

PARUL UNIVERSITY
FACULTY OF ENGINEERING & TECHNOLOGY
B.Tech. Summer 2018 - 19 Examination

Semester: 5**Subject Code: 03102330****Subject Name: Automotive Certification and Homologation****Date: 22/05/2019****Time: 10:30am to 01:00pm****Total Marks: 60****Instructions:**

1. All questions are compulsory.
2. Figures to the right indicate full marks.
3. Make suitable assumptions wherever necessary.
4. Start new question on new page.

Q.1 Objective Type Questions - (Each of one mark) (15)

1. Define two basic types of braking test.
2. Define: chatter
3. Carbon monoxide has strong absorbance in wavelength band of
4. Does homologation destroy the vehicle during test?
5. is a lowest speed of vehicle during coast down method.
6. India stands rank in the largest manufacturing of car around the world.
7. ARAI stands for
8. ASDC stands for
9. Why iso-kinetic system is used in particulate emission measurement?
10. Describe function of external projection test.
11. What is a IS number for sound level meter?
 (A) 9211:1979 (B) 9779:1981 (C) 9726:1984 (D) 11422:1986
12. The process of type approval take around year.
 (A) 3 (B) 0.33 (C) 0.25 (D) 0.5
13. ARAI established in year of.....
 (A) 1965 (B) 1966 (C) 1967 (D) 1968
14. NDIR is not used for measurement of.....
 (A) CO₂ (B) CO (C) H₂O(v) (D) NO
15. What would be measured by using plunger test?
 (A) Wear of tyre (B) Strength of tyre (C) Life of tyre (D) Reliability of tyre

Q.2 Answer the following questions. (Attempt any three) (15)

- A) Explain door lock actuator and also explain its problem.
- B) Explain rope brake dynamometer with neat sketch.
- C) Explain Prony-brake dynamometer with neat sketch.
- D) Explain flame ionization detector with neat sketch.

Q.3 A) Explain crash test with dummy and head restrainer test. (07)

- B) Explain testing procedure of coast down method. (08)

OR

- B) Explain headlamp alignment test in detail. (08)

Q.4 A) What do you mean by passive safety? Give importance of passive safety. (07)**OR**

- A) Explain Gradeability test in detail. (07)

- B) What is a turning radius? Explain turning circle radius test. (08)