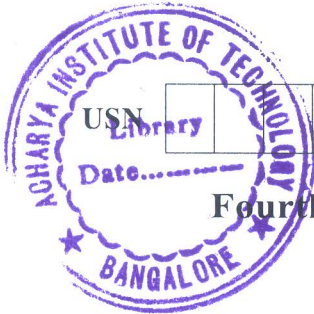


CBGS SCHEME

17AU44



Fourth Semester B.E. Degree Examination, July/August 2021 Automotive Engines

Time: 3 hrs.

Max. Marks: 100

Note: Answer any FIVE full questions.

- 1 a. Illustrate with a neat sketch about the working principle of Four stroke CI engine. (10 Marks)
b. Explain with a neat sketch about the constructional detail of Four strokes SI Engine. (10 Marks)
- 2 a. Compare the two strokes and Four stroke engine. (10 Marks)
b. Write the major difference between Otto cycle and diesel cycle. (10 Marks)
- 3 a. Illustrate with neat sketch about the working principle of common rail diesel injection systems. (10 Marks)
b. Explain with neat sketch the working of unit injector. (10 Marks)
- 4 a. Explain briefly about Pintle and Multihole nozzle. (10 Marks)
b. Briefly explain about the need and types of governor for diesel engine. (10 Marks)
- 5 a. Explain briefly the stages of combustion in SI engine. (10 Marks)
b. Explain briefly the process of knocking combustion in an SI engine. (10 Marks)
- 6 a. Illustrate with neat sketch about the various stages of combustion in an CI engine. (10 Marks)
b. Explain the factors affecting delay period and uncontrolled combustion in CI engines. (10 Marks)
- 7 a. Explain briefly about Turbo charging with waste gate variable geometry. (10 Marks)
b. Illustrate with neat sketch about different methods super charging and turbocharging. (10 Marks)
- 8 a. Justify the need for cooling system. (03 Marks)
b. Review in detail about types of cooling system for IC engine. (07 Marks)
c. Explain in detail about Thermo-Syphon cooling system. (10 Marks)
- 9 a. Briefly explain Mist-type lubrication system. (10 Marks)
b. Explain the requirements of lubrication system. (06 Marks)
c. Discuss the properties of lubricants. (04 Marks)
- 10 a. Illustrate with neat sketch about pressurized lubrication system. (10 Marks)
b. Explain in detail about Dry sump lubrication system with neat sketch. (10 Marks)

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Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
2. Any revealing of identification, appeal to evaluator and /or equations written eg, 42+8 = 50, will be treated as malpractice.