Code No: NR320303 **NR** **Set No. 2**

III B.Tech II Semester Examinations,December 2010
AUTOMOBILE ENGINEERING
Common to Mechanical Engineering, Mechatronics, Production Engineering
Time: 3 hours **Max Marks: 80**

Answer any FIVE Questions
All Questions carry equal marks

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1. (a) Describe with a neat sketch of Magneto-ignition system of a four-cylinder engine.
   (b) Compare Battery ignition system with Magneto-ignition system. [10+6]
2. (a) Sketch and explain the types of leaf springs suspension system of an automobile.
   (b) With neat sketch, explain the working of vertical guide type suspension system. [8+8]
3. (a) What are the merits of multiplate clutches over single plate clutches.
   (b) Draw a sketch of 5 − speed constant mesh type gear box when the gear is in neutral position. [8+8]
4. (a) What are the objects of engine lubrication?
   (b) How two stroke engines are being lubricated.
   (c) List the parts of any type of engine lubricating system. [6+6+4]
5. Write notes on:
   (a) Troubles with charging circuit.
   (b) Wiper blade mechanism.
   (c) Types of signal indicators.
   (d) Generator voltage regulation. [4+4+4+4]
6. (a) Explain the multiple jet compensation device used in modern carburetors.
   (b) Explain the salient features of ZENITH carburetor. [8+8]
7. (a) Explain the purpose of a radiator.
   (b) Describe the types of radiator cores.
   (c) Explain the details of servicing of radiator. [4+6+6]
8. Write notes for the following:
   (a) Hill-holder.
   (b) Leading and trailing shoes.
   (c) Requirements of break fluid.
   (d) Break shoe material. [4+4+4+4]

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Code No: NR320303 **NR** **Set No. 4**

III B.Tech II Semester Examinations,December 2010
AUTOMOBILE ENGINEERING
Common to Mechanical Engineering, Mechatronics, Production Engineering
Time: 3 hours **Max Marks: 80**

Answer any FIVE Questions
All Questions carry equal marks

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1. Write notes for the following:
   (a) Hill-holder.
   (b) Leading and trailing shoes.
   (c) Requirements of break fluid.
   (d) Break shoe material. [4+4+4+4]
2. (a) Describe with a neat sketch of Magneto-ignition system of a four-cylinder engine.
   (b) Compare Battery ignition system with Magneto-ignition system. [10+6]
3. (a) Explain the multiple jet compensation device used in modern carburetors.
   (b) Explain the salient features of ZENITH carburetor. [8+8]
4. (a) What are the merits of multiplate clutches over single plate clutches.
   (b) Draw a sketch of 5 − speed constant mesh type gear box when the gear is in neutral position. [8+8]
5. (a) Sketch and explain the types of leaf springs suspension system of an automobile.
   (b) With neat sketch, explain the working of vertical guide type suspension system. [8+8]
6. (a) What are the objects of engine lubrication?
   (b) How two stroke engines are being lubricated.
   (c) List the parts of any type of engine lubricating system. [6+6+4]
7. Write notes on:
   (a) Troubles with charging circuit.
   (b) Wiper blade mechanism.
   (c) Types of signal indicators.
   (d) Generator voltage regulation. [4+4+4+4]
8. (a) Explain the purpose of a radiator.
   (b) Describe the types of radiator cores.
   (c) Explain the details of servicing of radiator. [4+6+6]

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Code No: NR320303 **NR** **Set No. 1**

III B.Tech II Semester Examinations,December 2010
AUTOMOBILE ENGINEERING
Common to Mechanical Engineering, Mechatronics, Production Engineering
Time: 3 hours **Max Marks: 80**

Answer any FIVE Questions
All Questions carry equal marks

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1. Write notes for the following:
   (a) Hill-holder.
   (b) Leading and trailing shoes.
   (c) Requirements of break fluid.
   (d) Break shoe material. [4+4+4+4]
2. (a) Explain the multiple jet compensation device used in modern carburetors.
   (b) Explain the salient features of ZENITH carburetor. [8+8]
3. (a) Explain the purpose of a radiator.
   (b) Describe the types of radiator cores.
   (c) Explain the details of servicing of radiator. [4+6+6]
4. (a) Sketch and explain the types of leaf springs suspension system of an automobile.
   (b) With neat sketch, explain the working of vertical guide type suspension system. [8+8]
5. (a) What are the merits of multiplate clutches over single plate clutches.
   (b) Draw a sketch of 5 − speed constant mesh type gear box when the gear is in neutral position. [8+8]
6. Write notes on:
   (a) Troubles with charging circuit.
   (b) Wiper blade mechanism.
   (c) Types of signal indicators.
   (d) Generator voltage regulation. [4+4+4+4]
7. (a) Describe with a neat sketch of Magneto-ignition system of a four-cylinder engine.
   (b) Compare Battery ignition system with Magneto-ignition system. [10+6]
8. (a) What are the objects of engine lubrication?
   (b) How two stroke engines are being lubricated.
   (c) List the parts of any type of engine lubricating system. [6+6+4]

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Code No: NR320303 **NR** **Set No. 3**

III B.Tech II Semester Examinations,December 2010
AUTOMOBILE ENGINEERING
Common to Mechanical Engineering, Mechatronics, Production Engineering
Time: 3 hours **Max Marks: 80**

Answer any FIVE Questions
All Questions carry equal marks

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1. (a) Explain the purpose of a radiator.
   (b) Describe the types of radiator cores.
   (c) Explain the details of servicing of radiator. [4+6+6]
2. (a) What are the merits of multiplate clutches over single plate clutches.
   (b) Draw a sketch of 5 − speed constant mesh type gear box when the gear is in neutral position. [8+8]
3. (a) Explain the multiple jet compensation device used in modern carburetors.
   (b) Explain the salient features of ZENITH carburetor. [8+8]
4. (a) What are the objects of engine lubrication?
   (b) How two stroke engines are being lubricated.
   (c) List the parts of any type of engine lubricating system. [6+6+4]
5. (a) Describe with a neat sketch of Magneto-ignition system of a four-cylinder engine.
   (b) Compare Battery ignition system with Magneto-ignition system. [10+6]
6. Write notes on:
   (a) Troubles with charging circuit.
   (b) Wiper blade mechanism.
   (c) Types of signal indicators.
   (d) Generator voltage regulation. [4+4+4+4]
7. Write notes for the following:
   (a) Hill-holder.
   (b) Leading and trailing shoes.
   (c) Requirements of break fluid.
   (d) Break shoe material. [4+4+4+4]
8. (a) Sketch and explain the types of leaf springs suspension system of an automobile.
   (b) With neat sketch, explain the working of vertical guide type suspension system. [8+8]

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