

G 1688

(Pages : 2)

Reg. No.....

Name.....



B.TECH. DEGREE EXAMINATION, MAY 2015

Eighth Semester

Branch : Aeronautical Engineering / Mechanical Engineering

AN 010 805 G03/ ME 010 804 L03—CRYOGENICS (Elective III) (ME) (Elective IV) (AN)

(New Scheme—2010 Admission onwards)

[Regular/Supplementary]

Time : Three Hours

Maximum : 100 Marks

Part A

*Answer all questions.
Each question carries 3 marks.*

1. Define Cryogenic Engineering.
2. What is Adiabatic Process ?
3. What is the function of gas liquefaction systems ?
4. Define Cryogenic refrigeration systems.
5. Describe about the cryogenic storage.

(5 × 3 = 15 marks)

Part B

*Answer all questions.
Each question carries 5 marks.*

6. List the application of Cryogenics.
7. Describe the Joule Thomson expansion process.
8. Draw the function of hydrogen liquefaction system.
9. Explain ideal refrigeration systems.
10. Explain in detail about Cryogenic fluid transfer systems.

(5 × 5 = 25 marks)

Part C

*Answer all questions.
Each question carries 12 marks.*

11. Sketch the cryogenics in space technology with suitable diagram.

Or

12. Describe about the superconductivity applications.

Turn over

13. Discuss in detail about the properties of Cryogenics fluids.

Or

14. With the help of neat diagram, explain the super fluidity.

15. Write in detail about production of low temperatures.

Or

16. Explain the liquefaction systems for neon.

17. Mention the demagnetization method with suitable diagram.

Or

18. Show the refrigerators using liquids with neat block diagram.

19. Briefly describe cryo pumping.

Or

20. Explain about cryogenic fluid transfer system.

(5 × 12 = 60 marks)

