

## REVISION CHAPTER 1 & 2, A

### QUESTION 1

- a) List two (2) types of angle that important in mechanics of cutting. (2 marks)

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- b) What distinguishes slab milling from face milling? Explain with the aid of sketches. (5 marks)

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- c) State **two (2)** types of turning operations and support your answer with an aid of diagram. (3 marks)

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## QUESTION 2

- a) A machinist is assigned to choose suitable tools for a roughing process. The initial diameter is 52mm and final diameter is 47mm. Table below shows cutting parameters for the two tools. Calculate the MRR and decide which tool suitable for the job. (3 marks)

ool	CVD Coated Carbide	High Speed Steel
Feed, $f$ (mm/rev)	0.8	0.4
Depth of cut, $d$ (mm)	2.5	1.5
Rotational speed, $N$ (rpm)	250	300

- b) Castings involves pouring molten metal into a mold cavity. Describe functions of core and pouring cup in casting. (2 marks)

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- c) Sand casting processes is the most common and versatile. State four (4) requirements of sand used in casting and one (1) type of pattern materials used in casting. (5 marks)

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## QUESTION 3

- a) There are two types of casting, expendables mold and permanent mold. Differentiate both of the casting using diagram and state **two (2)** advantages for each casting. (5 marks)

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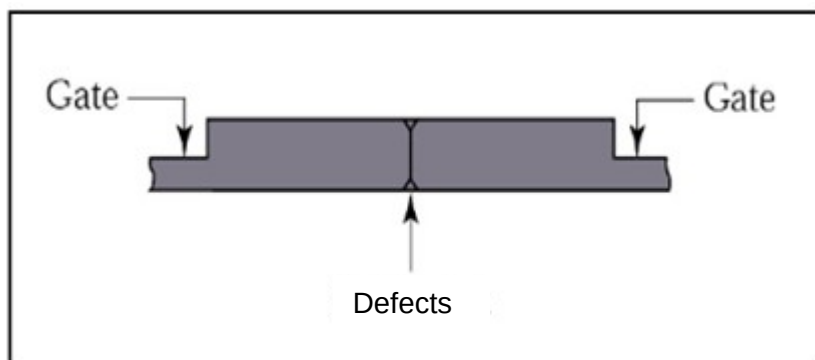
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- b) Figure 1 shows one of the pouring metal defects in casting. Name and describe the defects, causes of defects and suggest ways to rectify it. (5 marks)



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