7. Use divisibility test to test whether the following numbers are divisible by 6. (2 mks)

(i) 612

6+1+2=9 ✓
612 is divisible by 2 ✓

∴ The number is divisible by 6.

(ii) 83,472 (2 mks)

8+3+4+7+2=24 ✓
41736
2|83472 ✓

∴ It is divisible by 6 because it is divisible by both 2 & 3.

8. Use divisibility test to test whether the following numbers are divisible by 3. (2 mks)

(i) 20121

2+0+1+2+1 ✓①
=6
∴ Divisible ✓①

(ii) 722

7+2+2 ①
=11
∴ Not divisible ✓①

9. The G.C.D. of two numbers is 12 and their L.C.M. is 240. If one of the numbers is 60, find the other number. (2 mks)

$$\text{Number} = \frac{G.C.D \times L.C.M}{\text{Number}} = \frac{12 \times 240}{60} = 48$$ ✓

10. Express the following numbers in terms of their prime factors. (2 mks)

(i) 196

196
2 | 98
2 | 49
7 | 7

$= 2 \times 2 \times 7 \times 7 = 2^2 \times 7^2$

(ii) 715

5 | 715
11 | 143
13 | 13
1

$= 5 \times 11 \times 13$

11. A man was born in 1966. His father was born in 1928 and the mother three years later. If the man's daughter was born in 1992 and the son 5 years earlier, find the difference between the age of the man's mother and that of his son. (3 mks)

man → 1966
Father → 1928
mother → 1931 ✓
man's daughter → 1992
son → 1987

son − mother
1987 − 1931 ✓
= 56 years ✓