SEQUENCES AND SERIES	CM110801

1. If 5th term of a G.P. is 2, then the product of first 9 terms is:

(a) 256　　　　　　　(b) 128　　　　　　　(c) 512　　　　　　　(d) None

2. If a, b, c are in G.P. and x, y are with arithmetic mean of a, b and b, c respectively, then $\frac{1}{x} + \frac{1}{y}$ is equal to:

(a) $\frac{2}{b}$　　　　　　　(b) $\frac{3}{b}$　　　　　　　(c) $\frac{b}{3}$　　　　　　　(d) None

3. If the third term of a G.P. is 3, then the product of its first 5 terms is:

(a) 15　　　　　　　(b) 81　　　　　　　(c) 243　　　　　　　(d) Cannot be determined

4. If the pth, qth and rth terms of G.P. are a, b and c respectively. Then $a^{q-r} b^{r-p} c^{p-q}$ is sequal to:

(a) 0　　　　　　　(b) 1　　　　　　　(c) 2　　　　　　　(d) -1

5. Find the number of terms between 200 and 400 which are divisible by 7.

(a) 23　　　　　　　(b) 27　　　　　　　(c) 28　　　　　　　(d) 29

6. Insert 3 A.M's between 3 and 19.

7. Find a G.P. for which sum of the first two terms is –4 and fifth term is 4 times the third term.

8. The value of n so that $\frac{a^{n+1}+b^{n+1}}{a^n+b^n}$ may be the geometric mean between a and b.

9. Find sum of n terms : 4 + 44 + 444 + ………

12. Find the sum of 50 terms of a sequence : 7, 7.7, 7.77, 7.777, ……………

13. The arithmetic mean between two numbers is 10 and their geometric mean is 8. Find the numbers.

14. The first term of a G.P. is 2 and the sum to infinity is 6. Find the common ratio.

15. Evaluate : $0.23\overline{45}$.