

DEPARTMENT OF CIVIL ENGINEERING

Final Assignment / Quiz (Spring 2020)

Subject: Pavement Material Engineering
Instructor: Engr. Shabir Ahmad
Semester: M.S (Civil Engineering)

Duration: 6 Hours
Total Marks: 50

Note: Attempt all questions. Please don't follow Wikipedia or google, Use your concept, books and lecture notes. Give correct numbering to the Answers.

Q. No.(01) 5+10

1. Why do we carry out Granular (Physical) stabilization?
2. How do we carry out Granular (Physical) stabilization considering Granulometry and Collametry, Fabric, Soil Binder, collameritics and Specifications of gradation and selection of soil elements?

Q. No.(02) 5+5

1. How would you (being a material expert) identify aggregate referring to Naturally occurring materials, Igneous Rocks, Sedimentary Rock, Metamorphic and Residual material and transported deposits?
2. In aggregate investigation Material sourcing is referred to Filed investigation. Discuss Material sourcing in detail.

Q. No. (03) 15

Mc-Adam was a Scottish engineer who introduced, in the early nineteenth century, the idea of constructing roads composed of small size stones held together by means of a binding material? What are the Macadam bases types and discuss the Water bound Macadam and Wet Mixing Macadam in detail Bound, also elaborate the difference between Water bound Macadam and Wet Mixing Macadam?

Q. No. (04) 5+5

1. Discuss in detail the Bituminous Materials-Manufacturing?
2. Bituminous Materials-Chemistry is referred to chemical composition of bitumen. Elaborate in detail.