

Roll No. ....

**23231**

**M. Tech. 1st Semester (Civil Engg.)  
Transportation Engg.  
Examination – February, 2022**

**HIGHWAY AND AIRPORT PAVEMENT MATERIALS**

Paper : CE-643

*Time : Three Hours ]*

*[ Maximum Marks : 100*

*Before answering the questions, candidates should ensure that they have been supplied the correct and complete question paper. No complaint in this regard, will be entertained after examination.*

*Note : Attempt five questions in all, selecting one question from each Section. Question No. 1 is compulsory. All question carry equal marks.*

1. Describe the following : 4 × 5 = 20
- (a) Types of aggregate
  - (b) Softening of bitumen
  - (c) Grade of bituminous

(d) Types of pavement

(e) Rigid pavement

### SECTION - A

2. Explain technique for evaluation of aggregate. 20
3. Explain in detail properties of material used in road construction. 20

### SECTION - B

4. Explain the design procedure of flexible pavement. 20
5. Explain in detail method of testing of bituminous binder. 20

### SECTION - C

6. What are the construction procedure in cement concrete pavement ? Explain in detail. 20
7. Explain the design of mixes preparation for stabilized roads. 20

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### SECTION - D

8. Explain the application of new pavement material in detail. 20
9. What are the semi-rigid pavement material and explain their limitations ? 20
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