CONFIDENTIAL

UNIVERSITY COLLEGE TATI

UNIVERSITY COLLEGE TATI (UC TATI)

FINAL EXAMINATION QUESTION BOOKLET	
COURSE CODE	: FEW 1022
COURSE	: WORKSHOP TECHNOLOGY
SEMESTER/SESSION	: 3-2023/2024
DURATION	: 2.0 HOURS

Instructions:

1. This booklet contains **5** questions. Answer all questions
2. All answers should be written in answer booklet.
3. Write legibly and draw sketches wherever required.
4. If in doubt, rise up your hand and ask the invigilator.

DO NOT OPEN THIS BOOKLET UNTIL YOU ARE TOLD TO DO SO

THIS BOOKLET CONTAINS 4 PRINTED PAGES INCLUDING COVER PAGE

Answer all five (5) questions.

Question 1

a) **State** what must be learned before operating a machine tool for the first time. (2 marks)

b) **List** five (5) common causes of accident in the machine shop. (5 marks)

c) **Apply** five (5) good practice of housekeeping in the workshop. (10 marks)

Question 2

a) **State** three (3) types of measuring process. (3 marks)

b) Testing process can be classified into gauging and measuring, please **describe** it. (4 marks)

c) With referring to Figure 1, **solve** for the final measurement reading of the vernier. (5 marks)

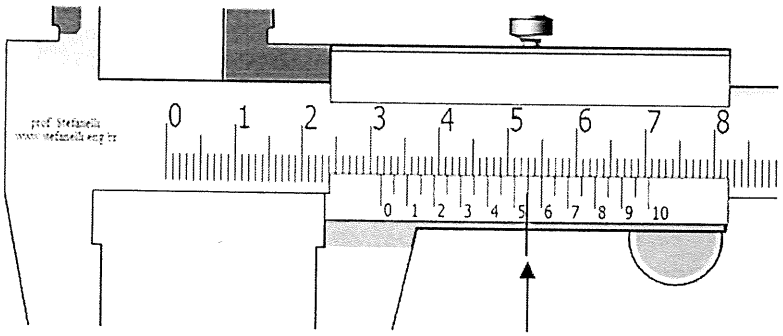

Figure 1

d) With referring to figure 2, **solve** for the final measurement reading of the micrometer. (5 marks)

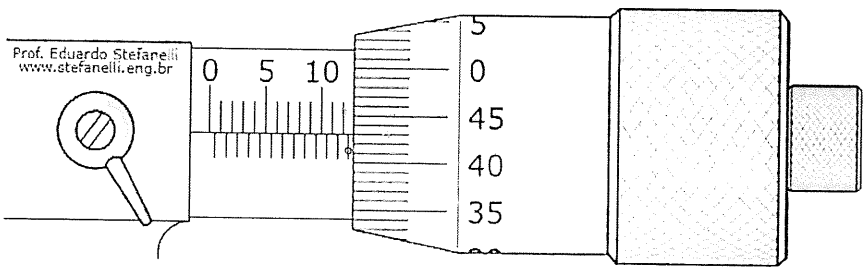

Figure 2

Question 3

a) **Name** five (5) shapes of files. (5 marks)

b) **Describe** the differences between taper tap and bottoming tap. (6 marks)

c) **Classified** three (3) types cutting roughness of the files. (6 marks)

d) **Demonstrate** the correct holding and filing technique. (Sketch where appropriate). (8 marks)

Question 4

a) **Name** two (2) types of drilling machine. (2 marks)

b) **Give** two (2) examples of tool holding devices and two (2) examples of work holding devices use at drilling machine. (4 marks)

c) Referring to Figure 3 **name** parts of lathe machine that label with A, B, C, D & E. (5 marks)

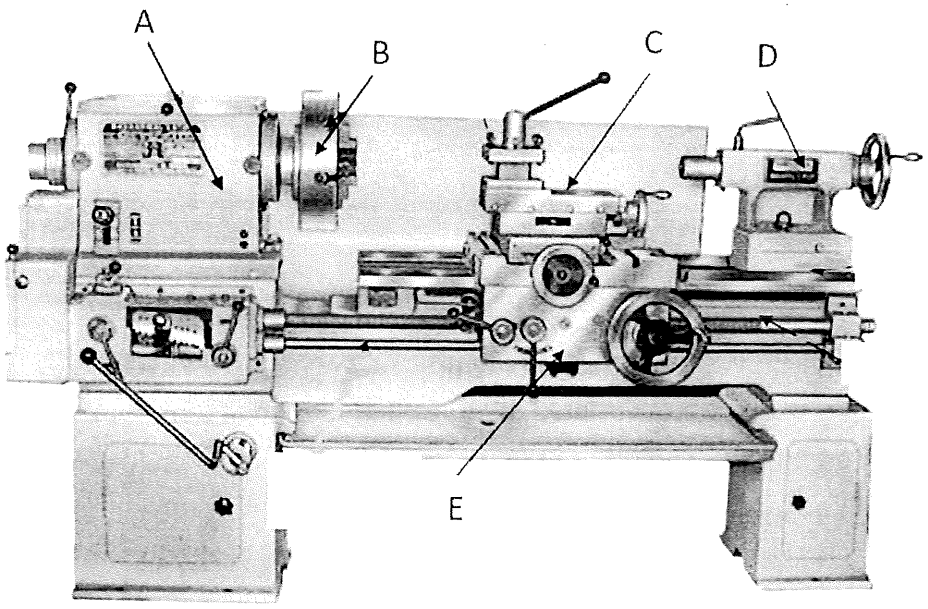

Figure 3

d) **Describe** four (4) common lathe operation. (8 marks)

e) **Estimate** the spindle speed in rpm for machining 30mm diameter aluminum using HSS cutting tool. Cutting speed is 150m/min. (5 marks)

Question 5

a) Referring to Figure 4, **name** parts of milling machine labeled with A, B, C & D. (4 marks)

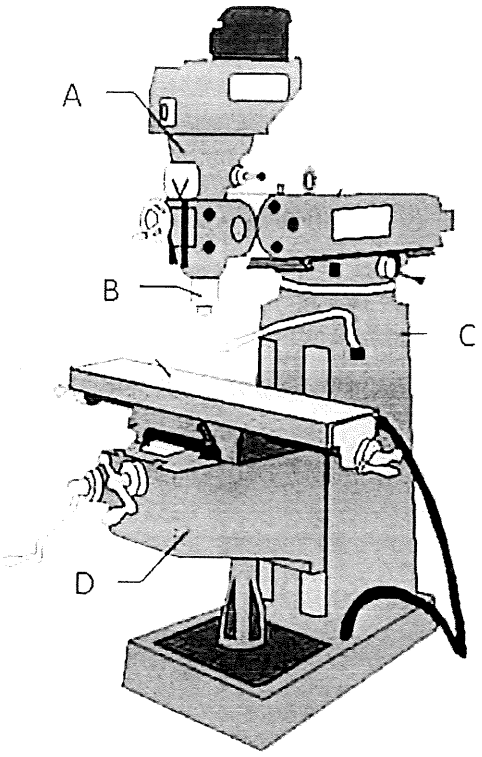

Figure 4

b) **Estimate** the spindle speed in rpm for a 10 mm diameter HSS milling cutter when machine mild steel. Cutting speed is 25m/min. (5 marks)

c) **Give** four (4) purposes of using cutting fluids. (4 marks)

d) Briefly **explain** two (2) types of cutting fluids. (4 marks)

----------End of questions ----------