Reg. No. : ☐☐☐☐☐☐☐☐☐☐

Question Paper Code: 34013

B.E. / B.Tech. DEGREE EXAMINATION, NOV 2017

Fourth Semester

Civil Engineering

01UCE403 – HIGHWAY ENGINEERING

(Regulation 2013)

Duration: Three hours   Maximum: 100 Marks

Answer ALL Questions

PART A - (10 x 2 = 20 Marks)

1. What is CRF? What is its present status?

2. List out the functions of Highway Research Board (HRB).

3. Express super elevation.

4. Write the formula for widening of curves.

5. List the components of flexible pavement.

6. State the desirable properties of bitumen.

7. Mandate the desirable properties of road aggregates.

8. Mention the type of joint filler material.

9. Define skid resistance.

10. Mention the types of maintenance of pavements.

PART - B (5 x 16 = 80 Marks)

11. (a) Trace out the history of road development in India.   (16)

Or

(b) Describe the factors influencing highway alignment.   (16)

12. (a) Describe the types of sight distance with neat sketch. (16)

Or

(b) Explain the different types of gradients. (16)

13. (a) Explain CBR method of designing flexible pavements. (16)

Or

(b) Discuss the equivalent single wheel load. (16)

14. (a) Illustrate the construction of WBM Road with neat sketch. (16)

Or

(b) Describe the following tests on aggregates with sketches: (i) Impact test (ii) Los Angeles Abrasion test. (16)

15. (a) Discuss the typical failures occurring in flexible pavements. (16)

Or

(b) Enumerate various steps involved in a highway project formulation and explain the contents in each step. (16)

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