



THE AMERICAN COLLEGE, MADURAI

(An Autonomous Institution Affiliated to Madurai Kamaraj University)
Re-accredited (2nd Cycle) by NAAC with Grade "A", CGPA – 3.46 on a 4-point scale

Backlog Arrear Examination, March 2021

Course Code : MAS 1203

Course Title : Basic Mathematics

Time : 2 Hrs

Max : 60 Marks

Answer Any FOUR questions :

4 × 15 = 60

- (i). Add the following numbers : 7.001, 24.9, 96.93 and 0.682

(ii). Subtract : 1.8264 from 23.3728

(iii). Multiply : 1.28×0.32
2. Find the perpendicular distance of the point P(1,1,1) from the line $\frac{x-2}{3} = \frac{y+3}{2} = \frac{z}{-1}$.
Also find the foot of the perpendicular.
3. Let R be the relation from $A = \{1, 3, 5, 7, 9\}$ to $B = \{2, 4, 6, 8\}$ which is defined as $a R b$ iff $a > b$

(a) List all the elements of R

(b) Find domain and Range of R.
4. If $A = \{a, b, c, d, e, f, g, h\}$, $B = \{b, d, f, h\}$ and $C = \{a, c, e\}$, then prove that

(a) $A \Delta (B \Delta C) = (A \Delta B) \Delta C$ (b) $A \cup (B \cap C) = (A \cup B) \cap (A \cup C)$
5. Find the value of $A = \frac{36.72 \times \sqrt{4.51}}{(1.87)^3 \times (2.19)}$ by using logarithm.
6. (i) A bag contains 50 p, 25 p and 10 p coins in the ratio 5 : 9 : 4, amounting to Rs. 206.
Find the number of coins of each type.

(ii) Evaluate : (a) $\log_3 27$ (b) $\log_{100} (0.01)$