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CA-CPT / MATHEMATICS   **MARKS: 50**   **DURATION: 1 HR**

1. The sub duplicate ratio of 25 : 36 is

(a) 6:5 (b) 36:25 (c) 50:72 (d) 5 : 6

2. Two numbers are in the ratio 2:3. If 4 be subtracted from each, they are in the ratio 3 : 5.
The numbers are

(a) (16, 24) (b) (4, 6) (c) (2, 3) (d) None of these

3. If x : y = 2 : 3, y : z = 4 : 3 then x:y:z is

(a) 2 : 3 : 4 (b) 4 : 3 : 2 (c) 3 : 2 : 4 (d) None of these

4. If a/b = c/d, implies (a + b) / (a - b) = (c + d) (c - d), the process is called

(a) Componendo (b) Dividendo
(c) Componendo & Dividendo (d) None of these

5. 4, *, 9, 13½ are in proportion. Then * is

(a) 6 (b) 8 (c) 9 (d) None of these

6. The number which when subtracted from each of the terms of the ratio 19 : 31 reducing it to 1 : 4 is

(a) 15 (b) 5 (c) 1 (d) None of these

7. The ratio between the speeds of two trains is 7:8 If the second train runs 400 Kms. in 5
hours, the speed of the first trains is

(a) 10 Km/hr (b) 50 Km/hr (c) 71 Km/hr (d) None of these

8. $\left[\frac{81x^4}{y^{-8}}\right]^{\frac{1}{4}}$ has simplified value equal to

(a) xy^2 (b) x^2y (c) $9xy^2$ (d) None of these

9. The value of $\left[\dfrac{2^{p2}q^3}{3xy}\right]^0$ is equal to

(a) 0   (b) 2/3   (c) 1   (d) None of these

10. Using $(a - b)^3 = a^3 - b^3 - 3ab(a - b)$ tick the correct of these when $x = p^{1/3} - p^{-1/3}$

(a) $x^3 + 3x = p + 1/p$ (b) $x^3 + 3x = p - 1/p$
(c) $x^3 + 3x = p + 1$ (d) None of these

11. Which sampling is subjected to the discretion of the sampler?

(a) systematic sampling   (b) simple random sampling
(c) purposive sampling   (d) quota sampling

12. In sampling theory, proportion is used to study_____

(a) attribute of position   (b) variable of population
(c) both   (d) none

13. For an unknown parameter, how many interval estimates exist?

(a) only one   (b) two   (c) three   (d) many

14. Statistical data may be collected by complete enumeration called

(a) Census inquiry   (b) sample inquiry   (c) both   (d) none

15. The primary object of sampling is to obtain _____ information about population with _____ effort.

(a) maximum, minimum   (b) minimum, maximum   (c) some, less   (d) none

16. A _____ is the set of measurement/data that are actually selected in the course of an investigation/enquiry.

(a) sample   (b) population   (c) both   (d) none