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**Question Paper Code: 35074**

B.E. / B.Tech. DEGREE EXAMINATION, NOV 2017

Fifth Semester

Mechanical Engineering

01UME504 – AUTOMOBILE ENGINEERING

(Regulation 2013)

Duration: Three hours

Maximum: 100 Marks

Answer ALL Questions

PART A - (10 x 2 = 20 Marks)

1. List the various lubrication systems used for IC engines.
2. List out any eight components of an engine.
3. What is the purpose of ignition system?
4. Name any four functions of a battery in a vehicle.
5. Differentiate between the shaft and axle with suitable example.
6. What is an overdrive?
7. What is a power steering system?
8. What is a tie-rod?
9. What is a hybrid vehicle?
10. What is E85?

PART - B (5 x 16 = 80 Marks)

11. (a) Categorize the vehicles in terms of its layouts and discuss its advantages and disadvantages. (16)

Or

- (b) Explain the different engine design variations with schematic sketches. (16)
12. (a) What is an exhaust system? Explain the principle of pollution control using a catalytic converter and Air injection system. (16)

Or

- (b) Explain the distributor type electronic ignition system with neat sketch. (16)
13. (a) What is the function of a Clutch and discuss its different types. (16)

Or

- (b) Explain the need for gear box and discuss the different types of meshes in the gearbox with neat sketches. (16)
14. (a) What is function of a suspension and list the advantages of independent suspension system of an automobile. (16)

Or

- (b) What do you understand by ABS? Explain it with schematic sketches. (16)
15. (a) What are alternate fuels? Discuss its advantages and disadvantages. (16)

Or

- (b) How do electric vehicles work? What are its advantages and disadvantages? (16)
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