

Seat No.: \_\_\_\_\_

Enrolment No. \_\_\_\_\_

## GUJARAT TECHNOLOGICAL UNIVERSITY

BE – SEMESTER–VIII • Remedial EXAMINATION – SUMMER • 2014

Subject Code: 182601

Date: 05-06-2014

Subject Name: Tyre and Tube Technology

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.

- Q. 1** (a) Answer the following. (10)
- (i) Define the term “Clinch Strip”.
  - (ii) Explain the basic requirements of tyre.
  - (iii) Why we are coating steel cord with brass or bronze?
  - (iv) “The tyre industry can help in fuel saving of vehicle”. Justify the statement.
  - (v) Draw the structure of given steel cord. (i)  $7 \times 3 \times 0.22$  (ii)  $7 \times 4 \times 0.22$
- Q.1** (b) Write the application of tyre according to type of vehicles. (04)
- Q. 2** (a) Explain the different components of tyre with their function. (07)
- (b) Explain tyre curing process. (07)
- OR
- (b) Answer the following.
- (i) Explain the after treatments and PCI in tyre manufacturing. (04)
  - (ii) Write a note on tyre building drums. (03)
- Q. 3** (a) List tyre construction types. Which one is better? Give reason. (07)
- (b) Explain the four steps involved in defining a tyre structure for designing a tyre. (07)
- OR
- Q. 3** (a) List out fabric treatment system and explain any one in detail. (07)
- (b) List out the mould cleaning process and explain any one in detail. (07)
- Q. 4** (a) Explain tyre stiffness and aquaplaning with respect to tyre performance analysis (07)
- (b) What is Aspect Ratio? Give the advantages and disadvantages of aspect ratio. (07)
- OR
- Q. 4** (a) List different types of destructive testing done on tyre. Explain any two. (07)
- (b) Discuss tyre evaluation with respect to traction, rolling resistance and noise. (07)
- Q. 5** (a) Explain the manufacturing process of automobile tube. (07)
- (b) Explain the mould of flap and its moulding process and finishing. (07)
- OR
- Q. 5** (a) Explain the various defects observed in tube. (07)
- (b) List out the retreading process. Explain any one in detail. (07)

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