



**UNIVERSITI KUALA LUMPUR
Malaysia France Institute**

**FINAL EXAMINATION
JANUARY 2011 SESSION**

SUBJECT CODE : FMB 21202
SUBJECT TITLE : MACHINE TOOL DESIGN
LEVEL : BACHELOR
TIME / DURATION : 9.00 am – 11.00 am
(2 HOURS)
DATE : 06 MAY 2011

INSTRUCTIONS TO CANDIDATES

1. Please read the instructions given in the question paper CAREFULLY.
 2. This question paper is printed on both sides of the paper.
 3. Please write your answers on the answer booklet provided.
 4. Answer should be written in blue or black ink except for sketching, graphic and illustration.
 5. This question paper consists of TWO (2) sections. Section A and B. Answer all questions in Section A. For section B, answer THREE (3) questions only.
 6. Answer all questions in English.
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THERE ARE 4 PAGES OF QUESTIONS, 2 PAGES OF APPENDICES EXCLUDING THIS PAGE.

SECTION A (Total: 40 marks)**INSTRUCTION: Answer ALL questions.****Please use the answer booklet provided.****Question 1**

- (a) Discuss the basic requirements of a good machine tool design. (4 marks)
- (b) Discuss how one would select a suitable drive system for a machine tool? (4 marks)
- (c) What is productivity loss? Explain its importance in the design of gear box? (4 marks)
- (d) Briefly describe any 4 mechanisms that can convert rotary motion into translation. (4 marks)
- (e) What are the advantages of hydraulic regulation of machine tool drive? (4 marks)
- (f) What are the commonly used column section in machine tools? (4 marks)
- (g) What are the constructional frame and important characteristics of machine tool guide ways? (4 marks)
- (h) Explain the characteristics of vee –type and dove-tail types of guide ways. (4 marks)
- (i) Differentiate between sliding friction and rolling friction bearings. (4 marks)
- (j) List out the important physical characteristics of a good bearing material. (4 marks)

