

Seat No.: _____
No. _____

Enrolment

GUJARAT TECHNOLOGICAL UNIVERSITY
M. E. - SEMESTER – I • EXAMINATION – WINTER • 2014

Subject code: 711107N

Date: 05-12-2014

Subject Name: Automobile Refrigeration and A/C

Time: 10:30 am - 01:00 pm

Total Marks: 70

Instructions:

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

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|------------|------------|---|-----------|
| Q.1 | (a) | Write short note on air conditioning system of an automobile. | 07 |
| | (b) | Explain vapour absorption refrigeration system with neat sketch. | 07 |
| OR | | | |
| Q.2 | (a) | Write short note on eco-friendly refrigerants. | 07 |
| | (b) | Explain vapour compression refrigeration with neat sketch. | 07 |
| | (b) | Explain properties of automotive refrigerants. | 07 |
| OR | | | |
| Q.3 | (a) | Write short note on trouble shooting of air conditioning system. | 07 |
| | (b) | Explain effect of air conditioning load on engine performance. | 07 |
| OR | | | |
| Q.3 | (a) | Explain layout of duct systems for automobiles. | 07 |
| | (b) | Write short note on different types of cooling loads. | 07 |
| OR | | | |
| Q.4 | (a) | Write short note on human comfort and explain factors affecting on it. | 07 |
| | (b) | Explain central air conditioning system with neat sketch. | 07 |
| OR | | | |
| Q.4 | (a) | Write short note on refrigeration of transport vehicles. | 07 |
| | (b) | Explain selection criteria for automotive refrigerants. | 07 |
| OR | | | |
| Q.5 | (a) | Explain following :
(i) Sensible cooling
(ii) Relative humidity | 07 |
| | (b) | Explain in brief types of grills. | 07 |
| OR | | | |
| Q.5 | (a) | Write short note on compressor service. | 07 |
| | (b) | Explain functions of the following:
(i) Thermostats
(ii) Control dampers | 07 |
