

### **EXPLANATORY NOTE ON POPULATION SECTOR.**

A population Census is defined in the United Nation's (UN) documents as the total process of collecting, compiling, evaluating, analyzing and disseminating demographic, economic and social data pertaining to all persons in the country at a specific time. The first attempt to count the people of British India was made between 1867 and 1871. The last census conducted in British rule was in 1941. This tradition of Pakistan continued and was conducted five censuses in 1951, 1961, 1972, 1981, 1998 and the last one in 2017. Various kinds of data pertaining to this sector are including in it.

Some formulas and equations which are often used in population sector are indicated as below :-

i) **Population Projection** =  $P_0 = P_1 (1 + r/100)^n$

Where  $P_1$  = Population of latest census

$P_0$  = Population of base census

$r$  = Growth rate

$n$  = Time Interval between two censuses

ii) **Dependency Ratio** The ratio of persons in the age defined as dependent (under 15 years and over 64 years) to those in the ages defined as economically active (15-64 years) in the population. So, the formula used for :

$$\text{Dependency ratio} = \frac{\text{Pop: (under 15 years + Pop: 65 years \& above)}}{\text{Population (15 to 64 years)}} \times 100$$

iii) Literacy Rate =  $\frac{\text{Total No. of literate (10 years \& above)}}{\text{Total Population (10 years and above)}} \times 100$

iv) Density ( Per Sq: Km ) =  $\frac{\text{Total Population}}{\text{Total Area}}$

v) Sex Ratio =  $\frac{\text{Male Population}}{\text{Female Population}} \times 100$

vi) Child Dependency Ratio =  $\frac{\text{Pop: (under 15 years)}}{\text{Pop: (15 to 64 years)}} \times 100$

vii) Old Dependency Ratio =  $\frac{\text{Pop: (65 years \& above)}}{\text{Pop: (15 to 64 years)}} \times 100$

viii) Index of Aging =  $\frac{\text{Pop: (65 years \& above)}}{\text{Pop: (under 15 years)}} \times 100$

ix) Crude Activity Rate =  $\frac{\text{Civilian Labour Force (10 years \& above)}}{\text{Total Population}} \times 100$

x) Refine Activity Rate =  $\frac{\text{Civilian Labour Force (10 years \& above)}}{\text{Population (10 years \& above)}} \times 100$

xi) Unemployment Rate =  $\frac{\text{Unemployment Persons (10 years \& above)}}{\text{Economically Active Pop: (10 years \& above)}} \times 100$

xii) Ratio of Child bearing women =  $\frac{\text{Women aged (15 - 49 years)}}{\text{Total Female population}}$

xiii) Ratio of Rural & Urban

Household Income =  $\frac{\text{Household's Average Monthly Income of Rural Area}}{\text{Household's Average Monthly Income of Urban Area}}$

xiv) Growth Rate =  $\frac{(P2 - P1)}{P1 \times T} \times 100$

Where: - P2 = is the preceding year Population  
 P1 = is the Base year Population  
 And T = Total period of Time

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