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SATHYABAMA UNIVERSITY

(Established under section 3 of UGC Act,1956)

Course & Branch :B.E - AUTO

Title of the Paper :Automotive Diesel Engines

Max. Marks :80

Sub. Code :686401

Time : 3 Hours

Date :04/05/2011

Session :FN

PART - A

(10 x 2 = 20)

Answer ALL the Questions

1. State any two difference between 2 stroke and 4 stroke engines.
2. Define Cetane number.
3. Classify fuel injection systems of diesel engines.
4. State the function of governor.
5. Define Swirl.
6. Define Knocking.
7. What do you mean by supercharging?
8. What do you mean by charge cooling?
9. State the purpose of engine testing.
10. What do you mean by performance maps?

PART – B
Answer All the Questions

(5 x 12 = 60)

11. With a neat sketch explain the working principle of four-stroke cycle diesel engine.
(or)
12. Explain the Cetane number determination test in detail.
13. With a neat sketch explain Common rail direct injection system. State its advantages.
(or)
14. Explain the different types of injection nozzles.
15. With a pressure-crank angle diagram explain the stages of combustion in CI engine.
(or)
16. Explain about M type combustion chamber with a neat sketch.
17. Discuss the different types of turbo charges with a neat sketch.
(or)
18. Explain the objectives, merits and demerits of EGR.
19. Discuss the performance and emission characteristics of a stationary diesel engine.
(or)
20. Discuss the variables affecting the engine performance and emission characteristics.