we must have atleast three 2's present, ∴ It must be divisible by 8.
∵ any four consecutive integers has two sets of three consecutive integers, by Prob 2, $P(P+1)(P+2)(P+3)$ is divisible by 3.

∵ 8 and 3 are co-prime to each other, $\boxed{\therefore 8\times3=24 \mid P(P+1)(P+2)(P+3)}$

From here, it's very easy to show that the product of any 5 consecutive integers is divisible by 120.

$\boxed{\text{Prob 5:}}$ Find the smallest natural number n such that n! is divisible by 990.

Ans: $990 = 9\times110 = 9\times10\times11$.
∴ n! must contain 9, 10 and 11 atleast once to be divisible by 990.
∴ n must be 11, since 11! is the smallest such factorial.

$\boxed{\text{Prob 6:}}$ How many zeros are there at the end of the decimal representation of the number 100!?

Ans: 100! contains atleast 11 0's at the end. This is because the number 100! has 1 occurence each of the 1st 10 multiples of 10 as it's factors, which give 11 0's at the end as a guarantee.
. We can also get zero at the end if we multiply a 5 by a even no., or more specifically, a 5 by a 2.
. Jot down the prime factorization of all the numbers from 1 to 100 apart from the multiples of 10.

Observation

5 $15=3\cdot5$ $25=5\cdot5$ $35=5\cdot7$ $45=3\cdot3\cdot5$ $55=5\cdot11$
$65=5\cdot13$ $75=3\cdot5\cdot5$ $85=5\cdot17$ $95=5\cdot19$

Notice, we have 12 5's among all those no.'s. ∴ We can easily get 12 more 0's, ∵ we have 50 even no.s, there must be atleast 50 2's as a bare minimum in the prime factorization.