



UNIVERSITI KUALA LUMPUR
Malaysia France Institute

FINAL EXAMINATION
JULY 2010 SESSION

SUBJECT CODE : FGB 16102
SUBJECT TITLE : MANUFACTURING TECHNOLOGY
LEVEL : BACHELOR
TIME / DURATION : 8.00pm – 10.00pm
(2 HOURS)
DATE : 08 NOVEMBER 2010

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 paper consists of FIVE (5) questions. Answer any FOUR (4) questions.
6. Answer all questions in English.

THERE ARE 3 PAGES OF QUESTIONS, EXCLUDING THIS PAGE.

(Total: 100 marks)

INSTRUCTION: Answer any FOUR questions.

Please use the answer booklet provided.

Question 1

- (a) Do you think the process of casting is competitive when compared with other manufacturing process? Justify your answer. (7 marks)
- (b) List three differences each and similarities between sand casting, die casting and permanent mould casting process. (9 marks)
- (c) Describe the common defects in casting? (4 marks)
- (d) Write a short note on a riser of the gating system. (5 marks)

Question 2

- (a) List four advantages and disadvantages resulting from hot working of metal. (8 marks)
- (b) List three differences between open-die forging and closed-die forging. (6 marks)
- (c) Explain (i) forward extrusion (ii) hydrostatic extrusion (iii) impact extrusion (iv) tube extrusion. (8 marks)
- (d) Describe the common defects in extrusion? (3 marks)

Question 3

- (a) Powder metallurgy is different from other manufacturing process. Justify your answer. (11 marks)
- (b) Explain three advantages does the powder metallurgy offers? (5 marks)
- (c) State four guides to the successful production of powder metal parts. (4 marks)
- (d) List five components which can be manufactured by powder metallurgy. (5 marks)

Question 4

- (a) Name and describe three kinds of chip with neat sketch. (14 marks)
- (b) Describe chip breaker and the purpose does it serves? (2 marks)
- (c) Why machining operation is necessary when the product can be manufactured by casting and forming operation? Explain. (5 marks)
- (d) Name at least four properties desirable in cutting tool material? (4 marks)

Question 5

(a) Cutting fluid have been used extensively in machining operation. Explain the effects of using cutting fluids.

(6 marks)

(b) Explain the method of cutting fluid applications.

(4 marks)

(c) There are 4 types of cutting fluids. Explain the characteristics and applications .

(10 marks)

(d) Explain the changes in the mechanics of cutting operations if the cutting fluid is cut off.

(5 marks)

END OF QUESTION