ME : Mechanical Engineering

AI24BTECH11022 - Pabbuleti Venkata Charan Teja

1) He is known for his unscrupulous ways. He always sheds _____ tears to deceive people. (2020)

   a) fox's
   b) crocodile's
   c) crocodile
   d) fox

2) Jofra Archer, the England fast bowler, is _____ than accurate. (2020)

   a) more fast
   b) faster
   c) less fast
   d) more faster

3) Select the word that fits the analogy:
   Build : Building :: Grow : _____ (2020)

   a) Grown
   b) Grew
   c) Growth
   d) Growed

4) I do not think you know the case well enough to have opinions. Having said that, I agree with your other point.
   What does the phrase "having said that" mean in the given text? (2020)

   a) as opposed to what I have said
   b) despite what I have said
   c) in addition to what I have said
   d) contrary to what I have said

5) Define $[x]$ as the greatest integer less than or equal to x, for each $x \in (-\infty, \infty)$. If $y = [x]$, then area under y for $x \in [1, 4]$ is (2020)

   a) 1
   b) 3
   c) 4
   d) 6

6) Crowd funding deals with mobilisation of funds for a project from a large number of people, who would be willing to invest smaller amounts through web-based platforms in the project.
   Based on the above paragraph, which of the following is correct about crowd funding? (2020)

   a) Funds raised through unwilling contributions on web-based platforms.
   b) Funds raised through large contributions on web-based platforms.
   c) Funds raised through coerced contributions on web-based platforms.
   d) Funds raised through voluntary contributions on web-based platforms.

7) P, Q, R and S are to be uniquely coded using α and β. If P is coded as $\alpha\alpha$ and Q as $\alpha\beta$, then R and S, respectively, can be coded as (2020)

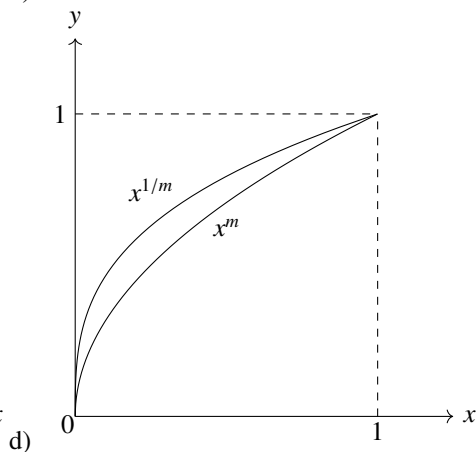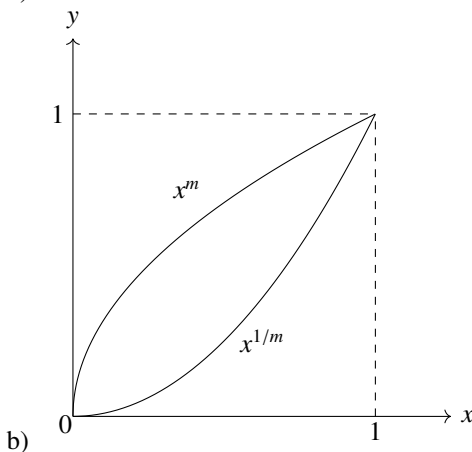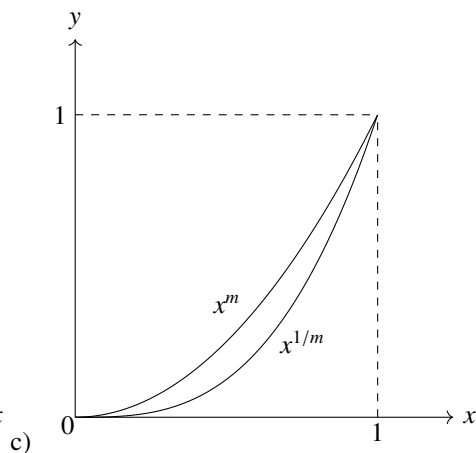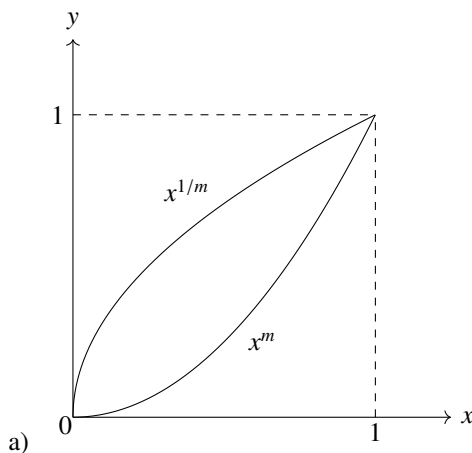a) $\beta\alpha$ and $\alpha\beta$ c) $\alpha\beta$ and $\beta\beta$

b) $\beta\beta$ and $\alpha\alpha$ d) $\beta\alpha$ and $\beta\beta$

8) The sum of the first n terms in the sequence $8, 88, 888, 888, \ldots$ is _____. (2020)

a) $\frac{81}{80}(10^n - 1) + \frac{9}{8}n$ c) $\frac{80}{81}(10^n - 1) + \frac{8}{9}n$

b) $\frac{81}{80}(10^n - 1) - \frac{9}{8}n$ d) $\frac{80}{81}(10^n - 1) - \frac{8}{9}n$

9) Select the graph that schematically represents BOTH $y = x^m$ and $y = x^{\frac{1}{m}}$ properly in the interval $0 \le x \le 1$, for integer values of m, where $m > 1$. (2020)

10) The bar graph shows the data of the students who appeared and passed in an examination for four schools P, Q, R and S. The average of success rates (in percentage) of these four schools is _____. (2020)

Number of students

Performance of Schools P, Q, R and S

a) 58.5%   c) 59.0%

b) 58.8%   d) 59.3%

11) Multiplication of real valued square matrices of same dimension is   (2020)

   a) associative   c) always positive definite

   b) commutative   d) not always possible to compute

12) The value of $\lim_{x \to 1} \left(\frac{1 - e^{-c(1-x)}}{1 - xe^{-c(1-x)}} \right)$ is   (2020)

   a) c c) $\frac{c}{c+1}$

   b) $c + 1$ d) $\frac{c+1}{c}$

13) The Laplace transform of a function $f(t)$ is $\mathcal{L}(f) = \frac{1}{s^2 + \omega^2}$. Then, $f(t)$ is   (2020)

   a) $f(t) = \frac{1}{\omega^2}(1 - \cos \omega t)$ c) $f(t) = \frac{1}{\omega} \sin \omega t$

   b) $f(t) = \frac{1}{\omega} \cos \omega t$ d) $f(t) = \frac{1}{\omega^2}(1 - \sin \omega t)$