty of Engineering

Midterm Examination Semester 1

Year 2007

Date : 29 July 2007

Time : 13:30-16:30

Subject : 226-341 Maintenance Engineering

Room : A201

Name :

Student code :

Part	1	2	3	Total
Full score	20	10	60	90
Score				

คำสั่ง

- นำตำราหรือเอกสารใด ๆ เข้าห้องสอบได้ ห้ามยืมเอกสารหรือสิ่งของใดๆในห้องสอบ
- นำ Dictionary และ เครื่องคิดเลขเข้าห้องสอบได้ ทุกชนิด ใช้ดินสอได้ แต่ต้องเขียนให้อ่านได้ชัดเจน
- ข้อสอบนี้ มีทั้งหมด 3 ส่วน คะแนนเต็ม 90 คะแนน คะแนนแต่ละส่วนไม่เท่ากัน ตรวจสอบก่อนเริ่มทำ (ให้ทำในกระดาษคำตอบเท่านั้น ตอบนอกกระดาษคำตอบไม่มีคะแนน)
- เขียน ชื่อ หรือ รหัส ในกระดาษคำตอบทุกหน้าก่อนเริ่มทำ เพื่อป้องกันความสับสน ในกรณีกระดาษคำตอบหลุดจากฉบับ

ทูลจรรยาบรรณในการสอบ โทษขั้นต่ำปรับตกในรายวิชานั้น และพักการเรียน 1 ภาคการศึกษา

Name :code.....

Part 1 Answer all questions. Please determine whether these following sentences are correct or incorrect. One point (1 point) will be given for the right answer. Minus half point (-0.5 point) will be given for the wrong answer. (Total 20 points)

Question no.	Correct ✓	Incorrect ✘	Question
1			Automatic ordering is suitable to non-permanent stores in the storehouse.
2			In the case of equipment manufactured within the plant, the total cost after close-out of the job can be handled like an invoice with no need for processing through accounts payable.
3			Maintenance-department overhead covers all expenses that cannot be directly charged to specific work units.
4			TPM is one of maintenance type that involves how to prevent machine maintenance by more economical and suitable material substitution.
5			The material with unknown time and quantity for replacement shall belong under non-permanent stores.
6			Maintenance man normally proud to do all menial jobs-furniture moving, digging ditches, aligning machinery, and testing electronic circuits.
7			Permanent articles should be purchased by bidding.
8			The maintenance storeroom charge is the indirect cost which is usually distributed by people served.
9			Maintenance overhead includes cost of know-how from contractor services, maintenance manager's salary and top-management's salaries.
10			Dismantling expense includes all expenses excluded an elimination of outdated equipment.
11			Job tickets for recording maintenance time provide more nearly accurate information than time cards
12			A non-permanent includes the materials, which are prepared against sudden failure, even if they are life-predictable articles.
13			Reusable articles shall be permanent stores.
14			Supervisory overhead, as well as operating cost of a maintenance shop is normally distributed on the basis of man-hours spent.

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Question no.	Correct ✓	Incorrect x	Question
15			The material, which is classified in class "A" (in ABC analysis), has to be controlled by two-bin method.
16			If the time for delivery to the storehouse is shorter than the repairing cycle, only the articles for one-time of planned repairs shall be permanent stores.
17			In theory X-Y, people type "Y" is normally hard-working, so manager should give close and strict attention on their works.
18			In CBM system, a plant must be stopped for maintenance at constant intervals.
19			In ABC classification, A items should receive close attention to make sure the customer service levels are attained, through frequent reviews of amounts on hand and control over withdrawals, where possible.
20			One of the differences between corrective maintenance and preventive maintenance is time for repair work.

Part 2

1. What type of maintenance organization is suitable for large size plant?
 - a) Compromise type
 - b) Departmental type
 - c) Area type
 - d) Product type
 - e) Central type
2. What is **NOT** included in maintenance overhead cost?
 - a) Maintenance clerk
 - b) Cost of supplies
 - c) Machine depreciation
 - d) Cost of Utilities
 - e) Top management salary
3. By what basis, the maintenance overhead cost is normally distributed?
 - a) Power consumption
 - b) Machine value
 - c) Man-hour used
 - d) People served
 - e) Floor space
4. What should be done when machine is manufactured within the plant?
 - a) Cost of machine can be neglected
 - b) Machine must be approved by subcontractor
 - c) An invoice need for processing through account department
 - d) Cost information is recorded and accumulated against a job number until completion of the work
 - e) Keep invoice of purchased machine and process it to purchasing department
5. What kind of job upset trained maintenance man?
 - a) Routine inspection job
 - b) Menial job
 - c) Breakdown maintenance job
 - d) Preventive maintenance job
 - e) Equipment cleaning job
6. How does top management stimulate maintenance men by "achievement"?
 - a) Making him part of company growth
 - b) Visiting maintenance shops
 - c) Making them feel important
 - d) Expanding their responsibilities
 - e) Assigning them various kinds of jobs
7. What is the disadvantage of "departmental type" maintenance organization?
 - a) Maintenance men can not become specialists.
 - b) Time for maintenance is normally long.
 - c) Maintenance men are sometimes free from work.
 - d) Maintenance work is more delay than other type.
 - e) Maintenance men do not want to be supervised by production head.

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8. What is the pattern of deterioration rate curve?
- a) Exponential
 - b) Water basin
 - c) Square
 - d) Cycle
 - e) Linear
9. Which one is comparative deterioration?
- a) Computer is out of date
 - b) Lathe is worn out.
 - c) Shift is torn.
 - d) Impeller is out of order.
 - e) Non of above answers
10. Which type of maintenance organization is suited to be applied for the case where the equipment for plural products exists in a plant?
- a) Compromise type
 - b) Departmental type
 - c) Area type
 - d) Product type
 - e) Central type

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Part 3. Answer all questions. Each question has different score. Total score for this part is 60 points.

1. To design maintenance organization, these following items must be considered. Please explain why these items have to be concerned.(9 points)

1.1 Operating condition of a plant or equipment's

1.2 Geographic disperse of a plant or equipment's

1.3 Managing ability of persons

2. How does "adequate maintenance shop" motivate maintenance man? (2 points)

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12. What should be considered when we want to plan for purchasing machine parts? (2 points)

13. How can we improve craftsman human relations skills through job itself? (2 points)

14. In what condition the purchasing through specific supplier for maintenance is required? (2 points)

15. How do we apply “motivation concept” for maintenance work in Industrial Engineering Department? (5 points)

16. In your assignment (maintenance website), what is your responsibility? Explain content of your work in detail as much as you can. (5 points)

Supriya

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17. From the maintenance type that was assigned in your assignment (maintenance website), if we want to apply this maintenance type to our department, what should we do? (7 points)

12/13

Support



GOOD LUCK

Dr. Klangduen Pochana



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18. Design essential forms for maintenance work in machine shop in IE department. (8 points)



GOOD LUCK

Dr. Klangduen Pochana



Signature