2014-ME- 1-13

EE24BTECH11021 - Eshan Ray

1) Choose the most appropriate phase from the options given below to complete the following sentence.

   The aircraft ... take off as soon as its flight plan was filed.
   a) is allowed to
   b) will be allowed to
   c) was allowed to
   d) has been allowed to

2) Read the statements :

   All women are entrepreneurs.
   Some women are doctors.

   Which of the following conclusions can be logically inferred from the above statements?
   a) All women are doctors
   b) All doctors are entrepreneurs
   c) All entrepreneurs are women
   d) Some entrepreneurs are doctors

3) Choose the most appropriate word from the options given below to complete the following sentence.

   Many ancient culture attributed disease to supernatural causes. However, modern science has largely helped ... such notions.
   a) impel
   b) dispel
   c) propel
   d) repel

4) The statistics of runs scored in a series by four batsman are provided in the following table. Who is the most <u>consistent</u> batsman of these four?

Batsman	Average	Standard Deviation
K	31.2	5.21
L	46.0	6.35
M	54.4	6.22
N	17.9	5.90

   a) K

   b) L

   c) M

   d) N

5) What is the next number in the series?

   12   35   81   173   357   ...

6) Find the odd one from the following group :

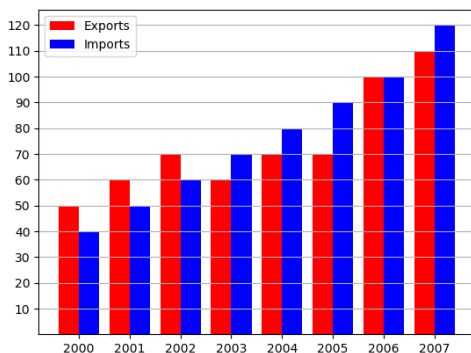 W, E, K, O I, Q, W, A F, N, T, X N, V, B, D

   a) W, E, K, O

   b) I, Q, W, A

   c) F, N, T, X

   d) N, V, B, D

7) For submitting tax returns, all resident males with annual income below $Rs\,10\,lakh$ should fill up Form P and all resident females with income below $Rs\,8\,lakh$ should fill Form Q. All people with incomes above $Rs\,10\,lakh$ should fill up Form R, except non-residents with income above $Rs\,15\,lakhs$, who should fill up Form S. All others should fill Form T. An example of a person who should fill Form T is

   a) a resident male with annual income of $Rs\,9\,lakh$

   b) a resident female with annual income of $Rs\,9\,lakh$

   c) a non-resident male with annual income of $Rs\,16\,lakh$

   d) a non-resident female with annual income of $Rs\,16\,lakh$

8) A train that is 280 metres long, travelling at a uniform speed, crosses a platform in 60 seconds and passes a man standing on the platform in 20 seconds. What is the length of the platform in metres?

9) The exports and imports (*in crores of Rs.*) of a country from 2000 to 2007 are given in the following bar chart. If the trade deficit is defined as excess of imports over exports, in which year is the trade deficit $\frac{1}{5}th$ of the exports?

   a) 2005

   b) 2004

c) 2007

d) 2006

10) You are given three coins : one has heads on both faces, the second has tails on both faces, and the third has a head on one face and a tail on the other. You choose a coin at random and toss it, and it comes up heads. The probability that the other face tails is

a) $\frac{1}{4}$

b) $\frac{1}{3}$

c) $\frac{1}{2}$

d) $\frac{2}{3}$

11) Given that the determinant of the matrix $\begin{pmatrix} 1 & 3 & 0 \\ 2 & 6 & 4 \\ -1 & 0 & 2 \end{pmatrix}$ is -12, the determinant of the

matrix $\begin{pmatrix} 2 & 6 & 0 \\ 4 & 12 & 8 \\ -2 & 0 & 4 \end{pmatrix}$ is

a) -96

b) -24

c) 24

d) 96

12) $\lim_{x \to 0} \frac{x - \sin x}{1 - \cos x}$ is

a) 0

b) 1

c) 3

d) not defined

13) The argument of the complex number $\frac{1+i}{1-i}$, where $i = \sqrt{-1}$, is

a) $-\pi$

b) $-\frac{\pi}{2}$

c) $\frac{\pi}{2}$

d) π