

DEMOGRAPHY PRELIMINARY EXAM
AUGUST 2001
MORNING EXAM

I. ANSWER EITHER A OR B.

A. Pick 8 items from the following list and describe each in a sentence or two. You may supplement your description with formulas as appropriate and if absolutely necessary, but do not use a formula as a substitute for your description.

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|--------------------------------|----------------------------|
| 1. Boserup | 7. Lexis diagram (draw it) |
| 2. crude rate of net migration | 8. Matlab |
| 3. ergodicity | 9. mover-stayer |
| 4. fecundability | 10. nonproportional hazard |
| 5. Graunt | 11. oldest old |
| 6. intrinsic rate of increase | 12. two-sex problem |

B. Consider the situation of contemporary populations and answer both parts (i) and (ii).

i. For contemporary populations, give approximate lows and highs for:

TFR

expectation of life at birth

growth rate

ii. Give an example of a country or a region at each of the extremes of these values.

II. ANSWER EITHER A OR B.

A. Investigations of social class differentials in mortality have nearly as long a history as measures of mortality themselves. Yet researchers have been much more successful in documenting such differentials than in explaining their causes. Recent evidence further shows that social class differentials in mortality among middle-aged and older men have increased during the last decades both in Europe and the United States.

i. Discuss a framework for interpreting the relationship between socioeconomic status and mortality. In your answer, pay specific attention to both measures of social class

and the processes through which SES is hypothesized to influence mortality. Justify your choices with references to the literature.

- ii. Using this framework, discuss factors you believe have contributed to the widening of social class differentials in mortality among middle aged and older men during the last decades.

- B. Demographers often argue that mortality risks are correlated for infants residing in the same household. Discuss the sorts of mechanisms that might generate such a correlation. What data and statistical models would be required to distinguish between alternative mechanisms?

III. ANSWER EITHER A OR B.

- A. Discuss recent trends in U.S. labor force participation by gender and/or race/ethnicity. In your answer, review: (i) factors affecting levels and trends, (ii) issues concerning the measurement of labor force status, and (iii) the strengths and weaknesses of available data with respect to measurement, and for assessing levels, trends, and associated factors.
- B. Most nations in the European Union (EU) have below replacement fertility; indeed, in some countries, fertility is substantially below replacement levels. Not surprisingly, this demographic trend has been accompanied by mounting concern and policy research regarding the future viability of national pension systems throughout the EU. This has prompted some observers to recommend increasing immigration to these countries (from high fertility countries in the region) as a likely solution to this dilemma. Others have commented that immigration cannot solve the problem of deficit state pension systems. Discuss the demographic literature surrounding these issues, commenting first on fertility trends in the European Community and second on migration/immigration trends in Europe. What link might you make between these trends and the apparently growing call from political parties on the right in parts of Europe to place further restrictions on immigration?