

Scheme-G
Sample Test Paper- I

Course Name :- Diploma in Automobile Engineering

Course Code :-AE

Semester :-Fourth

Subject Title :-Automobile Manufacturing Process

Marks :- 25

17403

Time:- 1 hour

Instructions:

1. All questions are compulsory
2. Illustrate your answers with neat sketches wherever necessary
3. Figures to the right indicate full marks
4. Assume suitable data if necessary
5. Preferably, write the answers in sequential order

Q1. Attempt any THREE

(09 Marks)

- a) Define Forge ability. List any two forgeable material
- b) Explain punching operation with neat sketch.
- c) Why clearance is necessary in between die and punch?
- d) State any three functions of pilots used in presses.

Q2. Attempt any TWO

(08 Marks)

- a) Compare Brazing and Soldering.(Any four points)
- b) Explain Blanking operation with neat sketch.
- c) Explain working principle of Gas welding operation.

Q3. Attempt any TWO

(08 Marks)

- a) Write forging sequence for manufacturing of Crank shaft.
- b) Compare TIG and MIG welding with respect to principle and application.
- c) Draw sketch of combination die and name different parts.

Scheme-G

Sample Test Paper- II

Course Name :-Diploma in Automobile Engineering

Course Code :-AE

Semester :-Fourth

Subject Title :-Automobile Manufacturing Process

Marks :- 25

17403

Time:- 1 hour

Instructions:

- 1) All questions are compulsory
- 2) Illustrate your answers with neat sketches wherever necessary
- 3) Figures to the right indicate full marks
- 4) Assume suitable data if necessary
- 5) Preferably, write the answers in sequential order

Q1. Attempt any THREE

(09 Marks)

- a) Describe Lapping process.
- b) Classify CNC machines.
- c) Why surface cleaning is necessary before surface treatment?
- d) State the function of any four M codes used in CNC part programming.

Q2. Attempt any TWO

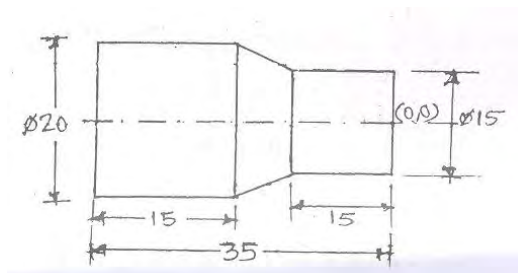
(08 Marks)

- a) What is Buffing? State any two advantages of Buffing.
- b) Differentiate between Conventional machines and CNC machines.
- c) List any four types of tools used on turning center. Draw simple sketch of any one.

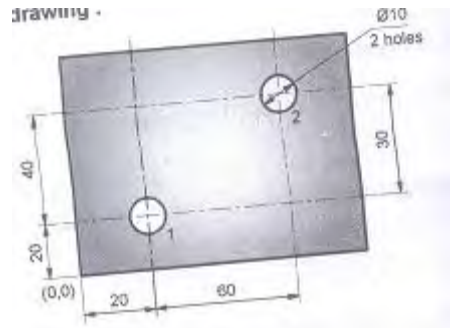
Q3. Attempt any ONE

(08 Marks)

- a) Develop a part program for the following part. (Fig. 1)



b) Develop a part program for the job shown in Fig. 2. Assume job thickness 10 mm.



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Scheme-G
Sample Question Paper

Course Name :-Diploma in Automobile Engineering

Course Code :-AE

17403

Semester :-Fourth

Subject Title :-Automobile Manufacturing Process

Marks :-100

Time:- 3 hour

Instructions:

- 1) All questions are compulsory
- 2) Illustrate your answers with neat sketches wherever necessary
- 3) Figures to the right indicate full marks
- 4) Assume suitable data if necessary
- 5) Preferably, write the answers in sequential order

Q1.A) Attempt any SIX

(12 Marks)

- a) Define forge ability of materials?
- b) Explain piercing operation?
- c) State the factors considered for selection of welding process?
- d) What is soldering? Give one application of soldering.
- e) State one application of electroplating and galvanizing .
- f) Define G code and M code used in CNC process?
- g) What is vertical machining centre?
- h) Define forging process?

B) Attempt any TWO

(8 Marks)

- a) State two advantages and two disadvantages of forging process?
- b) Explain drop forging with neat sketch
- c) Distinguish between open die forging and closed die forging processes.(Any four points)

Q2. Attempt any FOUR

(16 Marks)

- a) Explain how forging process improves the mechanical properties of components?
- b) Write down the sequence for manufacturing connecting rods?
- c) List the material used in press work in automobile parts with example.
- d) Describe simple die with neat sketch.
- e) Explain bending operation and drawing operation with neat sketch.
- f) List various die accessories. Describe any one using neat sketch.

Q3. Attempt any FOUR

(16 Marks)

- a) Explain how a steel glass is manufactured using drawing process.
- b) Draw labeled sketch of TIG welding process.
- c) Differentiate between TIG and MIG welding process.(Any four points)
- d) Describe resistance welding process.
- e) Compare soldering and brazing .(Any four points)
- f) Sketch and label fly press.

Q4. Attempt any FOUR

(16 Marks)

- a) Sketch and label different types of gas welding flames. Give application of any one.
- b) Explain galvanizing process and give two applications.
- c) How sand blasting process is used in surface cleaning?
- d) What are the advantages of burnishing process over other surface finishing process.
(any four points)
- e) State any four limitations of conventional machining process.
- f) Explain absolute and incremental coordinate system with suitable example.

Q5. Attempt any FOUR

(16 Marks)

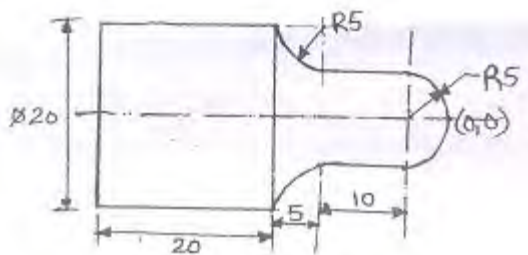
- a) Describe closed loop control CNC system with block diagram.
- b) Differentiate between NC and CNC machines (any four points)
- c) Point out any four disadvantages of CNC machines.

- d) State functions of G01, G03, M02, M06 used in CNC part programming?
- e) Write stepwise procedure for developing CNC part program.
- f) Differentiate between lapping and honing operation. (any four points)

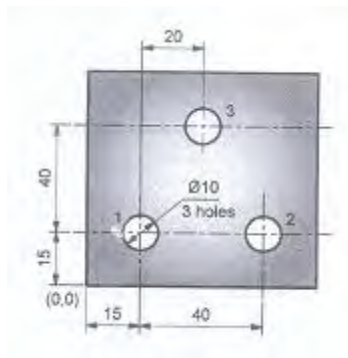
Q6. Attempt any TWO

(16 Marks)

- a) Write a part program for following component. Assume suitable data for programming.



- b) Write a part program for the job shown in figure. Use absolute mode for programming. Take plate thickness of 10 mm.



- c) Draw labeled sketch of progressive die. Write functions of any four parts of progressive die.