

# ae-2017-1 to 13

AI24BTECH11020 - Rishika

- 1) Once the team of analysts identify the problem, we \_\_\_\_\_ in a better position to comment on the issue.  
Which one of the following choices CANNOT fill the given blank?
  - a) will be
  - b) were to be
  - c) are going to be
  - d) might be
- 2) A final examination is the \_\_\_\_\_ of a series of evaluations that a student has to go through.
  - a) culmination
  - b) consultaion
  - c) desperation
  - d) insinuation
- 3) If IMHO=JNIP;IDK=JEL; and SO=TP, then IDC=\_\_\_\_\_.
  - a) JDE
  - b) JED
  - c) JDC
  - d) JCD
- 4) The product of three integers  $X$ ,  $Y$  and  $Z$  is 192.  $Z$  is equal to 4 and  $P$  is equal to the average of  $X$  and  $Y$ . What is the minimum possible value of  $P$ ?
  - a) 6
  - b) 7
  - c) 8
  - d) 9.5
- 5) Are there enough seats here? There are \_\_\_\_\_ people here than I expected.
  - a) many
  - b) most
  - c) least
  - d) more
- 6) Fiscal deficit was 4% of the GDP in 2015 and that increased to 5% in 2016. If the GDP increased by 10% from 2015 to 2016, the percentage increase in the actual fiscal deficit is \_\_\_\_\_.
  - a) 37.50
  - b) 35.70
  - c) 25.00
  - d) 10.00
- 7) Two pipes  $P$  and  $Q$  can fill a tank in 6 hours and 9 hours respectively, while a third pipe  $R$  can empty the tank in 12 hours. Initially,  $P$  and  $R$  are open for 4 hours. Then  $P$  is closed and  $Q$  is opened. After 6 more hours  $R$  is closed. The total time taken to fill the tank (in hours) is \_\_\_\_\_.
  - a) 13.50
  - b) 14.50
  - c) 15.50
  - d) 16.50

- 8) While teaching a creative writing class in India, I was surprised at receiving stories from the students that were all set in distant places; in the American West with cowboys and in Manhattan penthouses with clinking ice cubes. This was, till an eminent Caribbean writer gave the writers in the once-colonised countries the confidence to see the shabby lives around them as worthy of being "told". The writer of this passage is surprised by the creative writing assignments of his students, because \_\_\_\_\_.

- a) Some of the students had written stories set in foreign places
  - b) None of the students had written stories set in India
  - c) None of the students had written about ice cubes and cowboys
  - d) Some of the students had written about ice cubes and cowboys
- 9) Mola is a digital platform for taxis in a city. It offers three types of rides - Pool, Mini and Prime. The table below presents the number of rides for the past four months. The platform earns one US dollar per ride. What is the percentage share of revenue contributed by Prime to the total revenues of Mola, for the entire duration?

Type	Month			
	January	February	March	April
Pool	170	320	215	190
Mini	110	220	180	70
Prime	75	180	120	90

- a) 16.24
  - b) 23.97
  - c) 25.86
  - d) 38.74
- 10) X is an online media provider. By offering unlimited and exclusive online content at attractive prices for a loyalty membership, X is almost forcing its customers towards its loyalty membership. If its loyalty membership continues to grow at its current rate, within the next eight years more households will be watching X than cable television. Which one of the following statements can be inferred from the above paragraph?
- a) Most households that subscribe to X's loyalty membership discontinue watching cable television
  - b) Non-members prefer to watch cable television
  - c) Cable television operators don't subscribe to X's loyalty membership
  - d) The X is cancelling accounts of non-members
- 11) Let  $X$  be the Poisson random variable with parameter  $\lambda = 1$ . Then, the probability  $P(2 \leq X \leq 4)$  equals
- a)  $\frac{19}{24e}$
  - b)  $\frac{17}{24e}$
  - c)  $\frac{13}{24e}$
  - d)  $\frac{11}{24e}$
- 12) For the series  $\sum_{n=1}^{\infty} \frac{(x+1)^n}{n2^n}$ ,  $-\infty < x < \infty$ , which of the following statements is NOT correct?
- a) The series converges at  $x=-3$
  - b) The series converges at  $x=-1$
  - c) The series converges at  $x=0$
  - d) The series converges at  $x=1$
- 13) Let  $f(z) = \bar{z}e^{-|z|^2}$ , where  $\bar{z}$  is the complex conjugate of  $z$ . Then, it is differentiable on
- a)  $|z| > 1$
  - b)  $|z| < 1$
  - c)  $|z| = 1$
  - d) the entire complex plane  $\mathbb{C}$