UTHM
Universiti Tun Hussein Onn Malaysia

UNIVERSITI TUN HUSSEIN ONN MALAYSIA

FINAL EXAMINATION
SEMESTER I
SESSION 2017/2018

COURSE NAME	:	MANUFACTURING TECHNOLOGY
COURSE CODE	:	BPB 23303
PROGRAMME CODE	:	BPB
EXAMINATION DATE	:	DECEMBER 2017 / JANUARY 2018
DURATION	:	3 HOURS
INSTRUCTION	:	ANSWER **ALL** QUESTIONS

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THIS QUESTION PAPER CONSISTS OF **FOUR (4)** PAGES

Q1   (a)   Describe **TWO (2)** types of milling operation.

(5 marks)

(b)   Explain the following terms with appropriate illustrations.

(i)   Reaming

(ii)   Tapping

(iii)   Counterboring

(iv)   Centering

(v)   Spot facing

(20 marks)

Q2   (a)   Discuss **TWO (2)** principles of cutting tool technology.

(4 marks)

(b)   List **SIX (6)** precautions in arc welding work operation.

(6 marks)

(c)   Explain **FIVE (5)** steps of spot-welding cycle with appropriate illustration.
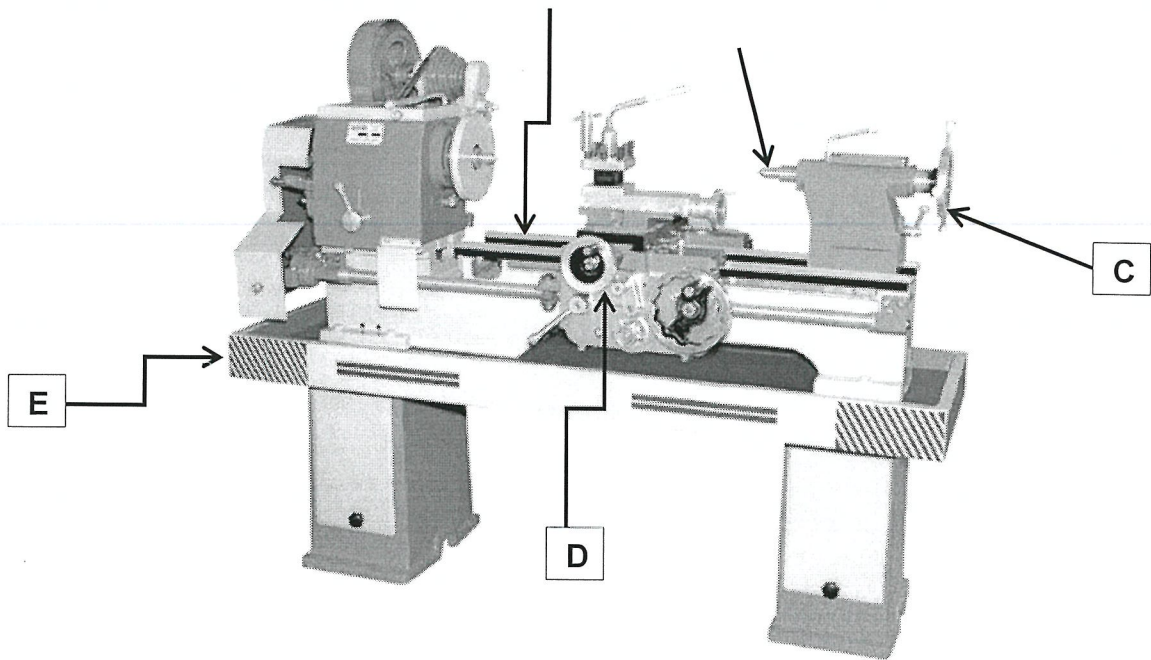
(15 marks)

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Figure Q3(a): Conventional Lathe Machine

(b) A drilling operation is to be performed with a 12.0 mm diameter twist in a steel work part. The hold is a blind hold at a depth of 50 mm and the point angle is 110°C. The cutting speed is 30 m/min and the feed is 0.20 mm /rev.

Calculate:

(i) Feed rate.

(5 marks)

(ii) Cutting time.

(10 marks)

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Q4 (a) Explain the physical interpretation of parameter C in the Taylor tool equation.

(5 marks)

(b)   Production turning operations were conducted using a cemented carbide tool. The diameter of work-part has 35 cm and 70 cm length. A feed is 0.2 mm/ rev, the depth of cut is 0.5 cm and the cutting speed is 125 m/ min.

Calculate:

(i)   Rotational speed.

(5 marks)

(ii)   Final diameter.

(5 marks)

(iii)   Machining time.

(10 marks)

- END OF QUESTIONS -