

GUJARAT TECHNOLOGICAL UNIVERSITY
BE VIII SEMESTER- • EXAMINATION – SUMMER 2015

Subject code: 182601**Date: 15/05/2015****Subject Name: Tyre and Tube Technology****Time: 10.30am-01.00pm****Total Marks: 70****Instructions:**

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

Q. 1 Answer the following. **(14)**

- (i). Define the term: (i) Clinch strip, (ii) Bead apex.
- (ii). Write the role of curing bag in Tyre vulcanisation.
- (iii). Give the outline of process of manufacturing camel back.
- (iv). Give the difference between solid tyre & conventional tyre?
- (v). What do you mean by 28" X 1½" and 4/14 in cycle tyre?
- (vi). Draw the structure of given steel cord.
(i) $9+3*0.2$ (ii) $3+9+15*0.18$
- (vii). Write the importance of crown angle in tyre.

Q. 2 (a) Discuss in detail about tyre nomenclature with designation. **(07)**

Q. 2 (b) List the destructive test for tyre. Explain any one in detail. **(07)**

OR

(b) Explain the basic functions of pneumatic tyre. **(07)**

Q. 3 (a) Give the important function of tread in tyre and explain the tread design in detail. **(07)**

(b) Discuss different raw materials used for manufacturing passenger tyre. **(07)**

OR

Q. 3 (a) List the types of vulcanisation for tyre. Explain any one in detail. **(07)**

(b) Describe the tyre building method for radial tyre. **(07)**

Q. 4 (a) "Tyre performance analyses depend on tyre footprint and Aquaplaning" justify the statement. **(07)**

(b) Explain the essential components of cycle tyre and draw the cross section of cycle tyre. **(07)**

OR

Q. 4 (a) Explain in detail about tyre uniformity and ride comfort test. **(07)**

(b) Explain the tyre retreading processes with its importance. **(07)**

Q. 5 (a) Explain the physical tests done on automobile tube in detail. **(07)**

(b) List the properties require for manufacturing of Tyre flap. Explain the compounding & manufacturing process of them. **(07)**

OR

Q. 5 (a) Describe the importance of Splicing, Valve jamming and Preforming operation done on automobile tube. **(07)**

(b) Discuss about the automobile tube defects with their causes & remedies. **(07)**