Q.27 Define mastic asphalt with their composition. (CO-4)

Q.28 Explain the method of application of tack coat with their composition. (CO-4)

Q.29 What do you understand by Quality control-thickness of layer, bitumen Content in the construction of S.D.B.C. surface course? (CO-4)

Q.30 Write a short note on liquid seal. (CO-5)

Q.31 Explain the method of application of fog seal. (CO-5)

Q.32 Describe sand bituminous premix patching. (CO-6)

Q.33 Write a short note on pneumatic typed roller. (CO-6)

Q.34 Explain pavers with their three functions. (CO-6)

Q.35 Write safety measures to be taken while working in a hot mix plant. (CO-6)

SECTION-D

Note: Long answer type questions. Attempt any two questions out of three questions. (2x10=20)

Q.36 Explain the construction procedure of wet mix macadam road with their grading and physical requirements. (CO-2)

Q.37 Explain the construction procedure of dense bituminous macadam with their physical properties of aggregate, binder size and shape as per MORT&H. (CO-4)

Q.38 Explain the working and use of hot mix plant with their types. (5+5) (CO-6)

(**Note:** Course outcome/CO is for office use only)

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Roll No. .....

6th Sem / Branch : Civil Engg. (Spl. Highway Engg.)

Subject:- Highway Construction and Maintenance

Time : 3Hrs. M.M. : 100

SECTION-A

Note: Multiple choice questions. All questions are compulsory (10x1=10)

Q.1 The compacted soil which act as a base to support road pavement is called ..... (CO-1)

a) Base course b) Sub base Course
c) Wearing Course d) Subgrade

Q.2 The test used for determining the quality of subgrade is ..... (CO-1)

a) CBR b) Plate load test
c) Impact Value test d) None of these

Q.3 WBM road is an example of ..... (CO-2)

a) Flexible Pavement
b) Rigid Pavement
c) Semi Rigid Pavement
d) Pavement

Q.4 WMM stand for..... (CO-2)

a) Water mix macadam
b) Water bound macadam
c) Wet mix macadam
d) None of these

Q.5 The application of a low viscosity liquid bituminous material over an existing untreated pervious pavement surface is known as (CO-3)

a) Seal Coat b) Prime coat
c) Tack coat d) All of the above

Q.6 In India, permix carpet of ..... thickness is generally laid (CO-4)

a) 10 MM b) 10 MM
c) 20 MM d) Between A & B

Q.7 ..... is caused due to entry of water through cracks and joints pavements. (CO-5)

a) Grouting b) Mud pumping
c) Deep pumping d) None of these

Q.8 A plant used to prepare premix carpet is ..... (CO-6)

a) Premix plant b) Hot mix plant
c) cold mix plant d) Road plant

Q.9 The primary function of road roller is to ..... road surfaces. (CO-6)

a) Press b) Consolidate
c) Compact d) Both B & C

Q.10 Asphalt mixer is used for preparing ..... (CO-6)

a) Carpet b) Premix carpet
c) Premix material d) Rigid Pavement

SECTION-B

Note: Objective type questions. All questions are compulsory. (10x1=10)

Q.11 CBR stand for ..... (CO-1)

Q.12 Water table should be ..... meters below the subgrade for road stability. (CO-1)

Q.13 WBM stand for ..... (CO-2)

Q.14 A layer of granular provided in between soil subgrade and base course is .....

Q.15 The application of bituminous material of medium viscosity over an existing impervious pavement is termed as .....? (CO-3)

Q.16 IRC recommended ..... thick bituminous concrete surface for highway pavement. (CO-4)

Q.17 The method of injecting suitable stabilizer in liquid state into hard soil is .....? (CO-5)

Q.18 A plant used for prepare premix carpet is .....? (CO-6)

Q.19 A roller provided with a number of rubber tyred is ..... (CO-6)

Q.20 The machine used for supplying hot bitumen at a required temperature is ..... (CO-6)

SECTION-C

Note: Short answer type questions. Attempt any twelve questions out of fifteen questions. (12x5=60)

Q.21 What is subgrade? Write any four function of soil as a highway subgrade. (CO-1)

Q.22 Enlist any five necessity of subgrade drainage system. (CO-1)

Q.23 Explain WBM and WMM roads. (CO-2)

Q.24 Write short note on course graded and closed graded GBS. (CO-2)

Q.25 Define prime coat. Why it is needed? (CO-3)

Q.26 Enlist the method of application of tack coat. (CO-3)