VIT UNIVERSITY
(Estd. u/s 3 of UGC Act 1956)
Vellore-632 014, Tamil Nadu, India.

SCHOOL OF MECHANICAL ENGINEERING

Continuous Assessment Test, Jan – 2020

B.TECH. (*Automotive/Mechanical*), Winter Semester, 2019-20

Course Code : MEE 2042 — **Duration** : 90 Minutes.

Course Name : Two and Three Wheeler — **Max. Marks** : 50

Faculty-In-Charge: Dr.B.Ashok — **Slot** : B2

Part - A (10x 5 = 50 Marks)

1. Discuss the various methods to enforce the emission regulation of the two wheeler vehicle. **(CO:1)**
2. What are the factors implemented to control the emissions in a two stroke engine of a motorcycle vehicle? **(CO:1)**
3. Discuss about the three-way catalytic converter used in the SI engine with a relevant sketch. **(CO:1)**
4. Explain the reason behind the operation of stoichiometric operation in an SI engine. Also discuss how these can be achieved in a modern two wheeler engines. **(CO:1)**
5. What are the advanced chassis and body related technologies implemented in motorcycles? Discuss anyone technology in detail. **(CO:1)**
6. Explain the classification of motorcycle vehicle based on model, engine, use and construction with two examples. **(CO:2)**
7. What are the requirements to be followed and considered in the design of motorcycle frame and three wheeler frames? Compare the safety aspects of the two and three wheeler frame design. **(CO:2)**
8. Discuss the characteristics features, advantages of the single cradle and backbone frame with relevant sketches. **(CO:2)**
9. Discuss the features and advantages of the various layout configurations of a three wheel vehicle with relevant sketch and examples. **(CO:2)**
10. Explain the monocoque frame construction with its advantages. Differentiate this type of frame with perimeter type of construction with relevant sketches. **(CO:2)**