Vedic Numbers Handout

1. What is the remainder of 22222222222….(27 times) is divided by 27? a.0   b.1 b.3   d.4
2. Check if 376575668469 is divisible by 1001? Yes / No

3. Find the remainder when 24^3 is divided by 7? a. 4   b. 5   c. 6   d. 7
4. Find the remainder of 74^6 is divided by 6?   a. 4   b. 5   c. 6   d. 7

5. Find the remainder when
7^{560} is divided by 2 = _____ 31^{560} is divided by 2 = _____ 3^{560} is divided by 4 = ___
6. Find the remainder of 625^{12} is divided by 12?   a. 1   b. 5   c. 6   d. 7
7. Find the remainder when 2^{246} is divided by 7?   a. 1   b. 3   c. 9   d. 7

8. Find the right most non zero digit of $(30)^{2720}$? a.1   b.3   c.7   d.9
9. Find the remainder when 54^{120} is divided by 7 = ?   a. 3   b. 1   c.7   d.9.
10. Find the remainder when 4^{96} is divided by 6 = ?   a. 3   b. 4   c.7   d.9

Wilson's Theorem
11. Find the highest power of 7 which will divide 780!   a. 13   b. 128   c.559   d.15

12. Find the highest power of 25 which will divide 250!   a. 13   b. 127   c.559   d.31

13. Find the highest power of 12 which will divide 20!   a. 13   b. 27   c. 59   d.None of these

14. Find the number of zeros in 100!   a. 13   b. 24   c. 59   d. None of these

15. N! has 23 zeros in it. Find the value of n?   a. 98   b. 24   c. 100   d. None of these

$A^n + B^n$ & $A^n - B^n$
Find the remainder when $35^{23} - 23^{23}$ is divided by 12?   a. 3   b. 0   c.7   d.9
16. Find the remainder when $35^{22} - 23^{22}$ is divided by 58?   a. 3   b. 0   c.7   d.9

17. Find the remainder when $16^3 + 17^3 + 18^3 + 19^3$ is divided by 70? a. 0   b. 1   c.69   d.35

18. Find the remainder when $7^{6n} - 6^{6n}$ is divided by ?   a. 13   b. 127   c.559   d.All of these

19. If $R = 30^{65} - 29^{65} / 30^{64} + 29^{64}$ a. 0<R<1   b. 0.5<R<1   c. 0<0.1   d. R>1

Vedic Numbers
20. Let N=1421*1423*1425. What is the remainder when N is divided by 12? a.0 b.9   c.3 d.6

21. What is the remainder when $(2^{100} + 2)$ is divided by 101?   a.3   b.4   c.5   d.6

22. The values of numbers 2^{2004} and 5^{2004} are written one after another. How many digits are there in all?
a. 4008   b. 2003   c. 2005   d. none of these

23. Find the remainder when 2009^{2010} is divided by 2011. a.2010.   b.0   c.1   d.2009

24. $111^{111} + 222^{111} + 333^{111} + 444^{111} + ….999^{111}$ is divided by 555?   a.1   b.0   c.2   d.3   e.4

25. If P=1! +(2*2!) +(3*3!) +(4*4!) …… (12*12!). Find the remainder when P is divided by 13.
a.11   b.1   c.2   d.12