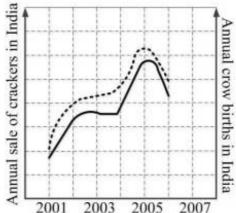


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GATE Aptitude Practice Questions Line Charts & Diagrams

Q.No. 1 In a detailed study of annual crow births in India, it was found that there was relatively no growth during the period 2002 to 2004 and a sudden spike from 2004 to 2005. In another unrelated study, it was found that the revenue from cracker sales in India which remained fairly flat from 2002 to 2004, saw a sudden spike in 2005 before declining again in 2006. The solid line in the graph below refers to annual sale of crackers and the dashed line refers to the annual crow births in India. Choose the most appropriate inference from the above data.



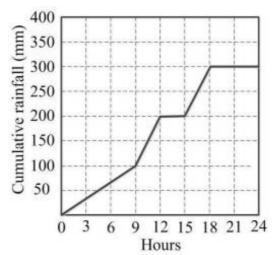
- (A) There is a strong correlation between crow birth and cracker sales.
- (B) Cracker usage increases crow birth rate.
- (C) If cracker sale declines, crow birth will decline.
- (D) Increased birth rate of crows will cause an increase in the sale of crackers.



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Q.No. 2 The annual average rainfall in a tropical city is 1000 mm. On a particular rainy day (24-hour period), the cumulative rainfall experienced by the city is shown in the graph. Over the 24-hour period, 50% of the rainfall falling on a rooftop, which had an obstruction-free area of 50 m², was harvested into a tank. What is the total volume of water collected in the tank in liters?



(A) 25,000

(B) 18,750

(C) 7,500

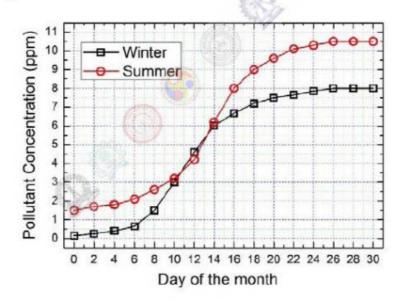
(D) 3,125



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Q.No. 3 In the graph below, the concentration of a particular pollutant in a lake is plotted over (alternate) days of a month in winter (average temperature 10 °C) and a month in summer (average temperature 30 °C).



Consider the following statements based on the data shown above:

- Over the given months, the difference between the maximum and the minimum pollutant concentrations is the same in both winter and summer.
- There are at least four days in the summer month such that the pollutant concentrations on those days are within 1 ppm of the pollutant concentrations on the corresponding days in the winter month.

Which one of the following options is correct?

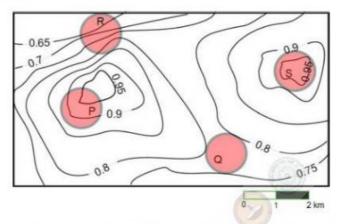
- (A) Only i
- (B) Only ii
- (C) Both i and ii
- (D) Neither i nor ii



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Q.No. 4 An air pressure contour line joins locations in a region having the same atmospheric pressure. The following is an air pressure contour plot of a geographical region. Contour lines are shown at 0.05 bar intervals in this plot.



If the possibility of a thunderstorm is given by how fast air pressure rises or drops over a region, which of the following regions is most likely to have a thunderstorm?

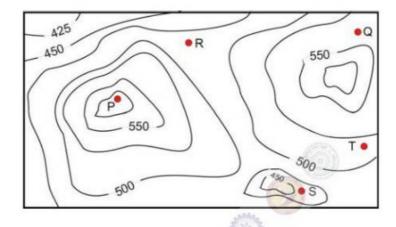
(A) P

(B) Q

(C) R

(D) S

Q.No. 5 A contour line joins locations having the same height above the mean sea level. The following is a contour plot of a geographical region. Contour lines are shown at 25 m intervals in this plot. If in a flood, the water level rises to 525 m, which of the villages P, Q, R, S, T get submerged?



(A) P, Q

(B) P, Q, T

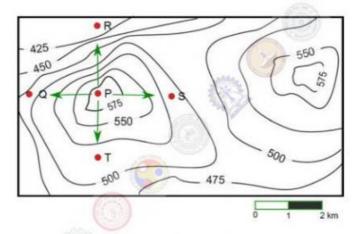
(C) R, S, T

(D) Q, R, S

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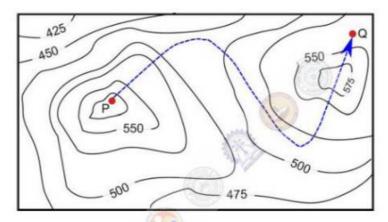
Q.No. 6 A contour line joins locations having the same height above the mean sea level. The following is a contour plot of a geographical region. Contour lines are shown at 25 m intervals in this plot.



Which of the following is the steepest path leaving from P?

- (A) P to Q
- (B) P to R
- (C) P to S
- (D) P to T

Q.No. 7 A contour line joins locations having the same height above the mean sea level. The following is a contour plot of a geographical region. Contour lines are shown at 25 m intervals in this plot.



The path from P to Q is best described by

- (A) Up-Down-Up-Down
- (C) Down-Up-Down

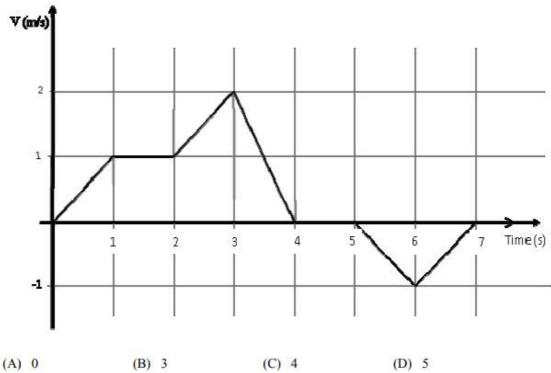
- (B) Down-Up-Down-Up
- (D) Up-Down-Up



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Q.No. 8 The velocity V of a vehicle along a straight line is measured in m/s and plotted as shown with respect to time in seconds. At the end of the 7 seconds, how much will the odometer reading increase by (in m)?

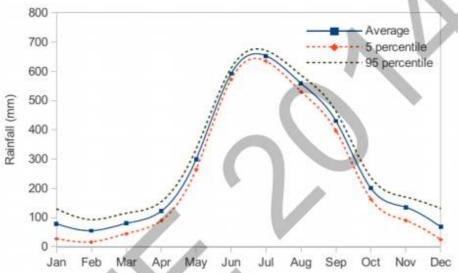




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Q.No. 9 The monthly rainfall chart based on 50 years of rainfall in Agra is shown in the following figure. Which of the following are true? (k percentile is the value such that k percent of the data fall below that value)



- (i) On average, it rains more in July than in December
- (ii) Every year, the amount of rainfall in August is more than that in January
- (iii) July rainfall can be estimated with better confidence than February rainfall
- (iv) In August, there is at least 500 mm of rainfall
- (A) (i) and (ii)

(B) (i) and (iii)

(C) (ii) and (iii)

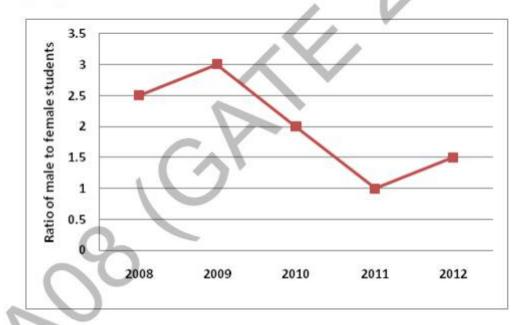
(D) (iii) and (iv)



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Q.No. 10 The ratio of male to female students in a college for five years is plotted in the following line graph. If the number of female students doubled in 2009, by what percent did the number of male students increase in 2009?





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Answer Key

| Q. No. | Ans. |
|--------|------|
| 1 | A |
| | |
| 2 | С |
| 3 | В |
| 4 | С |
| 5 | 0 |
| 6 | В |
| 7 | С |
| 8 | D |
| 9 | В |
| 10 | 140 |



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