

Scheme – G

Sample Test Paper - I

Course Name: Diploma in Production Engineering / Production Technology

Course Code : PG/PT

Semester : Sixth

Subject Title : Automobile Engineering and Manufacturing

Marks : 25

17614

Time: 1 Hrs.

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.

Q.1 Attempt any THREE of the following

09 Marks

- a) State three features of Constant mesh Gear Box.
- b) State necessity of clutch in vehicle
- c) Draw a layout of Automobile vehicle with component.
- d) Enlist types of component used for Automobile aerodynamics.

Q.2 Attempt any TWO of the following

08 Marks

- a) Explain different types of chassis
- b) Draw & explain construction of coil spring.
- c) State necessity of final drive & explain working of propeller shaft.

Q.3 Attempt any TWO of the following

08 Marks

- a) Explain function of real axles & their application.
- b) Write down classification of automobiles vehicle.
- c) Explain the terms of body nomenclature.

Scheme – G

Sample Test Paper - II

Course Name: Diploma in Production Engineering / Production Technology

Course Code : PG/PT

Semester : Sixth

Subject Title : Automobile Engineering and Manufacturing

Marks : 25

17614

Time: 1 Hrs.

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.

Q.1 Attempt any THREE of the following

09 Marks

- a) State three advantages of disc brake.
- b) State three benefits of independent suspension system
- c) Define i)Caster ii) Camber iii) Toe-in
- d) State the use of trailing link of suspension system.

Q.2 Attempt any TWO of the following

08 Marks

- a) Describe working of telescopic shock absorber.
- b) Explain construction & working of Hydraulic Brake
- c) Explain construction and working of McPherson strut Assy.

Q.3 Attempt any TWO of the following

08 Marks

- a) Draw a schematic sketch of recirculating ball bearing type steering Gearbox.
- b) Explain construction & working of wishbone suspension system.
- c) Explain construction & working of rack & pinion steering Gearbox.

Sample Question Paper

Course Name: Diploma in Production Engineering / Production Technology

Course Code : PG/PT

17614

Semester : Sixth

Subject Title : Automobile Engineering and Manufacturing

Marks : 100

Time: 3 Hrs.

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.

Q.1(A) Attempt any THREE

12 Mark

- a) List out different types of leaf spring used in vehicle & draw a neat sketch of any one leaf spring.
- b) Write down advantages & disadvantages of disc brakes.
- c) Explain different types of chassis
- d) Classify automobiles vehicle on the basis of Use, Capacity, Wheels and Drive

Q.1(B) Attempt any ONE

06 Marks

- a) Draw & explain layouts of Automobile vehicles with components and their functions.
- b) Explain construction and working of epicyclic gear box.

Q.2 Attempt any FOUR

16 Marks

- a) Explain Construction & working of differential.
- b) Draw a neat sketch of steering geometry & explain in brief.
- c) Explain Construction & working of McPherson strut Assy.
- d) Differentiate between welding & joining processes in car body manufacturing.
- e) Write down design procedure for a simple fixture used in Milling.

Q.3 Attempt any FOUR

16 Marks

- a) Draw a line diagram of Synchronesh gear box & state its significance over Constant Mesh
- b) Explain Construction & working of rack & pinion steering gear system.
- c) Describe the working of wishbone & trailing suspension.
- d) Explain any two mfg. processes used for production of crankshaft.

e) State the application of different types of drilling jigs.

Q.4 (A) Attempt any THREE of the following

12 Marks

- a) Explain Construction & working of propeller shaft.
- b) Draw a neat sketch of drum brake and explain its working
- c) Describe independent suspension system.
- d) Explain forging & broaching manufacturing process for production of connecting rod.

Q.4(B) Attempt any ONE of the following

06 Marks

- a) Write features and application of any three drilling jigs.
- b) Explain the terms in leaf spring.
 - i) Pre-steering
 - ii) Protective coating

Q.5 Attempt any FOUR of the following

16 Marks

- a) State the necessity of clutch & Draw a neat sketch of diaphragm spring type clutch.
- b) Explain construction and working of Pneumatics brakes.
- c) Explain construction and working of wishbone suspension.
- d) What is dynamic balancing? State its application
- e) Write down special clamping devices used in design of milling fixture.
- f) Describe painting and finishing process in car body manufacturing.

Q.6 Attempt any FOUR of the following

16 Marks

- a) Explain design consideration for jig & fixture.
- b) Describe construction & working of rigid axle
- c) Explain working principle of power steering
- d) Differentiate between Rear axle & front axle..
- e) Write down types of locators for different types of surfaces and shapes