

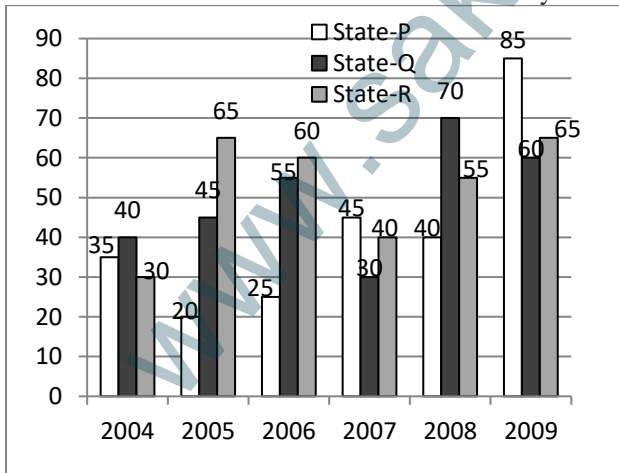
# AP GRAMA/WARD SACHIVALAYAM GRAND TEST – 3 GROUP B

MARKS : 150    No. of Questions: 150    Time : 150 Minutes    (-)tive marks: 0.25

1. The speed of a boat in still water is 9 km/h. A boat goes 72 km and back to its starting point in 18 hours. Find the speed of stream?  
(a) 3 km/hr                      (b) 4 km/hr  
(c) 5 km/hr                      (d) 6 km/hr
2. Rs. 500 is divided among A, B, C in such a way that Rs. 16 more  $\frac{2}{5}$  of A's share, Rs. 70 less than  $\frac{3}{4}$  of B's share, and Rs. 4 less than  $\frac{3}{5}$  of C's share are equal. Find B's share.  
(a) Rs. 300   (b) Rs. 400   (c) Rs. 100   (d) Rs. 200
3. A reduction of 20% in the price of Rice enables a Purchase to obtain 8kg more Rice for Rs. 160. Then the price per kg before reduction was  
(a) 5 per kg                      (b) 6 per kg  
(c) 7 per kg                      (d) 8 per kg
4. A man can row at a speed of  $4\frac{1}{2}$  km/hr in still water. If he takes 2 times as long to row a distance upstream as to row the same distance in downstream, then, the speed of stream (in km/hr) is  
(a) 1                                  (b) 1.5                      (c) 2                                  (d) 2.5
5. The area of a rhombus having one side 10 cm and one diagonal 12 cm is  
(a) 48 cm<sup>2</sup>   (b) 96 cm<sup>2</sup>   (c) 144 cm<sup>2</sup>   (d) 192 cm<sup>2</sup>

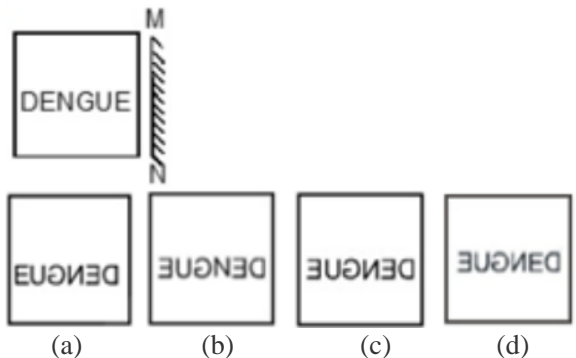
**Directions (6-8):** Study the following graphs carefully to answer the questions that follow.

Number of Candidates (in thousands) who qualified in an exam in three different states in six different years

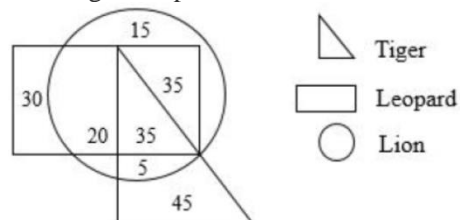


6. Total number of candidates who qualified in the exam in the year 2004 and 2005 together from state Q was approximately what percentage of total number of candidates who qualified in the exam from all the states together in the year 2008?  
(a) 61   (b) 65   (c) 79   (d) 52

7. What was the respective ratio between the number of candidate who qualified in the exam from state - R in the year 2008 and the number of candidates who qualified in the exam from state - P in the year 2004?  
(a) 11:10   (b) 9:11   (c) 11:7   (d) 11:9
8. If 40 per cent of the candidates who qualified in the exam from state- P in the year 2009 were females then what was the sum of number of male candidates who qualified from State - P in the year 2009 and the total number of candidates who qualified in the exam from state - Q in the year 2009?  
(a) 1,11,000   (b) 1,01,000   (c) 93,000  
(d) 1,21,000
9. If "S" denotes "multiplied by", "V" denotes "subtracted from", "M" denotes "added to" and "L" denotes "divided by", then  $7 V 42 M 56 L 8 S 5 = ?$   
(a) 8   (b) 12   (c) 20   (d) 0
10. If a mirror is placed on the line MN, then which of the answer figures is the right image of the given figure?



11. Mohan, Ritika, Janvi, Priya and Riya are friends. Janvi runs faster than Ritika but slower than Priya. Mohan is the slowest runner and Riya runs faster than Priya. Who runs the fastest among the five?  
(a) Priya   (b) Riya   (c) Ritika   (d) Mohan
12. The diagram represents the likes of children in a society.



- The difference between children who like leopard to those who like tiger is  
(a) 50   (b) 35   (c) 30   (d) 5

13. Which answer figure will complete the question figure?  
 (a) Sikkim (b) Bihar (c) Assam (d) Odisha



- (a) (b) (c) (d)

**Directions (Q. No. 14) :** In the following questions a blank has been given in a sentence. And it is followed by four options namely a, b, c and d. One of the options fills up the blank. Choose the appropriate option.

14. \_\_\_\_\_ lunch we had at your marriage was superb.  
 (a) a (b) the (c) an (d) No article

**Direction (Q. no. 15) :** In the following question a idiom is given. And it is followed by four options namely a, b, c and d. One of the options gives the meaning of the idiom. Choose the appropriate option.

15. To grease the palm  
 (a) To bribe (b) To reject  
 (c) To maintain (d) To hold

**Direction (Q. No. 16) :** In the following a paragraph has been jumbled. After keeping it in order attempt the appropriate option that makes sense and keep the paragraph in a proper order.

16. (A) He borrowed some money from his neighbor for me  
 (B) However, he promised to get the money I needed  
 (C) Since I had no money with me, I decided to borrow from my friend  
 (D) The electricity bill had to be paid immediately  
 (E) But, he had no money with him to lend me  
 (a) c d a b e (b) c e b a d  
 (c) a b c d e (d) d c e b a

17. The 'Dadasaheb Phalke Award' is India's highest award in which of the following fields?  
 (a) Sport (b) Business (c) Science (d) Cinema

18. Chandrayaan-2, India's second mission to the Moon will be launched by the launch vehicle \_\_\_\_\_  
 (a) PSLV-XL (b) GSLV-II  
 (c) GSLV-Mk III (d) RLV-TD

19. With which country did India hold high-level talks in July 2019 to elevate bilateral cooperation in the field of space, including assistance in India's 'Gaganyaan' mission?  
 (a) Japan (b) Russia (c) China (d) Indonesia

20. 'Game Changer' is the autobiography of which of the following cricketers?  
 (a) Shane Watson (b) Shahid Afridi  
 (c) Lasith Malinga (d) Chris Gayle

21. Longest serving Chief Minister of any state Pawan Kumar Chamling lost after 25 years. He was the Chief Minister of which state?

22. How many sustainable development goals are there  
 (a) 17 (b) 26 (c) 16 (d) 15

23. It is more comfortable to wear white cloths in summer because  
 (a) they reflect heat falling on them.  
 (b) they radiate heat transferred from the body.  
 (c) they absorb perspiration.  
 (d) they are soothing to the eye

24. The pyramid of energy in any ecosystem is  
 a) Always upright b) May be upright or inverted  
 c) Always inverted d) None of the above

25. An ecosystem must have continuous external source of  
 a) minerals b) energy c) food d) All of the above

26. In which place people revolted against English against their forest policies in 1879  
 (a) Rekapalli (b) Nadigudem  
 (c) Chinturu (d) Sileru

27. Which organization took active part in organizing Bipin Chandra Pal's tour of Rajahmundry  
 (a) Balabharati Samithi (b) Surabharathi Samithi  
 (c) Youngmen's association  
 (d) Rajahmundry Students association

28. Which Newspaper strongly supported the Home Rule Movement in Andhra  
 (a) Andhra Matha (b) Bharata Matha  
 (c) Teja (d) Desha Matha

29. Who among the following visited the Palnadu area in July 1921 to study the situation arising out of agitation against forest laws  
 (a) Vedam Venkatachari (b) Ramadas Pantulu  
 (c) Unnava Lakshminarayana (d) Swamy Sitaram

30. In the elections held to the Madras Legislative Assembly in 1920, how many seats were won by the justice party  
 (a) 63 (b) 64 (c) 65 (d) 66



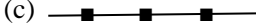

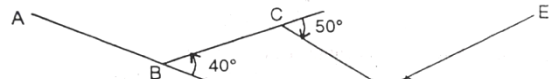
31. Who among the following wrote the Novel 'Asamarthuni Jeevitha Yatra'  
 (a) N.G. Ranga (b) Sri Sri  
 (c) K. Linga Raju (d) T. Gopichand

32. In which year the socialist party established its Andhra Branch  
 (a) 1930 (b) 1931 (c) 1932 (d) 1934

33. Which Telugu Newspaper commented "unless there is a separate government there is no protection for Telugu People's Culture"  
 (a) Desha Bhasha (b) Lokamanjari  
 (c) Desabhimani (d) Shashirekha

34. Who among the following opposed separate state for Andhras once he became Chief Minister of Madras State in 1932  
 (a) P. Ramarayanin Garu (b) P. Subbarayan  
 (c) K.V. Reddy Naidu (d) Bobbili Raja

35. In which place in 1935, the second Rayalaseema Mahasabha passed a resolution opposing separate Andhra State  
 (a) Kadapa (b) Kurnool  
 (c) Tirupathi (d) Anantapur

36. The agreement between Andhra and Rayalaseema leaders was made in 1937 at the residence of Kasinathuni Nageshwar Rao known as Sribagh pact. Where is Sribagh  
 (a) Vijayawada (b) Guntur  
 (c) Madras (d) Bangalore
37. In 1948 which Commission, in its report opined that creation of linguistic states is a threat to unity and integrity of the country  
 (a) J.V.P. Report (b) Dhar Commission  
 (c) Krishnamachary Commission  
 (d) Wanchoo Commission
38. The doctrine of "Paramountcy" is a legal principle:  
 (a) To reconcile conflicting laws where both central government and provincial governments have the power to create laws in relation to the same matter  
 (b) To explain the law making authority of the government  
 (c) To provide law making authority to the central government  
 (d) To explain law making authority of the country
39. With regard to officers of all India services, choose the correct answer from the following  
 (a) A member of an all India Service can be dismissed or removed only by the Union government  
 (b) A member of an all India service can be dismissed or removed by the state government also if he/se is serving under that state  
 (c) In India, state government employees administer state laws only  
 (d) Union government administer union laws through its departments only
40. Regarding the amendment of the constitution all following statements are correct, except  
 (a) According to Article 368, parliament of India can amend any part of the constitution  
 (b) Article 2 of the constitution empowered the parliament of India to admit new states into the Union  
 (c) With reference to Article 2 or 3, the amendment of the provisions of FIRST and FOURTH schedule shall not be deemed to be an amendment of the constitution for the purpose of Article 368  
 (d) The territories of the units of the federation may be altered or re-distributed by the parliament without intimation to the states
41. Which regards to fundamental rights, all statements below are correct, except  
 (a) Article 15 is for citizens only  
 (b) The right reserved for citizens are denied to the aliens  
 (c) Aliens are divided into friendly aliens and enemy aliens  
 (d) Indian constitution shows no difference between friendly aliens and enemy aliens
42. Which of the following articles of the Indian constitution explain about the citizenship?  
 (a) Articles 5 to 8 (b) Articles 6 to 8  
 (c) Articles 4 to 8 (d) Articles 3 to 8
43. Which of the following is not the supreme court's evolution?  
 (a) Basic structure (b) Public interest litigation  
 (c) Removal of hand cuffs  
 (d) Exemptions to fundamental rights
44. Which of the following groups of countries is arranged in descending order of area?  
 (a) Russia, Canada, China, U.S.A.  
 (b) Russia, U.S.A., Canada, China  
 (c) Russia, Canada, U.S.A., China  
 (d) Russia, China, U.S.A., Canada
45. Sierra Nevada is the name of  
 (a) An animal of America  
 (b) A disease found in America  
 (c) A fruit found in America  
 (d) A mountain in America
46. Which of the following is not a coal field?  
 (a) Raniganj (b) Umaria (c) Mosabani (d) Korba
47. The Radcliffe Line is the international border between  
 (a) India and Pakistan (b) India and China  
 (c) Indian and Bangladesh (d) India and Nepal
48. What is Durand Line?  
 (a) Boundary line between Afghanistan and Pakistan  
 (b) Boundary line between India and Pakistan  
 (c) Boundary line between India and China  
 (d) Boundary line between India and Burma
49. Which of the following will never get the vertical rays of the sun?  
 (a) Srinagar (b) Mumbai  
 (c) Chennai (d) Thiruvananthapuram
50. What is Durand Line?  
 (a) Boundary line between Afghanistan and Pakistan  
 (b) Boundary line between India and Pakistan  
 (c) Boundary line between India and China  
 (d) Boundary line between India and Burma
51. Handles are connected to the link by  
 (a) flexible joint (b) rigid joint  
 (c) ball and socket joint (d) swivel joint
52. Correct length of a 50 m tape, weighing 1.2 kg when a pull of 12 kg is applied at the ends and is freely suspended is  
 (a) 49.98m (b) 49.96 m (c) 50.02m (d) 50.04
53. Convention for a telegraphic line is  
 (a)  (b)   
 (c)  (d) 
54. If bearing of AB = 40°, bearing of BC = 300°, then  $\angle ABC =$   
 (a) 80° (b) 100° (c) 260° (d) 180°
55. In Fig, if bearing of AB is 190°, bearing of DE  
  
 (a) 40° (b) 140° (c) 240° (d) 340°

56. The variation of magnetic declination with area of the section in Fig. is called

- (a) diurnal variation (b) irregular variation  
(c) annual variation (d) secular variation

57. An instrumental error in compass survey is because of

- (a) inaccurate levelling (b) variation in declination  
(c) no counter weight provision to counteract dip  
(d) local attraction due to bare current carrying conductors.

58. An example for a level surface is

- (a) surface of earth (b) surface of sea  
(c) surface of a reservoir (d) surface of a still lake

59. Level line and horizontal line are

- (a) the same for longer distances  
(b) both straight lines  
(c) never the same  
(d) same for smaller lengths

60. A change point is

- (a) the very first station  
(b) the last station  
(c) the intermediate station where F. S. and B. S. are taken  
(d) the station after which the instrument is shifted

61. The correct position of holding staff is

- (a) held vertical  
(b) held vertically and swung to left and right and the least reading is recorded  
(c) held vertically and swung towards and away from the person holding and the highest reading is recorded  
(d) held vertically and swung towards and away by the person holding it and the least reading is recorded

62. In a survey it was recorded that  $\Sigma \text{ Rise} = 0$ , then

- (a) the ground is sloping  
(b) it is continuously rising  
(c) it is continuously falling  
(d) the survey had many invert readings.

63. Due to curvature of earth the object

- (a) looks higher than it is (b) looks lower than it is  
(c) looks as it is (d) looks curved.

64. Contour lines

- (a) end abruptly (b) cross each other  
(c) are uniformly spaced (d) close somewhere

65. When internal angles are to be subtended by a theodolite survey for closed traverse

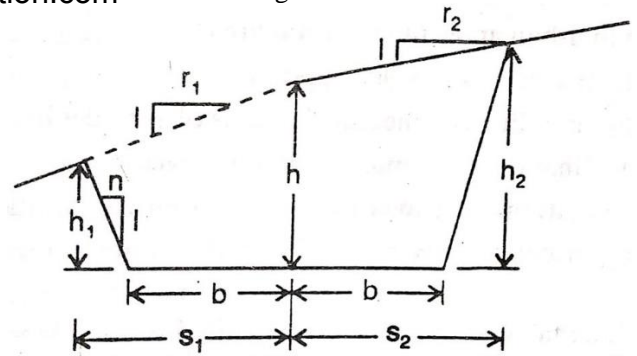
- (a) traverse should run clockwise  
(b) traverse should go counter clockwise  
(c) traverse may go either way  
(d) exterior angles are measured when the traverse goes anti-clockwise.

66. In a transit theodolite error due to eccentricity of verniers is counteracted by

- (a) reading both the verniers  
(b) reading different parts of main scale  
(c) reading right and left faces  
(d) taking both right swing and left swing readings.

67. For a level section area of a trapezoidal cut when base width is '2b', side slopes are 1V:nH and vertical depth is h, is

- (a)  $(b + nh)h$  (b)  $(b + 2nh)h$   
(c)  $(2b + nh)h$  (d)  $(b + nh) \times 2h$



- (a)  $b(h_1 + h_2) + h(b + nh_1 + nh_2)$   
(b)  $2b(h_1 + h_2) + 2h(s_1 + s_2)$   
(c)  $b(h_1 + h_2) + \left(\frac{h_1 + h_2}{2}\right)(s_1 + s_2)$   
(d)  $\frac{b}{2}(h_1 + h_2) + \frac{1}{2}h(s_1 + s_2)$

69. When the first object is to be focused, the scale is set to  $0^\circ 00' 00''$  and then

- (a) the upper screw is fixed, lower screw released, the object sighted, lower screw fixed and lower tangent screw operated.  
(b) both the clamp screw fixed, top tangent screw operated  
(c) bottom clamp screw fixed, top screw released, object sighted and upper tangent screw operated  
(d) object is exactly bisected by operating both the upper and lower tangent screws whichever is convenient.

70. Tacheometry is best suited

- (a) where chaining is impossible  
(b) for populous areas  
(c) in broken grounds  
(d) for extremely accurate survey

71. The size of drawing drawn to scale 2:1 will be \_\_\_\_\_ the actual size

- (a) same as (b) Twice of  
(c) Half of (d) None of these

72. The gear tooth profile in the form of

- (a) Spherical (b) Parabola  
(c) Spiral (d) Involute

73. A line drawn with a long section short dash and another long long section is a \_\_\_\_\_

- (a) hidden feature  
(b) centre of circle  
(c) centre axis of a hidden cylinder  
(d) centre of radius

74. If a plane is parallel to plane of projection, it appears as \_\_\_\_\_

- (a) True size (b) as a line or edge  
(c) Foreshortened (d) as an oblique surface

75. Size of A<sub>2</sub> paper is [all dimensions in mm]

- (a)  $841 \times 1189$  (b)  $594 \times 841$   
(c)  $420 \times 594$  (d)  $210 \times 297$

76. To draw smooth curves of any nature, drafting instrument used is

- (a) mini drafter (b) templates  
(c) French curve (d) eraser shield

77. Number of orientation mark generally contained by a drawing sheet is

- (a) 1 (b) 2 (c) 3 (d) 4



78. Which following publications made by BIS is the standard techniques for line conventions and lettering in detail \_\_\_\_\_

- (a) SP 46 (b) BIS 9609  
(c) ASMEY 14.217 (d) ISO 9000

79. Which of the following would be considered a primitive in a 3D solid modeling system?

- (a) cylinder (b) square (c) rhombus (d) spline

80. When a circle passes through three given points, its center lies at the intersection of

(a) the perpendicular bisector of the longest line and the perpendicular line drawn from the end of the shortest line

(b) the perpendicular bisector of the smallest line and the perpendicular line drawn from the end of the longest line

(c) the perpendicular bisectors of the lines that connect the points

(d) the tangents drawn through each point

81. When two graphic entities are at a constant distance apart along the length is commonly referred as \_\_\_\_\_

- (a) concentricity (b) parallelism  
(c) perpendicularity (d) chordality

82. The two recommended system of placing the dimensions are

- (a) unidirectional and aligned systems  
(b) upright and inclined systems  
(c) linear and oblique systems  
(d) linear and inclined systems

83. When (1) visible outlines (2) hidden lines (3) projection lines (4) centre lines overlap, the recommended sequence of priority is

- (a) 1-2-3-4 (b) 1-2-4-3 (c) 2-1-3-4 (d) 2-1-4-3

84. Long-dashed dotted narrow line is used to represent

- (a) line of symmetry (b) center lines  
(c) pitch circle of gears and holes (d) All the above

85. The included angle of a pentagon is

- (a)  $68^\circ$  (b)  $72^\circ$  (c)  $108^\circ$  (d)  $112^\circ$

86. Unit of R. F is \_\_\_\_\_

- (a) Cubic Centimeter (b) Square Centimeter  
(c) Centimeter (d) None of these

87. Scale of chord is used to measure

- (a) length of chord (b) arc length of chord  
(c) angle of chord (d) all of these

88. If the length of drawing is greater than the actual length of object then the drawing will be

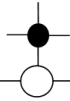
- (a) Full size drawing (b) Reduced drawing  
(c) Enlarged drawing (d) None

89. Which of the following scale is used for converting miles into kilometers.

- (a) diagonal scale (b) comparative scale  
(c) direct vernier scale (d) retrograde vernier scale

90. In the diagonal scale, the word diagonal: is used because it is most suitable for the measurement of

- (a) diameter of a circle (b) diagonal of a square  
(c) side of a pentagon (d) all of these



91. \_\_\_\_\_ Represents

- (a) fire cock (b) air vent (c) sprinkler (d) church



92. \_\_\_\_\_ represents

- (a) check value (b) safety value  
(c) fire hydrant (d) none



93. \_\_\_\_\_ represents

- (a) change of pipe size (b) change house line  
(c) residential building line (d) none

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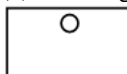
94. \_\_\_\_\_ represents

- (a) stop value (b) safety value  
(c) sluice value (d) both a & c



95. \_\_\_\_\_ represents

- (a) urinal bowl (b) floor trap  
(c) drinking fountain (d) none



96. \_\_\_\_\_ represents

- (a) Laundry sink (b) Washing fountain  
(c) Cleaner's sink (d) none



97. \_\_\_\_\_ Represents

- (a) Ledge cock (b) One-way cock  
(c) One way cock side inlet (d) None



98. \_\_\_\_\_ represents

- (a) Microphone Outlet (b) Loudspeaker Outlet  
(c) siren (d) horn



99. \_\_\_\_\_ represents

- (a) Tree (b) Tripod (c) Aerial (d) Antena



100. \_\_\_\_\_ represents

- (a) Bell Connected to fire alarm  
(b) LED bulb (c) Umbrella (d) None

101. The soil investigation method using the penetrometers belongs to the category of

- (a) open excavation (b) borings  
(c) sub-surface soundings (d) geophysical

102. The relationship between the ultimate bearing capacity  $q_f$ , the net ultimate bearing capacity  $q_{nf}$  and the depth of footing  $D$  is ( $\gamma$  being the unit weight of the soil)

- (a)  $q_{nf} = q_f + D\gamma$  (b)  $q_f = q_{nf} + \gamma D$   
(c)  $q_{nf} = q_f - D\gamma$  (d)  $q_f = q_{nf} - \gamma D$

103. Osmosis is

- (a) an electrical process where fine grained cohesive soils are drained using electricity  
(b) a method of chemical stabilisation  
(c) a method of determine the depth to water table  
(d) a method of shoring

104. The approximate bearing capacity of a sound rock without any defects may be taken as

- (a) 5 to 10  $t/m^2$  (b) 10 to 15  $t/m^2$   
(c) 100 to 200  $t/m^2$  (d) 300 to 350  $t/m^2$

105. A pile, which by itself does not carry any load but improves the bearing capacity of the soil is called

- (a) sheet pile (b) friction pile  
(c) bearing pile (d) compaction pile

1106. A cast-in-situ concrete pile with one or more bulb on its stem is called  
 (a) vibro pile (b) franki pile  
 (c) under reamed pie (d) simplex pile
1107. The distance between the flanges of the beams in any tier of a grillage foundation should be equal to  
 (a) half the flange width  
 (b) flange with  
 (c) one and a half times the flange width or 30 cm whichever is less  
 (d) minimum of 60 cm.
1108. The maximum permissible total settlement in the case of foundations on clayee soils is generally about  
 (a) 50 mm (b) 100 mm (c) 150 mm (d) 200 mm
1109. The safety of the structure can be disturbed by  
 (a) lowering or rising of water table  
 (b) excavations in the immediate vicinity of the structure  
 (c) mining or tunneling operations in the neighbourhood  
 (d) any of the above
1110. To improve the bearing capacity of the foundation, the cement grouting may be used if the foundation consists of  
 (a) clay (b) compacted sand (c) gravel (d) rock
1111. When two or more individual column footings are joined by a beam, it is called  
 (a) strip footing (b) step footing  
 (c) combined footing (d) strap footing
1112. The piles used in the construction of coffer dams  
 (a) bearing piles (b) sheet piles  
 (c) friction piles (d) compaction piles.
1113. A projected stone in masonry wall provided to serve as a support to joist or truss is known as  
 (a) cornice (b) corbel (c) coping (d) cramp
1114. The portion of a brick which is cut at one corner such that at one end its width is half of that of a full brick is called  
 (a) king closer (b) queen closer  
 (c) beveled closer (d) mitred closer
1115. A groove provided on the underside of projecting elements such as cornices, copings such that rain water can be discharged clear of the wall surface is called  
 (a) corbel (b) throating (c) hearting (d) weathering
1116. The safe compressive strength of ashlar masonry of granite stone in 1:6 cement mortar may be taken as  
 (a) 100 t/m<sup>2</sup> (b) 130 t/m<sup>2</sup> (c) 160 t/m<sup>2</sup> (d) 190 t/m<sup>2</sup>
1117. A bonding in which all courses are laid as stretchers is known as  
 (a) Flemish bond (b) Header bond  
 (c) Stretcher bond (d) English bond
1118. An arrangement for supporting an unsafe structure temporarily, till it is rendered safe or dismantled, is known as  
 (a) scaffolding (b) hauling (c) shoring (d) jacking
1119. In flat slab floor, the flared portion of the column just below the slab is called  
 (a) capital (b) pedestal (c) pilaster (d) cleat
1120. The advantage of R. C. C lintel is that  
 (a) the sunshade can be cast monolithic along with lintel  
 (b) there is no limitation on span  
 (c) they are strong and fire resistant  
 (d) all the above
1121. A row of arches in continuation is called  
 (a) multiple arch (b) arch line  
 (c) arcade (d) conclave
1122. The lower half of the arch between the crown and the skew-back is known as  
 (a) haunch (b) spandril (c) rise (d) soffit
1123. A stair in which all the steps are winders is  
 (a) circular stair (b) helical stair  
 (c) bifurcated stair (d) spiral stair
1124. Dog-legged stair is a  
 (a) half-turn stair (b) quarter-turn stair  
 (c) three-quarter turn stair (d) continuous stair
1125. Expansion joints in masonry walls are provided if length exceeds  
 (a) 10 m (b) 25 m (c) 40 m (d) 50 m
1126. Leaping weir is provided only in  
 (a) conservancy system (b) separate system  
 (c) partly separate system (d) combined system
1127. A sanitary sewer is expected to run  
 (a) full (b) half full (c)  $\frac{2}{3}$  full (d) 90% full
1128. Ovoid sewers are best suited for  
 (a) separate system  
 (b) combined system  
 (c) combined system with very wide fluctuations  
 (d) outfall sewer
1129. The working chamber of a manhole, along the direction of flow should have a minimum length of  
 (a) 0.6m (b) 0.9m (c) 1.2m (d) 2.4m
1130. A siphon spillway is an arrangement to  
 (a) divert DWF into open drain  
 (b) divert excessive DWF into open drain  
 (c) divert excessive storm water into open drain  
 (d) divert excessive combined flow into open drain
1131. The factor deciding the length of a grit chamber is  
 (a) detention period (b) horizontal velocity of flow  
 (c) settling velocity (d) surface loading
1132. Anti-syphonage pipe need not be provided in  
 (a) single-storeyed buildings  
 (b) multi-storeyed buildings  
 (c) residential flats  
 (d) industrial buildings
1133. Any trap is intended to trap  
 (a) water (b) sewage of sullage  
 (c) any liquid waste (d) fuel gases
1134. The maximum longitudinal pitch allowed in a butt riveted joint is  
 (a) 12D (b) 8D (c) 4.5D (d) 3.5D
1135. The ratio of the permissible bearing stress of hand driven rivets to the yield stress of mild steel is  
 (a) 1.0 (b) 0.9 (c) 0.67 (d) 0.87
1136. The strength of a riveted joint is equal to  
 (a) shearing strength of the rivets  
 (b) bearing strength of the rivets  
 (c) tearing strength of the plates  
 (d) least of (a), (b) and (c)

137. Number of rivets required in a joint is equal to

- (a)  $\frac{\text{load}}{\text{shear strength of a rivet}}$   
 (b)  $\frac{\text{load}}{\text{rivet value}}$   
 (c)  $\frac{\text{load}}{\text{bearing strength of a rivet}}$   
 (d)  $\frac{\text{load}}{\text{tearing strength of plate}}$

138. Bearing stiffeners are provided in plate girders to

- (a) eliminate web buckling  
 (b) transfer concentrated loads  
 (c) prevent excessive buckling  
 (d) eliminate local buckling

139. The maximum deflection permitted in the beam of jack arch is

- (a)  $\frac{\text{span}}{300}$  (b)  $\frac{\text{span}}{350}$  (c)  $\frac{\text{span}}{400}$  (d)  $\frac{\text{span}}{480}$

140. The sag tie in a truss is mainly used to reduce

- (a) tension (b) compression  
 (c) moment and deflection (d) weight of the truss

141. The economic range of spacing of roof trusses is

- (a)  $\frac{1}{2}$  to  $\frac{1}{3}$  of span (b)  $\frac{1}{2}$  to  $\frac{1}{4}$  of span  
 (c)  $\frac{1}{4}$  to  $\frac{1}{6}$  of span (d)  $\frac{1}{3}$  to  $\frac{1}{5}$  of span

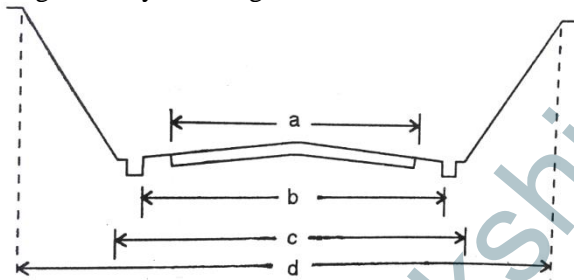
142. Sag rods in a roof truss are used for connecting

- (a) principal rafters (b) purlins  
 (c) main ties (d) all the above

143. A structural element used to support a vertical cladding is called

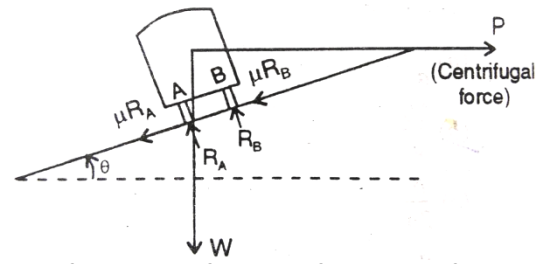
- (a) cleat (b) runner (c) ferrule (d) diaphragm

144. Right of way in the figure below is



- (a) a (b) b (c) c (d) d

145. Super elevation + lateral friction should not be greater than



- (a)  $\frac{V^2}{127R}$  (b)  $\frac{V^2}{225R}$  (c)  $\frac{V^2}{7.4R}$  (d)  $\frac{V^2}{14.28R}$

146. A pavement is classified as flexible pavement or rigid pavement based on its

- (a) Wearing course (b) Base course  
 (c) Sub-base (d) Sub-grade

147. Base course of a WBM road consists of

- (a) 120 to 180 mm stone placed on their ends upwards  
 (b) 120 to 180 mm stone placed on their ends upwards + 50 mm stone Macadan + Water  
 (c) 120 to 180 mm stone placed on their ends upwards + 50 mm stone Macadan + Water + 2 layers of metal each 150 thick  
 (d) 120 to 180 mm stone placed on their ends upwards + 50 mm stone Macadan + Water + 2 layers of metal each 150 thick + Rolled + Screenings applied.

148. Soil stabilizer is used for

- (a) improving properties of low cost roads  
 (b) improving skid resistance of a surface  
 (c) growing vegetation on the side slopes of embankment  
 (d) flattening of slope providing drainage and prevention of rock slides.

149. The prepared bed of ground to receive ballast is called

- (a) packing (b) boxing  
 (c) embankment or cutting (d) formation

150. An ideal sleeper in many ways is

- (a) wooden sleeper (b) steel sleeper  
 (c) cast iron sleeper (d) concrete sleeper

\*\*\*\*\* ALL THE BEST \*\*\*\*\*

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AP GRAMA/WARD SACHIVALAYAM GRAND TEST –3ANSWER KEY  
GROUP B

1	a	21	a	41	d	61	d	81	b	101	c	121	c	141	d
2	d	22	a	42	a	62	c	82	a	102	b	122	a	142	b
3	a	23	a	43	d	63	b	83	b	103	a	123	d	143	b
4	b	24	a	44	c	64	d	84	d	104	d	124	a	144	d
5	b	25	b	45	d	65	b	85	c	105	d	125	c	145	a
6	d	26	c	46	c	66	a	86	d	106	c	126	c	146	b
7	c	27	a	47	a	67	c	87	c	107	c	127	c	147	b
8	a	28	d	48	a	68	d	88	c	108	b	128	c	148	a
9	d	29	c	49	a	69	a	89	b	109	d	129	c	149	d
10	c	30	a	50	a	70	c	90	d	110	d	130	c	150	a
11	b	31	d	51	d	71	b	91	a	111	d	131	b		
12	b	32	d	52	a	72	d	92	b	112	b	132	a		
13	c	33	c	53	d	73	c	93	a	113	b	133	d		
14	b	34	d	54	a	74	a	94	d	114	a	134	c		
15	a	35	a	55	b	75	c	95	a	115	b	135	c		
16	d	36	c	56	a	76	c	96	c	116	c	136	d		
17	d	37	b	57	c	77	b	97	a	117	c	137	b		
18	c	38	a	58	d	78	a	98	b	118	c	138	d		
19	b	39	a	59	d	79	a	99	c	119	a	139	d		
20	b	40	d	60	c	80	c	100	a	120	d	140	c		