

QUESTION 1

- a) List six limitations of a census [6]
- b) What are the four main objectives of Demographic Surveys [4]
- c) What are content and coverage errors [6]
- d) In the evaluation of data and error detection both Direct and Indirect methods can be used. Briefly explain these [9]

QUESTION 2

- a) Write the Balancing Equation. What is the main shortcoming of the equation with respect to assessment of errors in census data [8]
- b) Using the Balancing Equation estimate the degree of completeness of death registration given the following:

1986 population aged 5+ years	:	12 030
1996 population aged 15+ years	:	10 065
Net migration from 1986 to 1996	:	112
Reported Deaths from 1986 to 1996	:	1 502
- c) Why are population data presented preferably in age groups rather than single years? [6]

QUESTION 3

- a) When detecting errors in data, internal consistency checks can be used, then vertical and horizontal consistency checks employed. Explain the meaning of the statement [6]
- b) Using the population data sheet attached, calculate the Whipples Index for digits 0 and 5 [8]

c) Calculate the Digit Preference Index for each of the digits in the attached data sheet [11]

QUESTION 4

a) In the calculation of Age Ratios the UN, Zelnik, and Ramachandran Methods may be used. Discuss fully these methods emphasising the rationale for their formulation [18]

b) What are diagonal consistency checks and how are they used in data error detection [7]

QUESTION 5

In the adjustment of age and sex data the United Nations three point / five point smoothing formulae or Newton's Halving formula (Quadratic Interpolation Method) may be used. Discuss fully these two methods [25]

TABLE 3.3: POPULATION BY SEX, SINGLE YEAR OF AGE AND CITIZENSHIP: 1986

AGE	TOTAL		
	MALES	FEMALES	BOTH SEXES
0	2791	2953	5744
1	3268	3264	6532
2	3353	3472	6825
3	3471	3547	7018
4	3425	3500	6925
0 TO 4	16308	16736	33044
5	3307	3218	6525
6	2956	2999	5955
7	2781	2918	5699
8	2879	2950	5829
9	2711	2780	5491
5 TO 9	14634	14865	29499
10	2825	2772	5597
11	2474	2513	4987
12	2694	2841	5535
13	2533	2607	5140
14	2417	2589	5006
10 TO 14	12943	13322	26265
15	2274	2401	4675
16	2213	2328	4541
17	1961	2120	4081
18	2482	2640	5122
19	1685	2115	3800
15 TO 19	10615	11604	22219
20	1759	2251	4010
21	1547	1995	3542
22	1489	2009	3498
23	1378	1886	3264
24	1282	1733	3015
20 TO 24	7455	9874	17329
25	1395	1830	3225
26	1172	1701	2873
27	990	1313	2303
28	1171	1663	2834
29	914	1199	2113
25 TO 29	5642	7706	13348
CONTD./			

TABLE 3.3: POPULATION BY SEX, SINGLE YEAR OF AGE AND CITIZENSHIP: 1986 (CONTE

TOTAL			
AGE	MALES	FEMALES	BOTH SEXES
30	1272	1644	2916
31	754	907	1661
32	987	1259	2246
33	728	850	1578
34	831	1025	1856
30 TO 34	4572	5685	10257
35	905	1075	1980
36	924	1099	2023
37	583	730	1313
38	820	1071	1891
39	752	850	1602
35 TO 39	3984	4825	8809
40	976	1211	2187
41	614	700	1314
42	660	866	1526
43	494	552	1046
44	573	664	1237
40 TO 44	3317	3993	7310
45	923	923	1846
46	727	690	1417
47	536	471	1007
48	636	681	1317
49	497	496	993
45 TO 49	3319	3261	6580
50	816	762	1578
51	378	384	762
52	463	491	954
53	335	323	658
54	410	381	791
50 TO 54	2402	2341	4743
55	381	358	739
56	434	423	857
57	242	286	528
58	353	354	707
59	256	257	513
55 TO 59	1666	1678	3344

CONTD./

TABLE 3.3: POPULATION BY SEX, SINGLE YEAR OF AGE AND CITIZENSHIP: 1986 (CONTD.)

AGE	TOTAL		
	MALES	FEMALES	BOTH SEXES
60	464	561	1025
61	196	233	429
62	252	279	531
63	138	198	336
64	177	199	376
60 TO 64	1227	1470	2697
65	261	330	591
66	173	186	359
67	159	167	326
68	218	412	630
69	118	204	322
65 TO 69	929	1299	2228
70	204	271	475
71	94	123	217
72	233	294	527
73	67	83	150
74	66	75	141
70 TO 74	664	846	1510
75	94	149	243
76	90	133	223
77	33	66	99
78	93	166	259
79	60	88	148
75 TO 79	370	602	972
80	95	182	277
81	28	58	86
82	44	82	126
83	30	39	69
84	68	85	153
80 TO 84	265	446	711
85	45	85	130
86	37	68	105
87	36	93	129
88	15	37	52
89	36	63	99
85 TO 89	169	346	515
CONTD./			

TABLE 3.3: POPULATION BY SEX, SINGLE YEAR OF AGE AND CITIZENSHIP: 1986 (CONT)

AGE	TOTAL		
	MALES	FEMALES	BOTH SEXES
90+	86	233	319
NOT STATED	431	466	897
TOTAL	90998	101598	192596

Remove Age NOT
STATED AND
CALCULATE (USE)
NEW TOTAL