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Total No. of Pages : 02

Total No. of Questions : 09

B.Voc. (Automobile Servicing) (Sem.-5)

AUTO NVH-I

Subject Code : 7.GV.04

M.Code : 91075

Date of Examination : 19-12-22

Time : 3 Hrs.

Max. Marks : 30

INSTRUCTIONS TO CANDIDATES :

1. **SECTION-A is COMPULSORY** consisting of **TEN** questions carrying **ONE** mark each.
2. **SECTION-B** contains **FIVE** questions carrying **2½** (Two and Half) marks each and students has to attempt any **FOUR** questions.
3. **SECTION-C** contains **THREE** questions carrying **FIVE** marks each and students has to attempt any **TWO** questions.

SECTION-A

1. Write short notes on :

- a) Define vibration.
- b) What is frequency?
- c) Define resonance.
- d) What is centrifugal pendulum?
- e) Discuss vibration isolation.
- f) What do you mean by single degree of freedom system?
- g) List any two sources of noise in automobiles.
- h) Define SHM.
- i) List different instruments used for vibration measurement.
- j) What is dry friction?

SECTION-B

2. Discuss important sources of vibration in automobiles.
3. What is damping? Explain types of vibration.
4. Discuss undamped two degree of freedom system.
5. Explain different types of dampers.
6. Explain any one type of vibro meter.

SECTION-C

7. Discuss the role of NVH in automotive design and development.
8. How vibration isolator differs from vibration absorber? Explain different types of vibration absorbers.
9. **Write short note on any two of the following :**
 - a) Formulate equation of motion for linear system.
 - b) Physiological effects of noise.
 - c) Control of torsional oscillation amplitudes in engine crankshaft.

NOTE : Disclosure of Identity by writing Mobile No. or Marking of passing request on any paper of Answer Sheet will lead to UMC against the Student.