Code No: R05222401 **R05** **Set No. 2**

II B.Tech II Semester Examinations,December 2010
AUTOMOTIVE ENGINES
Automobile Engineering

Time: 3 hours **Max Marks: 80**

Answer any FIVE Questions
All Questions carry equal marks

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1. (a) What is crank case dilution?
   (b) How it effects the performance of an engine?
   (c) Differentiate between crank case dilution and crank case ventilation. [4+6+6]
2. (a) Explain the petrol injection system with a suitable diagram?
   (b) Explain the advantages and disadvantages of petrol injection? [8+8]
3. (a) What is the function of carburettor in SI engine?
   (b) Why multi cylinder engines require rich mixture than single cylinder engine?
   (c) What are the limitations of simple carburettor? [4+4+8]
4. (a) Describe any one method of supercharging with a neat sketch
   (b) Explain briefly the thermodynamic cycle of supercharged engine on P-V diagram for an ideal Otto cycle. [8+8]
5. (a) How the diesel fuel injection pump is tested?
   (b) Explain the need and procedure of conducting calibration and phasing tests? [6+10]
6. (a) Explain in detail as to how spray formation takes place, when fuel is forced through nozzle.
   (b) What are the factors determine the penetration of spray? [8+8]
7. (a) Explain the scavenging process in two-stroke engine. What is meant by blow down?
   (b) What are the advantages of two-stroke CI engine.
   (c) What is meant by valve overlap? Why high valve overlap is undesirable? [8+4+4]
8. (a) What are the factors affecting the piston rings selection for an automotive engine?
   (b) Explain with the help of sketch the working of compression rings. [8+8]

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Code No: R05222401 **R05** **Set No. 4**

II B.Tech II Semester Examinations,December 2010
AUTOMOTIVE ENGINES
Automobile Engineering

Time: 3 hours **Max Marks: 80**

Answer any FIVE Questions
All Questions carry equal marks

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1. (a) How the diesel fuel injection pump is tested?
   (b) Explain the need and procedure of conducting calibration and phasing tests? [6+10]
2. (a) What is crank case dilution?
   (b) How it effects the performance of an engine?
   (c) Differentiate between crank case dilution and crank case ventilation. [4+6+6]
3. (a) Explain in detail as to how spray formation takes place, when fuel is forced through nozzle.
   (b) What are the factors determine the penetration of spray? [8+8]
4. (a) What are the factors affecting the piston rings selection for an automotive engine?
   (b) Explain with the help of sketch the working of compression rings. [8+8]
5. (a) What is the function of carburettor in SI engine?
   (b) Why multi cylinder engines require rich mixture than single cylinder engine?
   (c) What are the limitations of simple carburettor? [4+4+8]
6. (a) Explain the scavenging process in two-stroke engine. What is meant by blow down?
   (b) What are the advantages of two-stroke CI engine.
   (c) What is meant by valve overlap? Why high valve overlap is undesirable? [8+4+4]
7. (a) Describe any one method of supercharging with a neat sketch
   (b) Explain briefly the thermodynamic cycle of supercharged engine on P-V diagram for an ideal Otto cycle. [8+8]
8. (a) Explain the petrol injection system with a suitable diagram?
   (b) Explain the advantages and disadvantages of petrol injection? [8+8]

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Code No: R05222401 **R05** **Set No. 1**

II B.Tech II Semester Examinations,December 2010
AUTOMOTIVE ENGINES
Automobile Engineering

Time: 3 hours **Max Marks: 80**

Answer any FIVE Questions
All Questions carry equal marks

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1. (a) Describe any one method of supercharging with a neat sketch
   (b) Explain briefly the thermodynamic cycle of supercharged engine on P-V diagram for an ideal Otto cycle. [8+8]
2. (a) What is the function of carburettor in SI engine?
   (b) Why multi cylinder engines require rich mixture than single cylinder engine?
   (c) What are the limitations of simple carburettor? [4+4+8]
3. (a) How the diesel fuel injection pump is tested?
   (b) Explain the need and procedure of conducting calibration and phasing tests? [6+10]
4. (a) Explain the petrol injection system with a suitable diagram?
   (b) Explain the advantages and disadvantages of petrol injection? [8+8]
5. (a) Explain in detail as to how spray formation takes place, when fuel is forced through nozzle.
   (b) What are the factors determine the penetration of spray? [8+8]
6. (a) What are the factors affecting the piston rings selection for an automotive engine?
   (b) Explain with the help of sketch the working of compression rings. [8+8]
7. (a) What is crank case dilution?
   (b) How it effects the performance of an engine?
   (c) Differentiate between crank case dilution and crank case ventilation. [4+6+6]
8. (a) Explain the scavenging process in two-stroke engine. What is meant by blow down?
   (b) What are the advantages of two-stroke CI engine.
   (c) What is meant by valve overlap? Why high valve overlap is undesirable? [8+4+4]

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Code No: R05222401 **R05** **Set No. 3**

II B.Tech II Semester Examinations,December 2010
AUTOMOTIVE ENGINES
Automobile Engineering

Time: 3 hours **Max Marks: 80**

Answer any FIVE Questions
All Questions carry equal marks

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1. (a) What is crank case dilution?
   (b) How it effects the performance of an engine?
   (c) Differentiate between crank case dilution and crank case ventilation. [4+6+6]
2. (a) What is the function of carburettor in SI engine?
   (b) Why multi cylinder engines require rich mixture than single cylinder engine?
   (c) What are the limitations of simple carburettor? [4+4+8]
3. (a) Explain the scavenging process in two-stroke engine. What is meant by blow down?
   (b) What are the advantages of two-stroke CI engine.
   (c) What is meant by valve overlap? Why high valve overlap is undesirable? [8+4+4]
4. (a) Explain the petrol injection system with a suitable diagram?
   (b) Explain the advantages and disadvantages of petrol injection? [8+8]
5. (a) How the diesel fuel injection pump is tested?
   (b) Explain the need and procedure of conducting calibration and phasing tests? [6+10]
6. (a) What are the factors affecting the piston rings selection for an automotive engine?
   (b) Explain with the help of sketch the working of compression rings. [8+8]
7. (a) Explain in detail as to how spray formation takes place, when fuel is forced through nozzle.
   (b) What are the factors determine the penetration of spray? [8+8]
8. (a) Describe any one method of supercharging with a neat sketch
   (b) Explain briefly the thermodynamic cycle of supercharged engine on P-V diagram for an ideal Otto cycle. [8+8]

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