CAT Quantitative Aptitude Practice Questions

Question 1:
For an odd number n, find the highest number that always divides n × (n2 – 1)?
[1] 12
[2] 24
[3] 48
[4] 96

Question 2:
For every positive integer n, the highest number that n × (n2 – 1) × (5n + 2) is always divisible by is
[1] 6
[2] 24
[3] 36
[4] 48

Question 3:
1 and 8 are the first two positive integers for which 1 + 2 + 3 + ... + n is a perfect square. Which number is the 4th such number?

Question 4:
If x and y are positive integers and x2 – y2 = 101, find the value of x2 + y2.
[1] 5050
[2] 5150
[3] 5101
[4] None of these

Question 5:
The numbers 2604, 1020 and 4812 when divided by a number N give the same remainder of 12. Find the highest such number N.

Question 6:
A number when divided by 3, 4, 5, and 6 always leaves a remainder of 2, but leaves no remainder when divided by 7. What is the lowest such number possible?

Question 7:
How many natural numbers ‘n’ are there, such that ‘n!’ ends with exactly 30 zeroes?
[1] 0
[2] 1
[3] 3
[4] 4

Question 8:
n! has x number of zeros at the end and (n + 1)! has (x + 3) zeroes at the end. $1 \leq n \leq 1000$. How many solutions are possible for 'n'?
[1] 8
[2] 7
[3] 1
[4] 4

Question 9:
The sum of all the possible numbers of 4 digits formed by digits 3, 5, 5, and 6 using each digit once is
[1] 64427
[2] 63327
[3] 65297
[4] 43521

Question 10:
In how many ways 2 different numbers can be chosen using the numbers between 0 and 180 (both inclusive) so that 60 is their average?
[1] 50
[2] 60
[3] 80
[4] None of these

Question 11:
A Dubai based gangster Chhota Vakil is in Switzerland these days. He wants to rob a bank there, whose locker code according to his information is an odd number between 50 and 450. He also knows that the numbers are from the set :0, 1, 2, 3, 4, 5}. How many maximum trials does he have to take to unlock the locker?
[1] 54
[2] 72
[3] 78
[4] 106

Question 12:
A work was completed by three persons of equal ability, first one doing m hours for m days, second one doing n hours for n days (m and n being integers) and third one doing 16 hours for 16 days. The work could have been completed in 29 days by a third person alone with his respective working hours. If all of them do the work together with their respective working hours, then they can complete it in about
[1] 12 days
[2] 13 days
[3] 14 days
[4] 15 days

Question 13:
A and B do a work in exactly 16 days, B and C do the same work in exactly 12 days while C and A do the same work in about 10 days. If A, B and C can together do the work in integral number of days, then C does the work alone in
[1] 15 days
[2] 16 days
[3] 18 days
[4] None of these

Question 14:
I sell 16 sheep at a gain of 12.5% and 20 more at a certain gain percent. If 1 gain 25% on the whole, how much percent gain did I make on the latter number?

1. 20%
2. 25%
3. 30%
4. 35%

Question 15:
A bike costs Rs.48000. Its value depreciates by 30% in the first year and in each subsequent year the depreciation is 20% of the value at the beginning of that year. The value of the bike after 3 years will be

1. Rs.21504
2. Rs.26880
3. Rs.38400
4. Rs.39480