

# FUNCTIONS

EE24BTECH11038 - MALAKALA BALA SUBRAHMANYA ARAVIND

## 1 SECTION B

- 19) If the fractional part of the number  $\frac{2^{403}}{15}$  is  $\frac{k}{15}$ , then k is equal to: (JEE M 2019-9 Jan(M))
- 6
  - 8
  - 4
  - 14
- 20) If the function  $f: \mathbb{R} - \{-1, 1\} \rightarrow \mathbb{A}$  is defined by  $f(x) = \frac{x^2}{1-x^2}$ , is surjective then  $\mathbb{A}$  is equal to: (JEE M 2019-9 Jan(M))
- $\mathbb{R} - \{1\}$
  - $(0, \infty)$
  - $\mathbb{R} - [-1, 0)$
  - $(-1, 0)$
- 21) let  $\sum_{k=1}^{10} f(a+k) = 16(2^{10} - 1)$ , where the function  $f$  satisfies  $f(x+y) = f(x)f(y)$  for all natural numbers  $x, y$  and  $f(a) = 2$ . then the natural number 'a' is: (JEE M 2019-9 April(M))
- 2
  - 16
  - 4
  - 3