

A.P.P.S.C GROUP-IV

SECRETARIAL ABILITIES 2012

HELD ON: 22-01-2012

1. Complete the following number sequence 5, 9, 13, 17, 21, ?, 29
1) 25 2) 26 3) 27 4) 28
2. Complete the following letter / words series with proper word
EFG : HIJ :: MNO :
1) PRQ 2) PQR 3) PRR 4) PPQ
3. Complete the following letter / words sequence with proper word
CEG : EGC :: LNP :
1)>NNL 2) NPN 3) LPN 4) NPL
4. If JUDICIAL is coded as JUDICILA, what will be the code for 'GLORIOUS'
1) GOLRIOSU 2) GOLRSIOU
3) GOLIROSU 4) GOLISUOR
5. If FLOWER is coded as GMPXFS, then what does the code HBSEFO represent
1) FENCE 2) STEM 3) ROOT 4) GARDEN
6. If DELHI is coded as CCIDD, how BOMBAY can be coded?
1) AMJYSV 2) AMJYVS 3) AMJSVY 4) AMJSYV
7. (a) Painting, (b) foundation, (c) slab work, (d) flooring, (e) wiring. Arrange these activities in a logical order.
1) (a), (c), (d), (e), (a) 2) (a), (c), (b), (d), (e)
3) (b), (a), (d), (c), (e) 4) (a), (c), (d), (b), (e)
8. There are some boys and cycles. If one boy rides on one cycle, one boy remains. If two boys ride one each cycle, one cycle remains. Find out how many boys and how many cycles are there.
1) 3 boys and 4 cycles 2) 3 cycles and 4 boys
3) 4 boys and 5 cycles 4) 2 boys and 4 cycles

Directions to questions (9 – 12):

A, B, C, D, E, F, G and H are sitting in circle facing the centre.

E is between H and D

H is third to the left of B and second to the right of A

C is between A and G

F is opposite to B

9. Who is third to the left of E?
1) G 2) F 3) A 4) C
10. Who is sitting opposite to A?
1) D 2) E 3) B 4) C

11. Who is third to the right of G?

- 1) A 2) E 3) D 4) F

12. Who is between G and D?

- 1) H 2) B 3) A 4) C

13. Find the missing number in the following sets of numbers

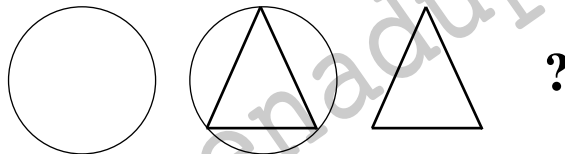
	26		5		37
35	?	30	15	2	17
	24		3		35

- 1) 5 2) 6 3) 7 4) 8

14. Thermometer : Degree :: Clock

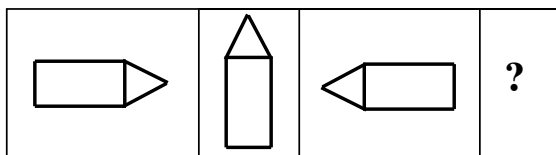
- 1) Minute 2) Tower 3) Wall 4) Hour

15. Which figure would replace the question mark?



- 1) 2) 3) 4)

16. Which Figure would replace the question mark?

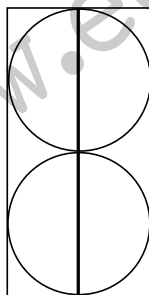


- 1) 2) 3) 4)

17. _ _ a a b _ a _ a _ ba

- 1) bbaab 2) aacbb 3) ababa 4) babab

18. Which letters are hidden in the following?



- 1) COSL 2) BOET 3) ICBN 4) MCSL

19. Ahmed is taller than Salim. Salim is not as tall as Ahmed but taller than Akbar. Sohan too is not as tall as Salim but taller than Akbar. Who is the tallest?
1) Salim 2) Akbar 3) Sohan 4) Ahmed
20. Which of the four sets is like the given set?
Given set is 14, 23, 32
1) 12, 21, 30 2) 13, 21, 29 3) 14, 19, 24 4) 15, 23, 31
21. Ecology is related to environment in the same way Histology is related to
1) Fossils 2) History 3) Tissues 4) Hormones
22. Teeth is related to Gnit in the same way as Fist is related to
1) Blow 2) Hand 3) Open 4) Clench
23. Truthfulness is to Liar as Loyalty is to
1) Worker 2) Traitor 3) Diligent 4) Faithful
24. Given set (49, 25, 9) choose that set of numbers from the four alternative sets that is similar to the given set.
1) (36, 16, 4) 2) (36, 25, 16) 3) (39, 26, 13) 4) (64, 27, 8)
25. RATIONAL is RATNIOLA as TRIBAL is to
1) TIRLAB 2) TRIALB 3) TIRLBA 4) TRILBA
26. The Odd one out of the following is
1) Capsicum 2) Pineapple 3) Cherry 4) Strawberry
27. The Odd one out of the following is
1) 48 2) 12 3) 36 4) 59
28. Which fraction comes next in the sequence
 $\frac{1}{2}, \frac{3}{4}, \frac{5}{8}, \frac{7}{16}, ?$
1) $\frac{9}{32}$ 2) $\frac{10}{17}$ 3) $\frac{11}{34}$ 4) $\frac{12}{35}$
29. Given the series 121, 143, 165, 186, 209 the wrong term is
1) 143 2) 186 3) 165 4) 209
30. If VICTORY is coded as YLFWRUB how can SUCCESS be coded?
1) VYEFIVV 2) VXFFHVV 3) VYEEHVV 4) VXEEIVV
31. If D = 4 and COVER = 63 then BASIS = ?
1) 54 2) 55 3) 50 4) 49
32. If banana is apple, apple is grapes, grapes is mango, mango is nuts, nuts is guava, which of the following is yellow fruit ?
1) Guava 2) Grapes 3) Nuts 4) Apple
33. Anil introduces Rohit as the son of the only brother of his father's wife. How is Rohit related to Anil?
1) Cousin 2) Son 3) Uncle 4) Brother

34. Daya has a brother Anil. Daya is the son of Chandra. Bimal is Chandra's father. In terms of relationship, what is Anil of Bimal?
 1) Brother 2) Grandson 3) Son 4) Grandfather
35. Five girls are sitting in a row. S is sitting next to P but not T. K is sitting next to R who is sitting on the extreme left and T is not sitting next to K. Who are sitting adjacent to S?
 1) R and P 2) K and P 3) P and T 4) Only P
36. Arrange the given words in alphabetical order and choose the one that comes last
 1) Remove 2) Revive 3) Rumour 4) Ruin
37. Select the series in which the letters skipped in between adjacent letters do not decrease in order
 1) PJXHM 2) MGVFK 3) GWIQU 4) EQZFI
38. How many numbers from 11 to 50 are there which are exactly divisible by 7 but not by 3?
 1) 2 2) 4 3) 6 4) 5
39. Sachin ranks twelfth in a class of 46. What will be his rank from the last ?
 1) 33 2) 34 3) 35 4) 37
40. How many days will there be from 26th January 1996 to 15th May 1996 (both days included)
 1) 112 2) 110 3) 113 4) 111
41. The age of a father is twice that of the elder son ten years. Hence the age of the father will be three times that of the younger son. If the difference of ages of the two sons is 15 years the age of the father is
 1) 50 years 2) 55 years 3) 70 years 4) 65 years
42. Find the missing character.
- | | |
|--|---|
| 9 | 15 |
| 4 58 8 | 9 ? 8 |
| 10 | 10 |
- 1) 100 2) 78 3) 117 4) 63

Directions: The following questions (43 – 50) contain some statements followed by four conclusions numbered I, II, III and IV. You have to take two given statements to be true even if they seem to be at variance from the commonly known facts. Choose which of the given conclusions logically follows from the two given statements disregarding commonly known facts and make your answer as 1, 2, 3 or 4 in the answer sheet.

43. **Statements:** Some cars are scooters.

No scooter is auto

Conclusions: I: Some cars are not autos

II: All autos are cars

III: Some autos are cars

IV: Some scooters are cars

- 1) Only II and III Follow 2) Only I and II follow
 3) Only I and III follow 4) III and IV follow

44. **Statements:** Some blankets are curtains.

No curtains is a chair

Conclusions: I: No Blanket is a chair

II: Some blankets are not chairs

III: Some curtains are blankets

IV: No curtain is blanket

- 1) Only I and III Follow
- 2) Either I or IV follow
- 3) Only II and IV follow
- 4) Only II and III follow

45. **Statements:** Some apples are grapes;

All grapes are pineapples.

Conclusions: I: Some pineapples are not apples

II: Some pineapples are apples

III: No pineapple is grape

IV: All apples are pineapples

- 1) Only I and II follow
- 2) Only I and IV follow
- 3) Only III and IV follow
- 4) All follow

46. **Statements:** Some students are brilliant

Gopi is a student

Conclusions: I : Some students are dull

II : Gopi is brilliant

III : Gopi is dull

IV : Students are usually brilliant

- | | |
|---------------------------|------------------|
| 1) Only I and II follow | 2) Only I follow |
| 3) Only II and III follow | 4) All follow |

47. **Statements:** Some pens laugh;

All tables laugh

Conclusions: I : All tables are pens

II : Some pens are tables

III : Those who do not laugh are not tables

IV : Some pens do not laugh

- | | |
|--------------------|--------------------------|
| 1) Only II follows | 2) Only I follows |
| 3) Only IV follows | 4) Only II and IV follow |

48. **Statements:** All crows are sparrows

No sparrow is a koel

Conclusions: I : No crow is koel

II : some crows are koels

III : All sparrows are crows

IV : Some koels are crows

1) Only II and III follow

2) Only II and IV follow

3) Only I follows

4) None of these

49. **Statements:** Some watches are fans

No fan is shirt

Conclusions: I : No fan is watch

II : No watch is fan

III : Some fans are shirts

IV : Some watches are shirts

1) Only I and IV follow

2) Only II and IV follow

3) Only III and IV follow

4) None follows

50. **Statements:** All spoons are bags

All bags are chalks

Conclusions: I : Some chalks are spoons

II : All spoons are chalks

III : All chalks are spoons

IV : Some bags are not spoons

1) Only I, II and IV follow

2) Only II, III and IV follow

3) Only I, III and IV follow

4) None of these

51. Which word cannot be formed with the letters of the word MASQUERADE?

1) SQUARE

2) MOSQUE

3) MADE

4) MARE

52. Which set of numbers is like a given set?

Given set is 8, 3, 2.

1) 95, 24, 5

2) 63, 8, 3

3) 10, 6, 5

4) 168, 15, 4

53. Which number is like the numbers of the given set? Given set is 813, 538, 725.

1) 219

2) 328

3) 814

4) 712

54. Kuldeep, the younger brother of Subash is older than Uttam. Prakash, who is younger to Satish, is older than Subash. Who among them is the eldest?

1) Prakash

2) Kuldeep

3) Subash

4) None of these

55. JD, KF, – , PM, TR

1) MI

2) NJ

3) NI

4) OJ

56. BTO, DSQ, FRS, HQS, –

- 1) IPY 2) JPW 3) GPW 4) JRW

57. Z, T, O, K, H, –

- 1) E 2) J 3) F 4) D

58. The doctor advised her to take a meagre diet of bread and water. The word 'meagre' in the sentence means

- 1) good in quality 2) small in quantity
3) best in quality 4) common quality

59. He had absented himself the office for the day. Fill the gap.

- 1) in 2) to 3) on 4) from

60. Choose the word with correct spelling

- 1) Optimum 2) Occurence 3) Committee 4) Recommend

61. I cannot come with you complete the sentence with the correct clause.

- 1) if it will rain today 2) if it won't rain today
3) if it would rain today 4) if it rains today

(62 – 65): Arrange the following four sentences A, B, C, D in the proper sequence so as to form a meaningful paragraph; then answer the questions.

- A. Soon fig trees and palm trees grow tall and graceful, making a cool, green shady place around the spring.
B. Here and there in the Arabian deserts are springs of water that come from days down under the ground so deep that the Sun cannot dry them up.
C. These springs are few and far apart, but whenever there is one, green grass very soon covers the ground a place is called an Oasis.
D. Such a place is called an Oasis.

62. Which of the following should be the first sentence?

- 1) A 2) B 3) C 4) D

63. Which of the following should be the second sentence?

- 1) A 2) B 3) C 4) D

64. Which of the following should be the third sentence?

- 1) A 2) B 3) C 4) D

65. Which of the following should be the fourth sentence?

- 1) A 2) B 3) C 4) D

(66 – 69): Arrange the following four sentences A, B, C, D in the proper sequence so as to form a meaningful paragraph; then answer the questions.

- A. Thus, the trunk serves the elephant as a long arm and hand.
B. It is a strange looking animal with its long nose called the trunk.
C. The elephant is the largest of all animals living and the strongest.
D. It draws up water by its trunk.

80. Which is a hill station and an industrial centre but not a historical place?

- 1) E 2) F 3) A 4) B

(81 to 90) **Directions:** Read the following passages and answer the questions given below them, selecting the correct answer from among the alternatives given. Mark your answer as 1, 2, 3 or 4 in your answer sheet.

PASSAGE

At an elevation of 29035 feet (8850 metres) Mount Everest is the world's largest mountain. Mount Everest is relatively young, having been formed only 60 million years ago and it is still growing a few millimetres every year! Mount Everest separates Nepal and Tibet. Each of these two countries have special name for this giant mountain. The Nepalese name is 'Sagarmatha' Which means goddess of the sky. The Tibetan name is 'Chomolungma' which means mother goddess of the universe. In English Mount Everest is named after Sir George Everest, the first person to record the height and location of the mountain. A climb to the summit was attempted by George Mallory in 1922 who famously gave his reason for wanting to climb Everest as "Because it is there". The first successful ascent of Mount Everest was accomplished by Sir Edmund Hillary and Tenzing Norgay on May 29, 1953.

81. How high is Mount Everest?

- 1) 29035 metres 2) 8850 feet 3) 29035 feet 4) 8850 metres²

82. In what way does Mount Everest change every year?

- 1) It is relatively young
2) It is an elevation of 8850 metres
3) It is the largest mountain
4) It is still growing a few millimetres every year

83. Where is Mount Everest located?

- 1) It is in Nepal
2) It is in Tibet
3) In the mountain range called the Himalayas
4) All the above

84. Who wanted to climb Mount Everest "Because it is there"?

- 1) Sir George Everest 2) George Mallory
3) Sir Edmund Hillary 4) All of these

85. In which year the first successful ascent of Mount Everest was accomplished?

- 1) 1953 2) 1952 3) 1922 4) None of these

86. 'Sagarmatha' means

- 1) God of the sky 2) Sky
3) Mother of the Universe 4) Goddess of the sky

87. Who recorded the location of the Mount Everest?

- 1) Sri George Everest 2) George Mallory
3) Tenzing Norgay 4) Edmund Hillary

95. The writer likes the saree because
1) It belongs to her mother
2) It has no boarded and pallau
3) It has petals of ivory here and there
4) None of the above
96. The first firm knot is compared to
1) a close family 2) a foam 3) a shade 4) all of these
97. This is a shade more luminous on the saree
1) a hint of peach 2) olives and petals
3) the golden glow 4) none of these
98. This is gone suddenly from the writer's mind as foam
1) Plam leaves 2) Susurrant
3) Golden glow 4) Snatches of dialogue
99. Elegant means
1) Beautiful 2) Old 3) New 4) Recent
100. Pallau means
1) Background 2) Decorated end portion
3) Boarder 4) Unusual sari

(101 to 120) Directions: The following questions contain four sentences which in their present arrangement lack coherence, connection and development. There is only one way of rearranging them to make a coherent package. Choose the correct arrangement from the alternatives given and mark your answer as 1, 2, 3, or 4 in the answer sheet.

101. a) The wings were long and narrow but widening at the ends.
b) It has a pair of long antenna and an ugly head.
c) The praying mantis is a large green insect that eats other insects.
d) When the insect is rested they are folded neatly over the back.
1) cdba 2) cabd 3) cbad 4) abcd
102. a) When Mohit went to the cinema hall yesterday, the film already started.
b) He counted twenty in fifth row and sat on a chair since his ticket is E20.
c) There nobody to show him the way.
d) It was dark inside.
1) acdb 2) acbd 3) dacb 4) adcb
103. a) Getting rid of plastics is particularly difficult.
b) Much has been done to improve sanitation and public health.
c) Pollution is not a new problem now a days.
d) In modern industrial towns the disposal of waste becomes quite complicated.
1) cbda 2) acbd 3) cabd 4) cbad

104. a) But once the dark clouds gather, it is quite chilly.
b) It is better if you take a raincoat.
c) It seems a lovely day now.
d) Then you do not panic in case it rains.
1) cbda 2) cadb 3) bdac 4) abdc
105. a) The money that was collected by this was donated to the Prime Minister's relief fund.
b) The play was rehearsed and was a resounding success.
c) The play the had staged was 'Bishop's candles sticks.'
d) The actors got standing oration.
1) adcb 2) acdb 3) cbda 4) cdab
106. a) Turning around, I saw some elephants approaching.
b) He has a placard advertising a forthcoming circus.
c) Across the road, Mr. Samuel has just finished polishing his fruits.
d) Leading was a young man on a penny
1) dbca 2) acdb 3) bcad 4) adbc
107. a) The losing teams are eliminated like in any other normal championship.
b) This trophy was gifted by the U.S. Lawn Tennis Association.
c) The Davis Cup is a beautiful silver punch bowl.
d) The top 16 tennis nations compete against one another.
1) cbda 2) dacb 3) badc 4) cbad
108. a) He mother heard that there was a wiseman at the village.
b) He loved to play Pranks and did not take anything seriously.
c) Rama was a boy from Tenali
d) She asked him to din same sense into Rama
1) adcb 2) cbad 3) cabd 4) cbda
109. a) A girl had been kidnapped by a neighbour for random.
b) More then 50 residents interviewed.
c) A probe was supervised by the DSP himself.
d) The mother informed the police about the missing girl.
1) abdc 2) abcd 3) adcb 4) acbd
110. a) Rinse the clothes thoroughly.
b) All the dirty clothes should be collected.
c) Soak all the white clothes for an hour.
d) Take half a bucket of water and add 4 caps of liquid bleach to it.
1) dcab 2) bdac 3) dcba 4) bdca

111. a) "Since you never spend time at home she left you out of the picture" said the teacher.
b) He wondered why he was not in the picture.
c) His brother grew concerned and sent him an e-mail one day.
d) At a parent teacher meeting a few months prior, he wrote, he had been shown a picture his daughter had drawn of their family.
1) acdb 2) badc 3) abdc 4) bdca
112. a) From the distance it looks like a circus tent.
b) The driver smiles but does not give any answer.
c) I ask the driver "Why are there so many prayer flags"?
d) On the way to city, there is a suspension bridge.
1) cbda 2) dacb 3) abdc 4) dcba
113. a) It was extremely different and risky before modern methods and machines began to be used.
b) To kill a whale the hunters used spears called harpoons.
c) Whale hunting however is not easy.
d) These harpoons had very long and strong lines tied to them.
1) bcad 2) bdca 3) cabd 4) abdc
114. a) The man becoming more and more invisible as he threw off one garment after another.
b) People gathered to watch a remarkable scene
c) He had to arrest a man without a head.
d) The constable arrived and was surprised.
1) badc 2) adcb 3) dacb 4) dcba
115. a) It was my wife who answered the phone.
b) I had a call from the Local assistant Commission of Income Tax.
c) After paying so much tax, where do we have any money left for mobile phone?
d) "He does not have a mobile phone", my wife replied.
1) cbad 2) adbc 3) bcad 4) badc
116. a) Jamshedji know very well that an industrial revolution can only be brought by setting up iron and steel industry.
b) He did not live to see the industry he had in mind.
c) His dream was fulfilled by his sons in 1907.
d) Jamshedji Tata is considered to be the path finder of modern industrial builders.
1) adcb 2) abcd 3) dabc 4) dcba
117. a) It was an auspicious day and many people had assembled in the temple
b) They were all in a happy state of mind as was apparent from their glowing faces.
c) Though different there was one commonality among all of them.
d) There were rich, poor, men, women, children, blind, handicapped among them.
1) dcba 2) adcb 3) adbc 4) cbda

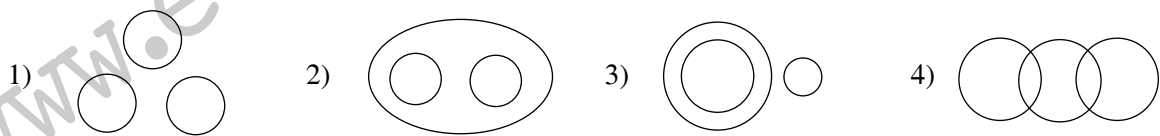
118. a) Clouds of fire flies in the garden of the rest house.
 b) A few years ago panthers are regular visitors to the rest house.
 c) It is now evening and we move towards shelter.
 d) Tree-felling since then pushed the prey species away and the great cats followed.
 1) cabd 2) bdac 3) acbd 4) abcd
119. a) Lack of infra-structural support has been one reason.
 b) There have been several factors responsible for it.
 c) Kalaripayattu is an ancient martial art of Kerala.
 d) It is now considered a dying form of art.
 1) cdba 2) cdab 3) dcab 4) cadb
120. a) May and June are the present months.
 b) The monsoon not only arrives in Mumbai but it also receives rainfall more than Delhi.
 c) Mumbai is comparatively less at 40°C.
 d) Delhi is very hot during summer.
 1) adbc 2) dacb 3) dabc 4) adcb

(121 to 125) Direction: From the following questions Choose the best alternative as the answer.

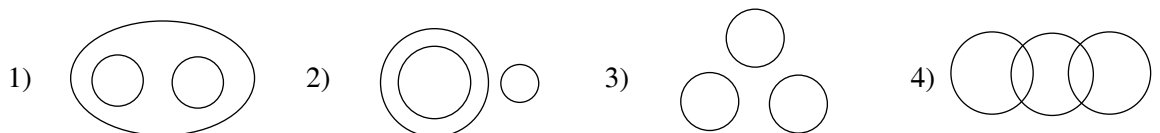
121. A book always has
 1) Pages 2) Chapters 3) Cover 4) Contents
122. A disease always has
 1) Germs 2) Cause 3) Medicine 4) Patient
123. Quilt always has
 1) Cover 2) Print 3) Cotton 4) Tags
124. Controversy always involves
 1) Dislike 2) Injustice 3) Passion 4) Disagreement
125. Danger always involves
 1) Fear 2) Help 3) Enemy 4) Attack

(126 to 130) Directions: Each of the following questions contain three items. Using the relationship between these items match even question with the most suitable diagram and mark your answer as 1, 2, 3 or 4 in the answer sheet.

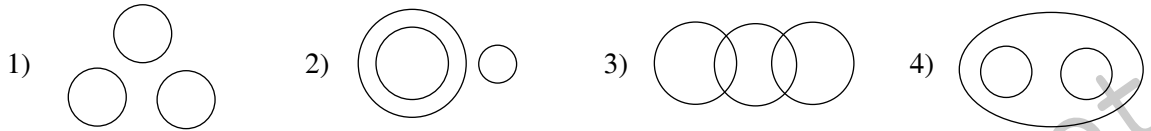
126. Deer Rabbit Mammal



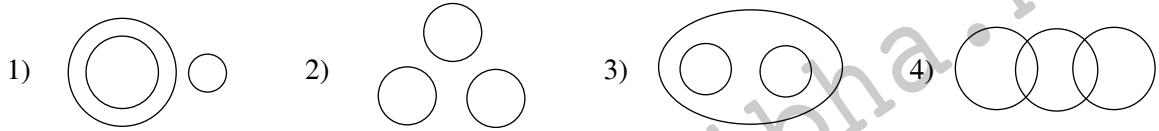
127. Whales Fishes Crocodiles



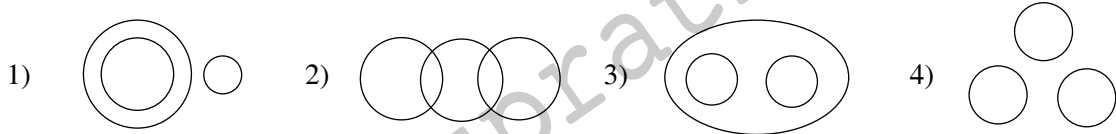
128. Engineer Doctor People



129. Sea Island Mountain



130. Flowers White Clothes



131. The value of k for which the system of equations: $2x - ky = 4$; $3x + 2y = 6$ has infinitely many solutions is

- 1) $\frac{4}{3}$ 2) $-\frac{2}{3}$ 3) $-\frac{4}{3}$ 4) $-\frac{3}{4}$

132. Ravi brought a shirt for Rs.374.50 which includes 7% sales tax. Then the price of the shirt is

- 1) 300 2) 305 3) 157 4) 350

133. If sum of the roots of the equation $x^2 - x = k(2x - 1)$ is zero then the value of k is

- 1) $\frac{1}{2}$ 2) 2 3) $\frac{1}{3}$ 4) $-\frac{1}{2}$

134. The quadratic equation whose roots are $3 + \sqrt{3}$, $3 - \sqrt{3}$ is

- 1) $x^2 - 6x + 12 = 0$ 2) $x^2 - 6x + 6 = 0$
 3) $x^2 - 2\sqrt{3}x + 6 = 0$ 4) $x^2 + 6x + 6 = 0$

135. The rational expression $\frac{x^2 - 6x + 8}{x^2 - 5x + 6}$ can be written as

- 1) $\frac{x - 2}{x - 3}$ 2) $\frac{x - 4}{x + 3}$ 3) $\frac{x - 4}{x - 3}$ 4) $\frac{x + 4}{x - 3}$

136. Sub duplicate ration of 1 : 2 is

- 1) 1 : 4 2) 1 : 8 3) 1 : 2 4) $1 : \sqrt{2}$

137. If $A = \{\text{prime numbers} < 20\}$ and $B = \{\text{whole numbers} < 10\}$ $A - (A \cap B) =$

- 1) $\{2, 3, 5, 7\}$ 2) \emptyset
 3) $\{0, 1, 4, 6, 8, 9\}$ 4) $\{11, 13, 17, 19\}$

138. Given the series 5, 2 -1... the 10th term is

- 1) 30 2) -30 3) -22 4) 22

139. If the mean and median of a group of observations are 24.5 and 24.375 respectively, the mode is

- 1) 0.125 2) 24.125 3) 24.875 4) 24.375

140. If $A \begin{bmatrix} 2 & -3 \\ 3 & -6 \end{bmatrix}$ then A is
 1) singular 2) non-singular 3) identity 4) rectangular
141. A student got twice as many sums wrong as he got right. If he attempted 48 sums in all how many did he solve correctly?
 1) 12 2) 24 3) 18 4) 16
142. In a group of cows and hens, the number of legs are 14 more than twice the number of heads. The number of cows is
 1) 5 2) 10 3) 7 4) 12
143. If + means -, - means \times , \times means \div and \div means + then $15 \times 3 \div 15 + 5 - 2 = ?$
 1) 20 2) 10 3) 0 4) 5
144. Find out the two signs to be interchanged for making the following correct: $4 \times 3 - 4 \div 8 + 1 = 1$.
 1) - and + 2) \times and \div 3) - and \times 4) \div and +
145. At the end of an executive meeting the nine people present all shake hands with each other one. How many hand shakes will there be altogether?
 1) 36 2) 45 3) 35 4) 33
146. If $\sqrt{a^x} = \sqrt[3]{a^2}$ then x =
 1) $\frac{2}{3}$ 2) $\frac{3}{4}$ 3) $\frac{4}{3}$ 4) $\frac{3}{2}$
147. $\lim_{x \rightarrow 3} \frac{x^3 - 27}{x - 3} =$
 1) 18 2) 9 3) 0 4) 27
148. If $y = 4x^{\frac{1}{2}}$ slope of the curve at $x = 2$ is
 1) 2 2) $\sqrt{2}$ 3) $\frac{1}{2}$ 4) $\frac{1}{\sqrt{2}}$
149. The remainder when $ax^3 + 9x^2 + 4x - 10$ is divided by $x - 3$ is 2. Then a is
 1) -3 2) 3 3) $\frac{85}{27}$ 4) $\frac{81}{7}$
150. The area of a rectangular kitchen is 112 m^2 . If its length is 14 m, its perimeter is
 1) 8 2) 44 3) 22 4) 12

ANSWERS

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