CDS Exam 2016 Mathematics Sample Services Exam Paper Part – 1

1. Convert 11001001_2 (binary) to decimal

(A) 20

(B) 2001

(C) 210

(D) 201

2. What is the result when a decimal 5238 is converted to base 16?

(A) 12166

(B) 1476

(C) 327.375

(D) 1388

3. The number of bits used to store a BCD digit is

(A) 4

(B) 8

(C) 2

(D) 1

4. $(112 \times 5^4) = ?$

(A) 67000

(B) 70000

(C) 76500

(D) 77200

5. A 3-digit number 4a3 is added to another 3-digit number 984 to give a 4-digit number 13b7 , which is divisible by 11. Then. $(a + b) = ?$

(A) 10

(B) 11

(C) 12

(D) 15

6. Six bells commence tolling together and toll at intervals of 2, 4,6, 8 10 and 12 seconds respectively.In 30 minutes, how many times do they toll together?

(A) 4

(B) 10

(C) 15

(D) 16

7. Reduce to its lowest terms.

(A) $\frac{3}{4}$

(B) $\frac{5}{13}$

(C) $\frac{7}{13}$

(D) $\frac{9}{13}$

8. A, B and C start at the same time in the same direction to run around a circular stadium. A completes a round in 252 seconds, B in 308 seconds and c in 198 seconds, all starting at the same point. After what time will they again at the starting point?

(A) 26 minutes and 18 second

(B) 42 minutes and 36 seconds

(C) 45 minutes

(D) 46 minutes and 12 seconds

9. The least number, which when divided by 12,151 20 and 54 leaves in each case a remainder of 8 is:

(A) 504

(B) 536

(C) 544

(D) 548

10. If the sum of two numbers is 55 and the H. C. F. and L. C. M. of these numbers are Sand 120 respectively, then the sum of the reciprocals of the numbers is equal to:

(A) $\frac{55}{601}$

(B) $\frac{601}{55}$

(C) $\frac{11}{120}$

(D) $\frac{12}{11}$

11. The sum of the present ages of a son and his father is 60 years. Six years ago, father's age was five times the age of the son. After 6 years, what will be son's age?

(A) 23 Years

(B) 22 Years

(C) 21 Years

(D) 20 Years