

EE24BTECH11016 - DHWANITH M DODDAHUNDI

- 1) This book, including all its chapters, \_\_\_\_\_ interesting. The students as well as the instructor \_\_\_\_\_ in agreement about it.
- a) is, was
  - b) are, are
  - c) is, are
  - d) were, was
- 2) People were prohibited \_\_\_\_\_ their vehicles near the entrance of the main administrative building.
- a) to park
  - b) from parking
  - c) parking
  - d) to have parked
- 3) Select the word that fits the analogy:  
Do : Undo :: Trust : \_\_\_\_\_
- a) Entrust
  - b) Intrust
  - c) Distrust
  - d) Untrust
- 4) Stock markets \_\_\_\_\_ at the news of the coup.
- a) poised
  - b) plunged
  - c) plugged
  - d) probed
- 5) If  $P, Q, R, S$  are four individuals, how many teams of size exceeding one can be formed, with  $Q$  as a member?
- a) 5
  - b) 6
  - c) 7
  - d) 8
- 6) Non-performing assets (NPAs) of a bank in India is defined as an asset, which remains unpaid by the borrower for a certain period of time in terms of interest, principal or both. Reserve Bank of India (RBI) has changed the definition of NPA thrice during 1993-2004, in terms of the holding period of loans. The holding period was reduced by one quarter each time. In 1993, the holding period was four quarters (360 days). Based on the above paragraph, the holding period of loans in 2004 after the third revision was \_\_\_\_\_ days.

- a) 45
- b) 90
- c) 135
- d) 180

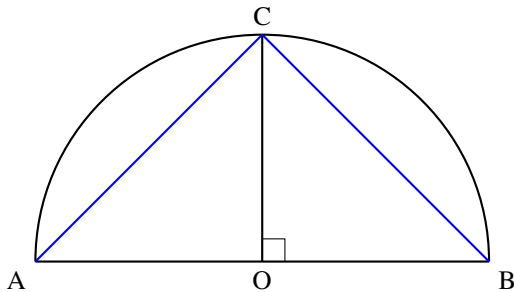
7) Select the next element of the series: Z, WV, RQP, \_\_\_\_\_

- a) LKJI
- b) JIHG
- c) KJIH
- d) NMLK

8) In four-digit integer numbers from 1001 to 9999, the digit group "37" (the same sequence) appears \_\_\_\_\_ times.

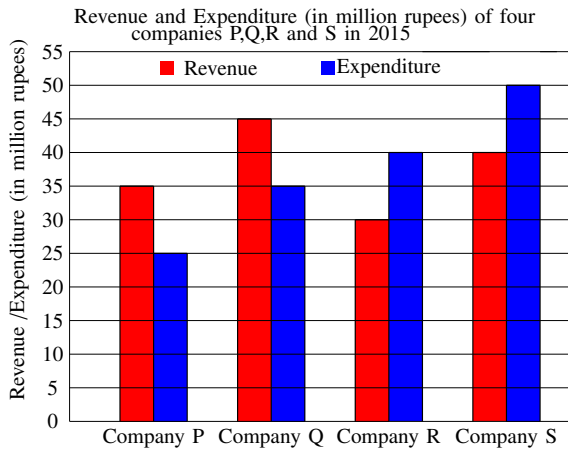
- a) 270
- b) 279
- c) 280
- d) 299

9) Given a semicircle with O as the center, as shown in the figure, the ratio  $\frac{\overline{AC} + \overline{CB}}{\overline{AB}}$  is \_\_\_\_\_, where  $\overline{AC}$ ,  $\overline{CB}$  and  $\overline{AB}$  are chords.



- a)  $\sqrt{2}$
- b)  $\sqrt{3}$
- c) 2
- d) 3

10) The revenue and expenditure of four different companies P, Q, R and S in 2015 are shown in the figure. If the revenue of company Q in 2015 was 20% more than that in 2014, and company Q had earned a profit of 10% on expenditure in 2014, then its expenditure (in million rupees) in 2014 was \_\_\_\_\_.



- a) 32.7  
b) 33.7  
c) 34.1  
d) 35.1
- 11)  $ax^3 + bx^2 + cx + d$  is a polynomial on real  $x$  over real coefficients  $a, b, c, d$  wherein  $a \neq 0$ . Which of the following statements is correct?
- a)  $d$  can be chosen to ensure that  $x = 0$  is a root for any given  $a, b, c$   
b) No choice of coefficients can make all roots identical  
c)  $a, b, c, d$  can be chosen to ensure that all roots are complex  
d)  $c$  alone cannot ensure that all roots are real
- 12) Which of the following is true for all possible non-zero choices of integers  $m, n$  :  $m \neq n$ , or all possible non-zero choices of real numbers  $p, q$  :  $p \neq q$ , as applicable?
- a)  $\frac{1}{\pi} \int_0^\pi \sin m\theta \sin n\theta d\theta = 0$   
b)  $\frac{1}{2\pi} \int_{-\frac{\pi}{2}}^{\frac{\pi}{2}} \sin p\theta \sin q\theta d\theta = 0$   
c)  $\frac{1}{2\pi} \int_{-\pi}^\pi \sin m\theta \cos n\theta d\theta = 0$   
d)  $\lim_{\alpha \rightarrow \infty} \frac{1}{2\alpha} \int_{-\alpha}^\alpha \sin m\theta \sin n\theta d\theta = 0$
- 13) Which of the following statements is true about the two sided Laplace transform?
- a) It exists for every signal which may or may not have a Fourier transform  
b) It has no poles for any bounded signal that is non-zero only inside a finite time interval.  
c) The number of finite poles and finite zeroes must be equal.  
d) If a signal can be expressed as a weighted sum of shifted one sided exponentials, then its Laplace Transform will have no poles.