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**B.E. / B.TECH. DEGREE EXAMINATIONS, DEC 2019**

Seventh Semester

**AE16703 – TWO AND THREE WHEELERS***(Automobile engineering)***(Regulation 2016)****Time: Three Hours****Maximum : 100 Marks**Answer **ALL** questions**PART A - (10 X 2 = 20 Marks)**

	CO	RBT
1. Differentiate between 2-stroke SI engine and 4-stroke SI engine.	1	AP
2. Explain the function of reed valve used in two stroke petrol engine.	1	U
3. What are the major components of electronic fuel injection system?	2	R
4. What are the advantages of electronic ignition system over conventional system.	2	U
5. List out the different types of clutches used in two wheeler.	3	R
6. List out the various panel meters present in a two wheeler.	3	R
7. What is Combined Braking System.	4	U
8. Enumerate the advantages of disc brake over drum brake system.	4	U
9. List out the various three wheeler manufacturers in India.	5	R
10. What are the major types of three wheelers available in the Indian market?	5	R

**PART B - (5 X16 = 80 Marks)**

11. (a) Explain briefly about the types of scavenging process with neat sketches. (16) 1 U

**(OR)**

- (b) Briefly explain about the construction and working of Electric Power-train of an e-bike with neat sketch. (16) 1 U

12. (a) Explain in detail about magneto coil ignition system with neat sketch. (16) 2 U

**(OR)**

(b) Explain with neat sketch about the various components of fuel injection system in a two wheeler. (16) 2 U

13. (a) Explain the construction and working of multi plate clutch with neat sketch. (16) 3 U

**(OR)**

(b) Explain briefly about the working principle of Telescopic shock absorber used in front suspension system of a two wheeler. (16) 3 U

14. (a) Briefly discuss about the Mechanical brake system of a two wheeler with a neat sketch and Explain the construction and working of the rear Drum Brake system. (16) 4 U

**(OR)**

(b) Explain the construction and working of Anti-lock Braking System for two wheeler. (16) 4 U

15. (a) Discuss in detail about performance characteristics and features of any four bikes of same category by different manufacturers in India. (16) 5 U

**(OR)**

(b) Draw the layout of a three wheeler and mark its parts along with their functions. (16) 5 U