

**DEPARTMENT OF STATISTICS**  
**UNIVERSITY OF KARACHI**  
**ACT-316 FUNDAMENTAL OF INSURANCE MATHEMATICS**  
**QUIZ-1**

**Duration:** 1 hours

| Country    | Year | Estimated mid year population | Number of deaths |
|------------|------|-------------------------------|------------------|
| Argentina  | 1990 | 32322000                      | 295796           |
| Brazil     | 1989 | 147404000                     | 1,164452         |
| Colombia   | 1990 | 328987000                     | 201,166          |
| Costa Rica | 1991 | 3064000                       | 12,452           |
| Mexico     | 1991 | 87836000                      | 500,615          |

Q-1 Above table gives the total number of deaths in certain years, together with the estimated mid year population for those years, for certain countries in Latin America. Use them to calculate the crude death rate for each of these countries.

| Age group | males               |                  |         |                  |
|-----------|---------------------|------------------|---------|------------------|
|           | Mid-year Population | Number of deaths | Females | Number of deaths |
| 1-4       | 1422                | 1637             | 1380    | 1,325            |
| 5-14      | 3062                | 1390             | 2968    | 920              |
| 15-24     | 2430                | 2816             | 2318    | 1,437            |
| 25-44     | 4101                | 9690             | 4023    | 5942             |
| 45-64     | 2755                | 36581            | 2753    | 18535            |

Q-2 Above table gives the estimated mid-year population in certain age group, together with the number of deaths to people in those age group, for males and females in Argentina in 1986. Use them to calculate age specific death rates for two sexes.