

## Int. Msc 5th year

the state of the s
0.1 Clar Fermat's theorem to verify that 17 dinedes
11 7 + 1 .
0.2 @ 2/ gcd (0,35)=1, plow Hat a = 1 (md 35)
(b) 2f gcd (a, 42)=1, show that 168=3.7.8 divides a b-1.
Derive the following conquiences:
O.6 Derive the following conquiences:  a) $a^{2} = a$ (med 15) $+ a$ .
(b) $a^9 \equiv a \pmod{30} + a$ .
25 a) Find the cenits digits of 3 to by Fermat's theorem.
05 @ Find the cenits digits of 3 to by Fermat's theorem.
0.6 of 7/a, prove that either a <sup>3</sup> +1 or a <sup>-1</sup> is
divisible by 7.
by prime p establish the following.
of pour p istablish the following
(a) If $a^{b} \equiv b^{b}$ (mod $p$ ), then $a \equiv b$ (mod $p$ )
(6) 2) p = (p + 1)
(6) If $a^{p} \equiv b^{p}$ (med $p$ ), then $a^{p} \equiv b^{p}$ (med $p^{2}$ ).



. ~					
0.8	the Fermat.	s blearen to	prove that	il bis an	n odo
pro	ime, then			0	
(4)	1 + 2 p-1 + 3	p-1 +	+(b-1) =.	-1 (mod p)	
	1 + 2 + 3 h				
1000	Confirm L pseudo pre				
STATE OF THE PARTY	pseudo pre 1105 = 5.				<u>, , , , , , , , , , , , , , , , , , , </u>
(6	2465 = 5	17.29			
0.10	Find the ru	emainder w	shom 15! j	o divided	by 17
0-11	Avienge and b	the integr	no 2,3,4,  1 ab≡ 1 (	,21 em p	atro
0	E. Show the			King!	
0.1	3 Jinen a	primen	umker p,	establish	the
_	congruen	ce			1
		p-1) & = b-	1 (med 1	+2+3+	+(b-l))
		7			
(		And the section of th	And with Aging the special services consistently the public of special services for the consistent of	And the state of t	-
					Designation of the September 1
					integration des statements
1		and the second s	and the same of th	and the second of the second o	