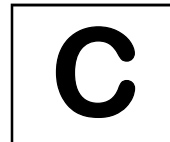# MIZORAM SUBORDINATE SERVICES SELECTION BOARD

COMBINED COMPETITIVE EXAMINATION FOR RECRUITMENT TO THE POST OF JE(CIVIL)/OVERSEER
JANUARY - 2023

Question Booklet Series

C

PAPER III

Time Allowed : 3 Hours **Maximum Marks : 200**

INSTRUCTIONS

1. This paper consists of one hundred (100) multiple-choice type of questions.

2. Immediately after the commencement of the examination, you should check that this question booklet does not have any unprinted or missing pages or items, etc. If so, get it replaced by a complete booklet from the invigilator.

3. Please note that it is the candidate's responsibility to fill in all necessary details such as Roll Number, etc. and the Question Booklet Series A, B, C or D carefully and without any ommission or discrepancy at the appropriate places in the OMR Answer Sheet. Any ommission/discrepancy will render the Answer Sheet liable for rejection.

4. Each question comprises four responses (answers). You will select the response which you want to mark on the Answer Sheet. In case you feel that there is more than one correct response, mark the response which you consider the best. In any case, choose *ONLY ONE* response for each item.

5. You have to mark your responses ONLY on the separate OMR Answer Sheet provided. *Read instructions given in the OMR sheet carefully*.

6. All questions carry equal marks.

7. Rough work is to be done in the spaces available in the question booklet. *Use of calculator is not permitted*.

8. You have to submit your Answer Sheet to the invigilators at the end of the examination compulsorily and must not carry it with you outside the Examination Hall. You are permitted to take away with you the question booklet on conclusion of examination.

9. There are no negative marks for incorrect answer.

1. Match the following :
   1. Soundness of cement : (a) Le Chatelier's apparatus
   2. Initial setting time of cement : (b) Vicat apparatus
   3. Fineness of cement : (c) Sieve analysis
   Select the correct answer using the codes given below.
   (A)   1 – (a), 2 – (b), 3 – (c)   (B)   1 – (b), 2 – (a), 3 – (c)
   (C)   1 – (a), 2 – (c), 3 – (b)   (D)   1 – (c), 2 – (b), 3 – (a)

2. Normal consistency of a cement paste is that consistency which will permit a vicat plunger to penetrate a depth of
   (A)   15mm to 20mm from bottom   (B)   20 mm to 25 mm from top
   (C)   33mm to 35mm from top   (D)   12mm to 16mm from bottom

3. Generally, tensile strength of cement is _____ of compressive strength.
   (A)   1% to 5%   (B)   10% to 15%
   (C)   20% to 25%   (D)   21% to 27%

4. Age of trees may be ascertained by
   (A)   radius of stem   (B)   circumference of its stem
   (C)   number of branches   (D)   number of annual rings

5. The most commonly used admixture for accelerating initial set of concrete is
   (A)   Gypsum   (B)   Tricalcium silicate
   (C)   Calcium Carbonate   (D)   Calcium Chloride

6. A slope failure which occurs in case of infinite slope and where the failure surface is parallel to the slope surface is called
   (A)   rotational failure   (B)   toe failure
   (C)   translational failure   (D)   base failure

7. As per IRC SP 48:1998, method of analysis of stability of hill slope is given in detail in
   (A)   IRC 75- 1979   (B)   IRC 76-1979
   (C)   IRC 73-1980   (D)   IRC 6-2017

8. Counterweight fills for increasing the resisting force of a slide surface of hill slope are provided
   (A)   at toe of unstable slope   (B)   at heel of retaining wall
   (C)   at facing of reinforced earth   (D)   above the compacted backfill

9. Catchwater drains should be
   (A)   provided near the top of the breast wall
   (B)   avoided near the top of the breast wall
   (C)   provided to allow seepage of water into the cut slope
   (D)   provided at the level of roadside drain

10. Reinforced earth wall is economical where height is more than
    (A)   1.5 metres   (B)   2 metres
    (C)   5 metres   (D)   10 metres

11. According to Terzaghi, a foundation is shallow if
    (A)   its depth is equal to or less than its width
    (B)   its depth is 1 metre below the ground level
    (C)   its depth is one third the width
    (D)   ts depth is more than its width

12. Two or more spread footings connected by a beam is called
    (A)   Raft footing   (B)   Strip footing
    (C)   Strap footing   (D)   Beam footing

13. The type of failure when there is relatively high compression of soil under the footing, accompanied by shearing in the vertical direction.
    (A)   General shear failure   (B)   Local shear failure
    (C)   Punching shear failure   (D)   Joint shear failure

14. The type of test generally applicable to saturated clays having no apparent angle of shearing resistance is
    (A)   Direct shear test   (B)   Triaxial test
    (C)   Unconfined compression test   (D)   Vane shear test

15. A spread foundation is a type of
    (A)   Shallow foundation   (B)   Deep foundation
    (C)   Caissons foundation   (D)   Pile foundation

16. Accurate determination of water content, is made by
    (A)   Calcium carbide method   (B)   Sand bath method
    (C)   Alcohol method   (D)   Oven-drying method

17. The plasticity index is the numerical difference between
    (A)   liquid limit and plastic limit   (B)   plastic limit and shrinkage limit
    (C)   liquid limit and shrinkage limit (D)   liquid limit and consistency limit

18. Fundamental relationship between saturated density (ρ_{sat}), specific gravity (G), and porosity (n) is
    (A) $\rho_{sat} = G\rho_w(1-n) - \rho_w n$ (B) $\rho_{sat} = G\rho_w(1+n) + \rho_w n$
    (C) $\rho_{sat} = G\rho_w(1-n) + \rho_w n$ (D) $\rho_{sat} = G\rho_w(1+n) - \rho_w n$

19. Match the following :
    1. Double mass curve   : (a) Line joining points having equal rainfall depth in a given duration
    2. Isohyet   : (b) Representative area used for weighting the observed station precipitation
    3. Thiessen polygon   : (c) Plot of accumulated annual rainfall of a station vs accumulated rainfall of a group of stations
    4. Hyetograph   : (d) Representation of distribution of rainfall intensity over time

Select the correct answer using the codes given below.
    (A)   1 – (d), 2 – (b), 3 – (a), 4 – (c)   (B)   1 – (c), 2 – (a), 3 – (b), 4 – (d)
    (C)   1 – (d), 2 – (c), 3 – (b), 4 – (a)   (D)   1 – (c), 2 – (d), 3 – (a), 4 – (b)

20. Match the following :

    1. Porosity   : (a) Volume of air void/Volume of void
    2. Air content   : (b) Weight of water/Weight of solids
    3. Water content   : (c) Unit weight of soil solids/Unit weight of water
    4. Specific gravity   : (d) Volume voids/total volume of soil mass

    Select the correct answer using the codes given below.
    (A)   1 – (d), 2 – (a), 3 – (c), 4 – (b)   (B)   1 – (d), 2 – (b), 3 – (a), 4 – (c)
    (C)   1 – (d), 2 – (a), 3 – (b), 4 – (c)   (D)   1 – (d), 2 – (b), 3 – (c), 4 – (a)

21. Match the following :

    1. Oven-drying method   : (a) Most accurate laboratory method
    2. Sand bath method   : (b) For rough value of water content
    3. Calcium carbide method: (c) For embankment soil
    4. Pycnometer method   : (d) For soil whose specific gravity is accurately known

    Select the correct answer using the codes given below.
    (A)   1 – (a), 2 – (d), 3 – (c), 4 – (b)   (B)   1 – (a), 2 – (b), 3 – (d), 4 – (c)
    (C)   1 – (d), 2 – (b), 3 – (c), 4 – (a)   (D)   1 – (a), 2 – (b), 3 – (c), 4 – (d)

22. As per IS 14961:2001, the down pipe in roof water collection system should be at least
    (A)   75 mm   (B)   100 mm
    (C)   150 mm   (D)   200 mm

23. Match the following :

    1. Ice crystals of density 0.1 g/cc   : (a) Glaze
    2. Frozen raindrops   : (b) Snow
    3. Water droplets in contact with cold water surface   : (c) Hail
    4. Lumps of ice >8 mm   : (d) Sleet

    Select the correct answer using the codes given below.
    (A)   1 – (b), 2 – (c), 3 – (a), 4 – (d)   (B)   1 – (c), 2 – (d), 3 – (b), 4 – (a)
    (C)   1 – (d), 2 – (c), 3 – (b), 4 – (a)   (D)   1 – (b), 2 – (d), 3 – (a), 4 – (c)

24. Consider the following statements :

    1. Non recording rain gauge are most widely adopted in India
    2. The fall speed of drizzle drops are around 1metre/sec
    3. An accurate estimate of average rainfall in a particular catchment area can be obtained by arithmetic mean method

    Which of the above statements are correct?
    (A)   1 and 2   (B)   2 and 3
    (C)   1 and 3   (D)   1, 2 and 3

25. Aquifer which is separated from the main water table by a shallow and curved impervious stratum is called
    (A)   confined aquifer   (B)   unconfined aquifer
    (C)   perched aquifer   (D)   aquiclude

26. In the design of retaining wall, minimum factor of safety against sliding recommended is
    (A)   1.5   (B)   2
    (C)   1   (D)   0.8

27. Weep holes are provided in retaining walls for
    (A)   preventing shrinkage
    (B)   avoiding friction between wall and backfill
    (C)   drainage
    (D)   all of the above

28. Bally benching is adopted for
    (A)   reshaping of slope   (B)   changing the grade of slope
    (C)   control of surface erosion   (D)   sub-surface drainage of water

29. Field investigation of a landslide does not include
    (A)   mapping of the area   (B)   geological investigation
    (C)   geotechnical investigation   (D)   hydrological survey

30. The size of weep holes as per IRC should not be less than
    (A)   20 cm $\times$ 10 cm   (B)   10 cm $\times$ 10 cm
    (C)   15 cm $\times$ 10 cm   (D)   15 cm $\times$ 15 cm

31. Consider the following :
    (i) argillaceous rocks   (ii) calcareous rocks   (iii) foliated rocks
    (iv) stratified rocks   (v) unstratified rocks
    Which of the above belong to the physical classification of rocks?
    (A)   (i), (ii) and (iii)   (B)   (ii), (iii) and (iv)
    (C)   (iii), (iv) and (v)   (D)   (i), (ii) and (v)

32. As per IS:1077-1970, the minimum crushing strength of bricks is
    (A)   2.5 N/mm^2 (B)   3.5 N/mm^2
    (C)   4.0 N/mm^2 (D)   5.0 N/mm^2

33. If p is the percentage of water required for normal consistency, water to be added for determination of initial setting time of cement is
    (A) $0.70p$ (B) $0.75p$
    (C) $0.85p$ (D) $0.90p$

34. The rate of wear of stones is determined by
    (A)   Abrasion test   (B)   Attrition test
    (C)   Crushing test   (D)   Smith test

35. Driers in varnish are used as
    (A)   reducers   (B)   retarders
    (C)   oxidizer   (D)   accelerator

36. IS 456–2000 recommends that in any column a minimum of _____ reinforcement should be used.
    (A)   0.8 %   (B)   1.0%
    (C)   1.2 %   (D)   1.5%

37. Match the following :
    1. Column : (a) Structural member carrying an axial compressive load
    2. Flat slab : (b) Vertical structural member carrying an axial compressive load
    3. Strut : (c) Reinforced slab built monolithically with supporting column
    4. Doubly reinforced : (d) Reinforced concrete section provided with steel reinforcement
       section   in tension and compression side
    Select the correct answer using the codes given below.
    (A) 1 – (d), 2 – (c), 3 – (a), 4 – (b) (B) 1 – (b), 2 – (c), 3 – (a), 4 – (d)
    (C) 1 – (d), 2 – (c), 3 – (b), 4 – (a) (D) 1 – (a), 2 – (c), 3 – (b), 4 – (d)

38. The limit on span to depth ratio is specified in IS 456:2000 because
    (A) it ensures the limit or tensile crack width
    (B) it ensures safety against shear failure
    (C) it limits the maximum deflection of the beam
    (D) it limits the maximum tensile stress in steel

39. The direct tensile strength of concrete is determined from
    (A) modulus of elasticity of concrete (B) modulus of rupture of concrete
    (C) creep coefficient of concrete (D) grade of concrete

40. The main purpose of column ties is to resist
    (A) shear stress in column (B) flexural stresses in column
    (C) buckling of main reinforcing bar (D) axial compression and flexure

41. Match the following :
    1. M35 : (a) Minimum grade of concrete for reinforced cement concrete under severe exposure
    2. M25 : (b) Minimum grade of concrete for reinforced cement concrete under moderate exposure
    3. M30 : (c) Minimum grade of concrete for plain cement concrete under very severe exposure
    4. M20 : (d) Minimum grade of concrete for reinforced cement concrete under very severe exposure
    Select the correct answer using the codes given below.
    (A) 1 – (d), 2 – (b), 3 – (a), 4 – (c) (B) 1 – (d), 2 – (c), 3 – (a), 4 – (b)
    (C) 1 – (d), 2 – (c), 3 – (b), 4 – (a) (D) 1 – (d), 2 – (a), 3 – (c), 4 – (b)

42. Design of R.C.C. simply supported beams carrying U.D.L. is based on the resultant B.M. at
    (A) supports (B) mid span
    (C) every section (D) quarter span

43. IS Code adopted as code of practice for concrete structures for storage of liquids is
    (A) IS 3370 (B) IS 13920
    (C) IS 1893 (D) IS 2387

44. Shear span is defined as the region where
     (A)   shear force is constant   (B)   shear force is zero
     (C)   flexural moment is constant   (D)   flexural moment is zero

45. Consider the following :
     (i) Limit State Method   (ii) Working Stress Method   (iii) Ultimate Load Method
     Which of the above reinforced concrete design philosophy do not distinguish between
     different load cases?
     (A)   (i) only   (B)   (ii) only
     (C)   (iii) only   (D)   (i) and (iii)

46. When moving warm moist air mass is obstructed by the zone of cold air mass, the
     warm moist air rises up to higher altitude, get condensed and heavy rainfall occurs.
     This is known as
     (A)   frontal precipitation   (B)   non-frontal precipitation
     (C)   convective precipitation   (D)   orographic precipitation

47. The stream which does not have any base flow contribution is called
     (A)   perennial stream   (B)   intermittent stream
     (C)   ephemeral stream   (D)   braided stream

48. The ratio of runoff to rainfall is called
     (A)   rainfall coefficient   (B)   runoff coefficient
     (C)   infiltration coefficient   (D)   distribution coefficient

49. Match the following :
     1. Hygrometer   : (a) Relative humidity
     2. Anemometer   : (b) Wind velocity
     3. Psychrometer   : (c) Evapotranspiration
     4. Lysimeter   : (d) Humidity
     Select the correct answer using the codes given below.
     (A)   1 – (d), 2 – (c), 3 – (a), 4 – (b)   (B)   1 – (c), 2 – (d), 3 – (b), 4 – (a)
     (C)   1 – (d), 2 – (c), 3 – (b), 4 – (a)   (D)   1 – (d), 2 – (b), 3 – (a), 4 – (c)

50. Ryve's formula for calculation of discharge is

     (A) $Q = C \times A^{\frac{3}{4}}$ (B) $Q = C \times \sqrt{A}$

     (C) $Q = C \times A^{\frac{1}{4}}$ (D) $Q = C \times A^{\frac{2}{3}}$

51. The front bater of cement masonry retaining wall as per IS 14458 (Part I) should be
     (A)   5 : 1   (B)   10 : 1
     (C)   15 : 1   (D)   12 : 1

52. Terzaghis's grouping of landslides is based on
     (A)   physical properties of rocks involved
     (B)   type and rate of movement
     (C)   mass movements and geomorphological cycles
     (D)   climatic factors

53. In slope stability analysis cases
    (A) cylindrical rupture surface is assumed
    (B) analysis is done by dividing the strip mass into vertical slices
    (C) both (A) and (B)
    (D) neither (A) nor (B)

54. Movement of earthquake waves through the ground can produce
    (A) liquefaction   (B) creep
    (C) solification   (D) overturning

55. Range of permissible slope for bed rock cuts in inter bedded sand stones, shales and limestone is
    (A) ½ : 1 to ¾ : 1   (B) ¼ : 1 to ½ : 1
    (C) ¾ : 1 to 1 : 1   (D) ¾ : 1 to ¼ : 1

56. If fineness modulus of a sand is 2.5, it is graded as
    (A) very fine sand   (B) fine sand
    (C) medium sand   (D) coarse sand

57. Tensile strength of timber
    (A) is maximum in a direction parallel to grains
    (B) is maximum in a direction across the grains
    (C) is minimum in a direction parallel to grains
    (D) is minimum in a direction $60°$ to the grains

58. Which of these imparts a yellow tint to bricks?
    (A) Silica   (B) Iron oxide
    (C) Lime   (D) Magnesia

59. For a good building stone, the specific gravity should be greater than
    (A) 1.5   (B) 2.7
    (C) 3.7   (D) 1.7

60. Isotropic materials are those which have the same
    (A) thermal properties in all directions (B) stresses induced in all directions
    (C) ductility throughout (D) elastic properties in all directions

61. Hydrated lime can be effectively used for stabilization of
    (A) sandy soils   (B) silty soils
    (C) plastic clayey soils (D) loamy soils

62. Which of the following methods is more suitable for the determination of permeability of clayey soil?
    (A) Constant head method   (B) Falling head method
    (C) Horizontal permeability method (D) Measuring flask method

63. An example of deep foundation is
    (A) Spread Footing   (B) Mat Foundation
    (C) Raft Foundation   (D) Pile Foundation

64. Match the following :
    1. Water content : (a) Water content at which the soil loses full plasticity
    2. Liquid limit : (b) Boundary between liquid state and plastic limit
    3. Plastic limit : (c) Water content at which soil particles come as near to each other as physically feasible
    4. Shrinkage limit : (d) Ratio of weight of water to weight of dry soil
    Select the correct answer using the codes given below.
    (A) 1 – (a), 2 – (b), 3 – (c), 4 – (d)　　(B) 1 – (d), 2 – (a), 3 – (b), 4 – (c)
    (C) 1 – (d), 2 – (b), 3 – (a), 4 – (c)　　(D) 1 – (c), 2 – (b), 3 – (a), 4 – (d)

65. Cassagrande's apparatus is related to
    (A) liquid limit　　　　　　　　　(B) plastic limit
    (C) water content　　　　　　　　(D) specific gravity

66. The natural water content of soil is 30%, the liquid limit is 60% and plastic limit is 25%. The stages of consistency of soil is
    (A) liquid state　　　　　　　　　(B) semi-solid state
    (C) solid state　　　　　　　　　(D) shrinkage state

67. The angle of internal friction is least for
    (A) angular-grained loose sand　　(B) angular -grained dense sand
    (C) round-grained loose sand　　　(D) clays

68. You are given a sample of soil containing coarse grains, to determine its water content, you will use
    (A) Pycnometer　　　　　　　　　(B) Oven-drying method
    (C) Calcium carbide method　　　　(D) Alcohol method

69. Maximum size of clay particle is
    (A) 0.002 mm　　　　　　　　　　(B) 0.04 mm
    (C) 0.06 mm　　　　　　　　　　(D) 0.08 mm

70. In Rankine's theory of earth pressure,
    (A) elemental failure is considered　(B) wedge failure is considered
    (C) both (A) and (B)　　　　　　　(D) neither (A) nor (B)

71. The major ingredient in a good brick earth is
    (A) lime　　　　　　　　　　　　(B) silica
    (C) alumina　　　　　　　　　　　(D) magnesia

72. Match the following :
    1. Aluminium paint : (a) For resisting corrosive reaction
    2. Anti-corrosive paint : (b) For painting iron work under water
    3. Bituminous paint : (c) For painting surfaces exposed to high temperature
    4. Cellulose paint : (d) For painting storage tank
    Select the correct answer using the codes given below.
    (A) 1 – (d), 2 – (c), 3 – (a), 4 – (b)　　(B) 1 – (d), 2 – (a), 3 – (c), 4 – (b)
    (C) 1 – (d), 2 – (a), 3 – (b), 4 – (c)　　(D) 1 – (d), 2 – (b), 3 – (a), 4 – (c)

73. Natural rubber contains polymers of which organic compound?
    (A) Isoprene (B) Neoprene
    (C) Polyprene (D) Vinyl

74. The main function of alumina in brick is
    (A) to impart plasticity (B) to prevent shrinkage
    (C) to impart durability (D) to make the brick impermeable

75. When water is added to the cement the quickest to react with water is
    (A) C_2S (B) C_3S
    (C) C_3A (D) C_4AF

76. In the toe slab of a retaining wall, reinforcement is usually provided at
    (A) top of the slab (B) bottom of the slab
    (C) face of the stem (D) backfill side

77. Cantilever retaining can usually be used for height not more than
    (A) 10 metres (B) 8 metres
    (C) 6 metres (D) 4 metres

78. The thickness of base slab of retaining wall generally provided is
    (A) one-third of the width of the stem at the bottom
    (B) one-fourth of the width of the stem at the bottom
    (C) two-third of the width of the stem at the bottom
    (D) width of slab at bottom

79. The intensity of earth pressure at depth of 8 m in dry sand with an angle of internal friction 30° and unit weight 18 kN/m³ will be
    (A) 1/2 (B) 2
    (C) 1/3 (D) 3

80. Tension cracks in hill slope
    (A) develops due to strains caused by incipient mass movements
    (B) serves a direct path for the infiltration of surface run-off water
    (C) both (A) and (B)
    (D) neither (A) nor (B)

81. Specific capacity of a well
    (A) is a measure of the effectiveness of the well
    (B) increases with increase in pumping rate
    (C) is a measure of its routing period
    (D) decreases with time from the start of pumping

82. Which of the following statements is correct?
    (A) Yield of a drainage basin is the runoff at any time
    (B) Yield of a drainage basin is the runoff over long periods
    (C) Yield of a drainage basin is expressed as surface runoff per year
    (D) Runoff is expressed as total volume per day

83. Hydrograph is a graphical representation of
   (A) surface runoff
   (B) discharge flowing in the river
   (C) ground water flow
   (D) rainfall

84. Which of the following about artificial recharge of aquifers is correct?
   (A) Period of monsoon data is essential in design of artificial recharge of aquifer
   (B) Dug wells may be utilized as recharge structure for artificial recharge of aquifer
   (C) Percolation tanks can be constructed to recharge deeper aquifers
   (D) All of the above

85. Shallow well constructed in series along the banks of a river in order to collect river water seeping through their bottom is called
   (A) surface spring
   (B) infiltration wells
   (C) dug well
   (D) tube well

86. Quick lime is
   (A) Calcium Sulphate
   (B) Calcium Carbonate
   (C) Calcium Hydroxide
   (D) None of these

87. Slow setting cement will have higher percentage of
   (A) Gypsum
   (B) Tricalcium aluminate
   (C) Dicalcium silicate
   (D) Tricalcium silicate

88. Limestone is an example of
   (A) Calcareous rock
   (B) Argillaceous rock
   (C) Silicious rock
   (D) Igneous rock

89. Charring of a timber is a method of
   (A) Seasoning
   (B) Preservation
   (C) Curing
   (D) Restoration

90. Which of these has the least crushing strength?
   (A) Sandstone
   (B) Limestone
   (C) Granite
   (D) Laterite

91. 300 grams of soil sample is sieved using 4.75mm IS sieve and 165 g of sample passes the sieve. The soil is
   (A) sand
   (B) gravel
   (C) silt
   (D) clay

92. The bearing capacity factors Nc, Nq and Nr are functions of
   (A) width and depth of footing
   (B) density of soil
   (C) cohesion of soil
   (D) angle of internal friction of soil

93. Stoke's law is valid only if the size of particle is
   (A) less than 0.0002 mm
   (B) greater than 0.2 mm
   (C) between 0.2 mm and 0.0002 mm
   (D) between 2 mm and 0.2 mm

94. A soil is said to be well graded if coefficient of curvature lies between
   (A) 1 and 3
   (B) 1 and 5
   (C) 3 and 5
   (D) 5 and 7

95. A loose uniform sand with rounded grains has effective grain size of 0.05 cm. Coefficient of permeability of sand is
(A)   0.25 cm/sec
(B)   0.50 cm/sec
(C)   1.0 cm/sec
(D)   1.25 cm/sec

96. Which of the following statements is incorrect?
(A)   Monitoring of pore water pressure is essential for effective stress analysis of slide prone area
(B)   Horizontal movement of slide is measured with settlement gauges
(C)   Prestressed anchors are used where it is required to stabilize a rock slop against deep seated failure
(D)   Compaction has no effect on structure of soil

97. Which of the following statements is incorrect?
(A)   Crib walls can be used as a restraining structure
(B)   Growth of vegetative cover helps to improve stability of slope
(C)   Topples is a type of slope movement
(D)   None of the above

98. Surface vertical movement of slides are measured with
(A)   Hydraulic piezometer
(B)   Pneumatic piezometer
(C)   Platform gauges
(D)   Tensiometer

99. Which of the following statements is incorrect?
(A)   Performance of hill road is directly proportional to degree of stability of the slope
(B)   Sub-surface drainage in a hill slope increases hydrostatic pressure
(C)   Landslides are normally caused by a number of factors
(D)   All of the above

100. Asphalt mulch treatment is a method adopted for
(A)   making the road surface impervious
(B)   controlling erosion of hill slope
(C)   installation of sub surface drain pipe
(D)   making road smooth and free of cracks

SPACE FOR ROUGH WORK