

## **UNDERSTANDING POPULATION DYNAMICS**

### **A. Definition**

### **B. Population of Earth**

### **C. Growth rates of natural populations: S curves vs J curves**

### **D. Exponential growth**

### **E. Cause of growth**

### **F. Population doubling times – “Rule of 70”**

### **G. Increases per year/day/hour/minute**

### **H. Replacement level fertility**

### **I. Major factors affecting population growth rate:**

1. Total fertility rate
2. Age of first reproduction
3. Age structure of population: age structure diagrams (population histograms)

### **J. Crude birth rates and crude death rates (CBR and CDR)**

### **K. Calculating population rates of change:**

$$\text{CBR} - \text{CDR} \times 100 = \% \text{ rate of change}$$