

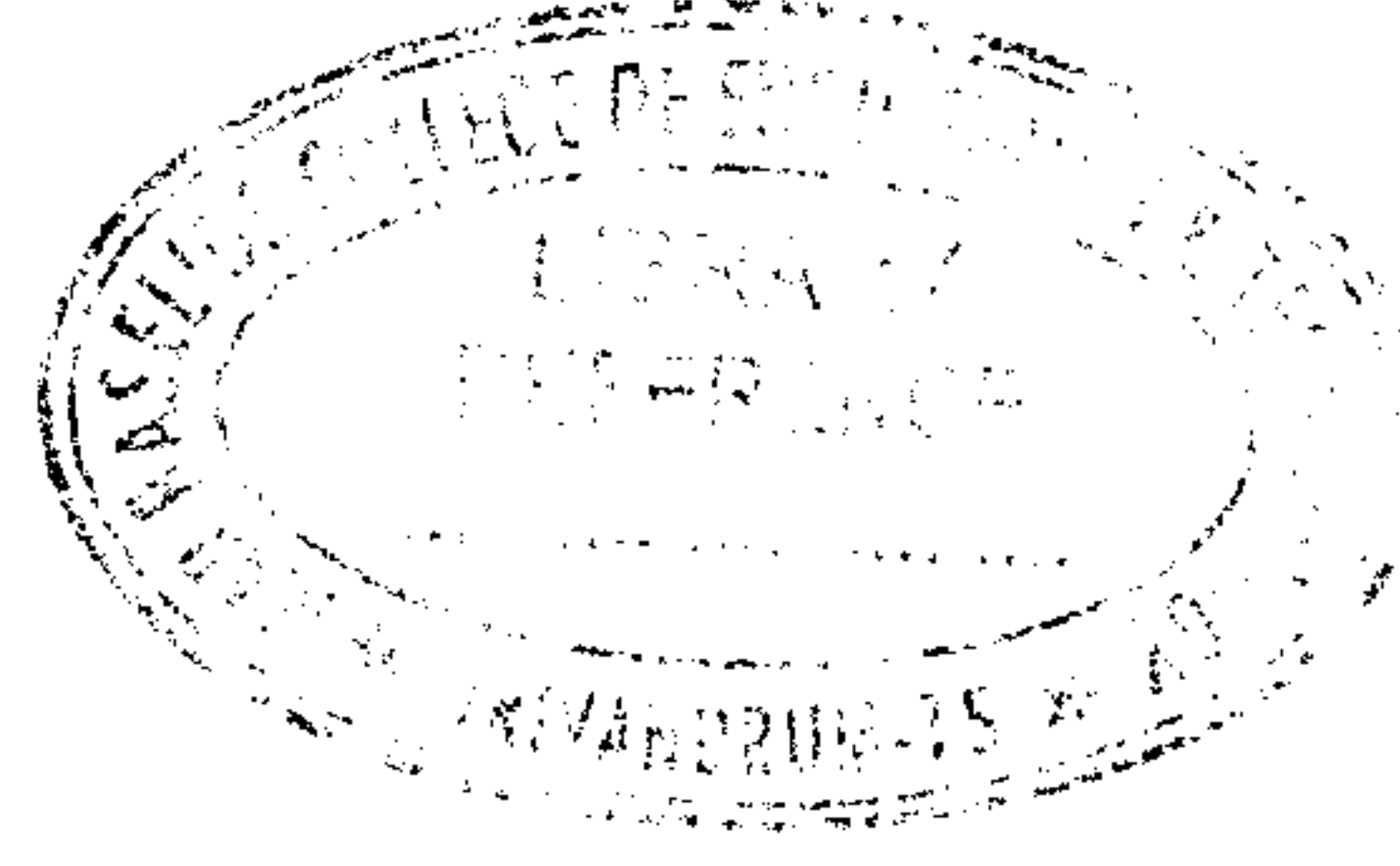


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B – 5232

Reg. No. :

Name :



**Combined First and Second Semester B.Tech. Degree Examination,
February 2017
(2008 Scheme)
08-107 : BASIC MECHANICAL ENGINEERING (CMNPHERUFBS)**

Time : 3 Hours

Max. Marks : 100

Instruction : Answer **all** questions of Part **A** and **two** questions from **each** Module of Part **B**.

PART – A

(4×10=40 Marks)

1. Sketch the Diesel cycle on a P-V and T-S diagram.
2. Make a note on hybrid vehicles.
3. Differentiate between fire tube and water tube boiler.
4. Explain the working of reciprocating pump.
5. What are the desirable properties of a refrigerant ?
6. Sketch the layout of a hydroelectric power plant.
7. Name two machining elements manufactured by each of the following process
i) Extrusion ii) Forging.
8. Differentiate between soldering and brazing.
9. Describe milling operation.
10. Explain the working principle of electro chemical machining.

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PART – B

Each question carries 10 marks.

Module – I

11. Give definitions of the following i) Zeroth law of thermodynamics ii) Second law of thermodynamics.
12. Explain the working of a 4-stroke petrol engine with suitable sketches.
13. With a neat sketch explain the working of a Cochran boiler.

Module – II

14. Explain the working principle of an impulse turbine with a neat sketch.
15. Draw the layout of a nuclear power plant and explain its working.
16. Explain the working of a vapour compression system.

Module – III

17. Compare and explain the fields of application of belt, rope and chain drives.
 18. Describe the following process i) Forging ii) Rolling.
 19. Explain the application and advantages of CNC machine.
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