

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

Enrollment No: \_\_\_\_\_

**PARUL UNIVERSITY**  
**FACULTY OF ENGINEERING & TECHNOLOGY**  
**M.Tech. Summer 2017 - 18 Examination**

**Semester: 1**  
**Subject Code: 03211103**  
**Subject Name: Highway Materials & Construction**

**Date: 26/05/2018**  
**Time: 2:00pm to 4:30pm**  
**Total Marks: 60**

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**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** A) Give Classification of the soil. (05)  
B) Enlist the materials used for soil stabilization and their suitability for different types of soils. (05)  
C) Enlist the desirable properties of the aggregates and tests to check them also mention their permissible limits as per their codes. (05)
- Q.2** Answer the following questions. (Attempt any three) (Each five mark) (15)  
A) Explain combined test of elongation and flakiness.  
B) Give full names of WMM, WBM, BM, LBM, DBM, MSS, BC.  
C) How do you conduct ductility test for bitumen in the laboratory?  
D) Why blending of aggregates are required? Write procedure for it.
- Q.3** A) Write short note on construction method for flexible pavement. (07)  
B) Describe Marshall Mix design in details. (08)
- OR**
- B) Write short note on concrete mix design methods used for rigid pavement. (08)
- Q.4** A) Explain subsurface drainage system for urban roads. (07)
- OR**
- A) Write steps of Marshall Mix Design. (07)  
B) Explain surface drainage system for hill roads. (08)