

Model Question Paper-1 with effect from 2019-20 (CBCS Scheme)

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Fourth Semester B.E. Degree Examination Subject Title: AUTOMOTIVE ENGINES

TIME: 03 Hours

Max. Marks: 100

- Note: 01. Answer any **FIVE** full questions, choosing at least **ONE** question from each **MODULE**.
02. Draw a neat diagram where ever required.

| | | Module -1 | CO | *Bloom's Taxonomy Level | MARKS |
|-------|---|---|-----------|--------------------------------|--------------|
| Q.01 | a | Draw a neat diagram of a single cylinder 4-stroke SI engine ,label its parts and briefly explain them | CO1 | L1,L2 | 10 |
| | b | With a neat line diagram explain the working principle and construction of 2-stroke CI engine | CO1 | L1,L2 | 10 |
| | | OR | | | |
| Q.02 | a | Write the comparision between SI and CI 4-stroke engine | CO1, CO2 | L2 | 10 |
| | b | Write a note on i) Otto cycle ii) Diesel cycle | CO1 | L1 | 10 |
| | | Module-2 | | | |
| Q. 03 | a | With a neat diagram explain Working of simple venturi carburetto | CO2 | L2 | 10 |
| | b | With a neat diagram explain Electronic fuel injection system | CO2 | L2 | 10 |
| | | OR | | | |
| Q.04 | a | With a neat diagram explain Common rail diesel injection (CRDI) system | CO1 | L1,L2 | 10 |
| | b | With a neat diagram explain Pneumatic governor | CO1 | L1,L2 | 10 |
| | | Module-3 | | | |
| Q. 05 | a | With a neat diagram explain the construction and working of thermostats water cooling | CO3 | L1,L2 | 10 |
| | b | What do you mean by antifreeze solutions, Explain different types of coolant. | CO3 | L1,L2 | 10 |
| | | OR | | | |
| Q. 06 | a | What do you mean by lubricant, Explain the necessity of lubricant in automobile? | CO3 | L1,L2 | 10 |
| | b | List and explain various required properties of lubricant | CO3 | L1,L2 | 10 |
| | | Module-4 | | | |
| Q. 07 | a | With a neat diagram explain roots supercharger | CO4 | L1,L2 | 10 |
| | b | List the limitations of Turbocharger on petrol and diesel engine | CO4 | L1,L2 | 10 |
| | | OR | | | |
| Q. 08 | a | With a neat diagram explain waste gate controller in turbocharger | CO4 | L1,L2 | 10 |
| | b | Name different methods of turbocharging and with a neat diagram explain any two | CO4 | L1,L2 | 10 |
| | | Module-5 | | | |
| Q. 09 | a | Name different types of scavenging process, with necessary sketches explain them | CO1 | L1,L2 | 10 |
| | b | With a neat diagram explain 3 port engine | CO1 | L1,L2 | 10 |
| | | OR | | | |
| Q. 10 | a | Write a note on Scavenging parameters | CO1 | L1,L2 | 10 |
| | b | Write Comparison of Different Scavenging Systems | CO1 | L1,L2 | 10 |