



Reg. No. : .....

Name : .....

**IV Semester B.Tech. Degree Examination, July 2009**  
**Branch : Mechanical Engg.**  
**Lab : IC ENGINES LAB**

Time : 3 Hours

Max. Marks : 100

(Answer **one** question, as chosen by **lot**)

1. Conduct an experiment to determine the flash point and fire point of the given oil. Comment the result.
2. Conduct an experiment to determine to find the calorific value of the given fuel using Junker's gas calorimeter.
3. Determine the kinematic viscosity of the given oil at various temperatures and draw a graph connecting temperature and viscosity also determine the kinematic viscosity at .....0 °C.
4. Conduct a constant speed test on the given single cylinder petrol engine and plot the following performance curves :
  - a) TFC vs BP.
  - b) SFC vs BP.
  - c) Mechanical Efficiency vs BP.
  - d) Brake thermal efficiency vs BP.Comment on your results.
5. Conduct a constant speed test on the given diesel engine and plot the following performance curves :
  - a) TFC vs BP.
  - b) SFC vs BP.
  - c) Mechanical Efficiency vs BP.
  - d) Brake thermal efficiency vs BP.Comment on your results.

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6. Conduct experiment on given diesel engine under different loading condition and hence plot the following graphs.
    - a) Mechanical Efficiency vs BP.
    - b) Volumetric Efficiency vs BP.
    - c) Air fuel ratio vs BP.
  7. Conduct a morse test to find the indicated power of the multi cylinder petrol engine. Comment on the results.
  8. Conduct heat balance test on the given diesel engine and prepare a heat balance sheet and heat balance chart using the obtained data.
  9. Conduct experiment on the given diesel engine to draw the valve timing diagram. Comment on the results.
  10. Conduct a test on the given reciprocating air compressor and plot the following characteristic curves.
    - a) Volumetric efficiency vs Delivery pressure.
    - b) Overall efficiency vs Delivery pressure.
  11. Conduct a load test on the multi cylinder petrol engine and plot the performance curves :
    - a) TFC vs BP.
    - b) SFC vs BP.
    - c) Mechanical Efficiency vs BP.
    - d) Brake thermal efficiency vs BP.Comment on the results.
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