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UNIVERSITI TUN HUSSEIN ONN MALAYSIA

**FINAL EXAMINATION
(TAKE HOME)
SEMESTER II
SESSION 2019/2020**

COURSE NAME	:	MANUFACTURING TECHNOLOGY
COURSE CODE	:	BPB 23303
PROGRAMME CODE	:	BPB
EXAMINATION DATE	:	JULY 2020
DURATION	:	24 HOURS
INSTRUCTION	:	ANSWER ALL QUESTIONS OPEN BOOK EXAMINATION

THIS QUESTION PAPER CONSISTS OF **TWO (2)** PAGES

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- Q1** (a) (i) Explain the difference between fine and coarse metal powder in terms of final density and pressure needed to obtain the true density of that particular metal with a sketch of the graph of density vs. compacting pressure. (7 marks)
- (ii) State which metal is better in terms of mechanical strength based on the graph in **Q1(a)(i)**. (2 marks)
- (b) Discuss the reasons for the large variety of welding processes that have been developed over the years with specific examples. (10 marks)
- (c) A machining operation is being carried out with a cutting fluid that is an effective lubricant. Explain what will be the changes in the mechanics of the cutting operation if the fluid is shut off. (10 marks)

- Q2** (a) (i) Distinguish **THREE (3)** differences between brazing and soldering (3 marks)
- (ii) Explain the process in **Q2(a)** that produces the strongest joints. (4 marks)
- (b) Explain **TWO (2)** common soldering problems and its prevention method. (4 marks)
- (c) Explain the sequences of heat treatment for unhardened knife as shown in **Figure Q2(c)**. (10 marks)



Figure Q2(c): Unhardened knife

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-END OF QUESTIONS -