IIFT PAPER: (24-11-2013)

SECTION - 4

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104. Suppose there are 4 bags. Bag 1 contains 1 black and a^2-6a+9 red balls, bag 2 contains 3 black and a^2-6a+7 red balls, bag 3 contains 5 black and a^2-6a+5 red balls and bag 4 contains 7 black and a^2-6a+3 red balls. A ball is drawn at random from a randomly chosen bag. The maximum value of probability that the selected ball is black, is

A. $16/a^2-6a+10$
B. $20/a^2-6a+10$
C. 1/16
D. None of the above

105. If the product of the integers a, b, c and d is 3094 and if 1<a<b<c<d, what is the product of b and c?

A. 26
B. 91
C. 133
D. 221

106. Mrs. Sonia buys Rs. 269.00 worth of candies for the children of a school. For each girl she gets a strawberry flavoured candy priced at Rs. 3.30 per candy; each boy receives a chocolate flavoured candy priced at Rs.2.90 per candy. How many candies of each type did she buy?

A. 21, 57
B. 57, 21
C. 37, 51
D. 27, 51

107. There is a triangular building (ABC) located in the heart of Jaipur, the Pink City. The length of the one wall in east (BC) direction is 397 feet. If the length of south wall (AB) is perfect cube, the length of southwest wall (AC) is a power of three, and the length of wall in southwest (AC) is thrice the length of side AB, determine the perimeter of this triangular building.

A. 3209 feet
B. 3213 feet
C. 3773 feet
D. 3313 feet

108. Out of 8 consonants and 5 vowels, how many words can be made, each containing 4 consonants and 3 vowels?

A. 700
B. 504000
C. 3528000
D. 7056000

109. If $x^2+3x-10$ is a factor of $3x^4+2x^3-ax^2+bx-a+b-4$, then the closest approximate values of a and b are

A. 25, 43
B. 52, 43
C. 52, 67
D. None of the above

110. If the product of n positive integers is n^n, then their sum is

A. a negative integer
B. equal to n
C. equal to $n+\frac{1}{n}$
D. never less than n^2

111. A tennis ball is initially dropped from a height of 180 m. After striking the ground, it rebounds (3/5)th of the height from which it has fallen. The total distance that the ball travels before it comes to rest is

A. 540 m
B. 600 m
C. 720 m
D. 900 m

112. In a [illegible] meet for senior citizens organized by the Rotary Club in Kolkata, 9 married couples participated in Table Tennis mixed double event. The number of ways in which the mixed double team can be made, so that no husband and wife play in the same set, is

A. 1512
B. 1240
C. 960
D. 640

$9\times8\times7\times6\times5$

$= 72$

113. Two trains P and Q are scheduled to reach New Delhi railway station at 10.00 AM. The probability that train P and train Q will be late is 7/9 and 11/27 respectively. The probability that train Q will be late, given that train P is late, is 8/9. Then the probability that neither train will be late on a particular day is

A. 40/81
B. 41/81
C. 77/81
D. 77/243

114. A survey was conducted to test relative aptitudes in quantitative and logical reasoning of MBA applicants. It is perceived (prior to the survey) that 80 percent of MBA applicants are extremely good in logical reasoning, while only 20 percent are extremely good in quantitative aptitude. Further, it is believed that those with strong quantitative knowledge are also sound in data interpretation, with conditional probability as high as 0.87. However, some MBA applicants who are extremely good in logical reasoning can be also good in data interpretation, with conditional probability 0.15. An applicant surveyed is found to be strong in data interpretation. The probability that the applicant is also strong in quantitative aptitude is

A. 0.4
B. 0.6
C. 0.8
D. 0.9

115. Your friend's cap is in the shape of a right circular cone of base radius 14 cm and height 26.5 cm. The approximate area of the sheet required to make 7 such caps is

A. 6750 sq cm
B. 7280 sq cm
C. 8860 sq cm
D. 9240 sq cm

116. In an engineering college there is a rectangular garden of dimensions 34 m by 21 m. Two mutually perpendicular walking corridors of 4 m width have been made in the central part and flowers have been grown in the rest of the garden. The area under the flowers is

A. 320 sq m
B. 400 sq m
C. 510 sq m
D. 630 sq m

percent, then X percent of 50 is

A. 3.84
B. 4.82
C. 7.10
D. The data is insufficient to answer the question

118. A rod is cut into 3 equal parts. The resulting portions are then cut into 12, 18 and 32 equal parts, respectively. If each of the resulting portions have integer length, the minimum length of the rod is

A. 6912 units
B. 864 units
C. 288 units
D. 240 units

119. If $\log_{10} x - \log_{10} \sqrt[3]{x} = 6\log_x 10$, then the value of x is

A. 10
B. 30
C. 100
D. 1000

120. A mother along with her two sons is entrusted with the task of cooking Biryani for a family get-together. It takes 30 minutes for all three of them cooking together to complete 50 percent of the task. The cooking can also be completed if the two sons start cooking together and the elder son leaves after 1 hour and the younger son cooks for further 3 hours. If the mother needs hour less than the elder son to complete the cooking, how much cooking does the mother complete in an hour?

A. 33.33%
B. 50%
C. 66.67%
D. None of the above

121. It was a rainy morning in Delhi when Rohit drove his mother to a dentist in his Maruti Alto. They started at 8.30 AM from home and Rohit maintained the speed of the vehicle at 30 Km/hr. However, while returning from the doctor's chamber, rain intensified and the vehicle could not move due to severe water logging. With no other alternative, Rohit kept the vehicle outside the doctor's chamber and returned home along with his mother in a rickshaw at a speed of 12 Km/hr. They reached home at 1.30 PM. If they stayed at the doctor's chamber for the dental check-up for 48 minutes, the distance of the doctor's chamber from Rohit's house is

A. 15 Km
B. 30 Km
C. 36 Km
D. 45 Km

122. Two alloys of aluminium have different percentages of aluminium in them. The first one weighs 8 kg and the second one weighs 16 kg. One piece each of equal weight was cut off from both the alloys and first piece was alloyed with the second alloy and the second piece alloyed with the first one. As a result, the percentage of aluminium became the same in the resulting two new alloys. What was the weight of each cut-off piece?

A. 3.33 kg
B. 4.67 kg
C. 5.33 kg
D. None of the above

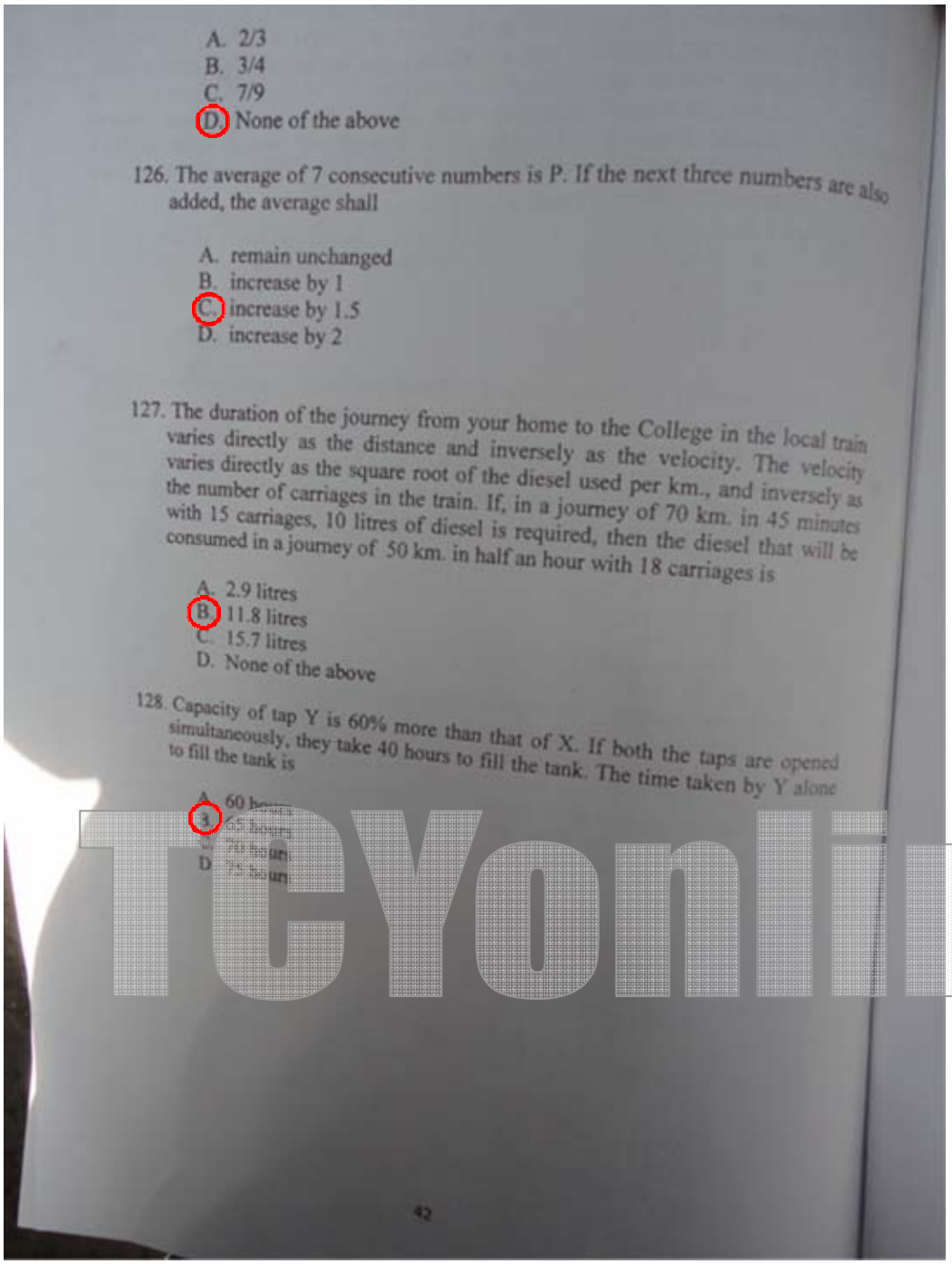
123. Three years ago, your close friend had won a lottery of Rs. 1 crore. He purchased a flat for Rs. 40 lakhs, a car for Rs. 20 lakhs and shares worth Rs. 10 lakhs. He put the remaining money in a bank deposit that pays compound interest @ 12 percent per annum. If today, he sells off the flat, the car and the shares at certain percentage of their original value and withdraws his entire money from the bank, the total gain in his assets is 5%. The closest approximate percentage of the original value at which he sold off the three items is

A. 60 percent
B. 75 percent
C. 90 percent
D. 105 percent

124. If $\log_{13}\log_{21}\{\sqrt{x+21}+\sqrt{x}\}=0$, then the value of x is

A. 21
B. 13
C. 81
D. None of the above

125.



A. 2/3
B. 3/4
C. 7/9
D. None of the above

126. The average of 7 consecutive numbers is P. If the next three numbers are also added, the average shall

A. remain unchanged
B. increase by 1
C. increase by 1.5
D. increase by 2

127. The duration of the journey from your home to the College in the local train varies directly as the distance and inversely as the velocity. The velocity varies directly as the square root of the diesel used per km., and inversely as the number of carriages in the train. If, in a journey of 70 km. in 45 minutes with 15 carriages, 10 litres of diesel is required, then the diesel that will be consumed in a journey of 50 km. in half an hour with 18 carriages is

A. 2.9 litres
B. 11.8 litres
C. 15.7 litres
D. None of the above

128. Capacity of tap Y is 60% more than that of X. If both the taps are opened simultaneously, they take 40 hours to fill the tank. The time taken by Y alone to fill the tank is

A. 60 h
B.
C.
D.

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