

Class Test  
Topic-Power play  
FM-15 Time-35 minutes

1. The value of  $(\frac{-1}{2})^{-4}$  is  
A) 16    B)  $\frac{1}{16}$     C) -16    D)  $\frac{-1}{16}$     (1)
2. If  $2^x \times 2^{x+1} = 32$ , what is the value of  $x$ ?  
A) 1    B) 2    C) 3    D) 4    (1)
3. A digital storage has a capacity of  $2^{50}$  bytes . If a single file occupies  $2^{10}$  bytes , how many such files can be stored on the device ?  
A)  $2^{60}$     B)  $2^5$     C)  $2^{40}$     D)  $2^{30}$     (1)
4. Find the value of  $x$  such that  $(\frac{3}{4})^{-2x} \div (\frac{4}{3})^x = (\frac{9}{16})^3$  .    (3)
5. Simplify :  $\frac{6^3 \times 12^2 \times 9}{24 \times 18^2}$  .    (2)
6. Find the value of  $x$  and  $y$  such that  $5^x = 125$  and  $7^y = \frac{1}{343}$ . Hence evaluate the expression  $(x - y)^{(x+y)}$  .    (3)
7. Write in standard form a) 30349000000000    b) 0.00000000090058  
(2)
8. Write in usual form a)  $2.1 \times 10^{-9}$     b)  $8.08 \times 10^{13}$     (2)