Seat No.: _____ Enrolment No._____

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)**

****