Key Words Models and Math Graphs

#### **Review For Midterm 2**

# Exam 2 covers from Chapter 4 (Solow Neoclassical Growth Model) up to and including Chapter 8.



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#### **Review For Midterm**

There are 8 multiple choice questions (5 pts each), 1 mandatory long answer question (30 pts), and 2 long answer questions (30 points each), of which you choose one.

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#### Chapter 4

- Knife-edge problem
- Diminishing returns to capital
- Capital deepning
- Capital widening

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### Chapter 5

- Big push
- Linkages
- Pareto efficiency and Pareto optimality
- Backward linkages
- Soviet Union model of growth
- NGOs (non-government organizations)

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### Chapter 5

- Washington Consensus
- 5 key elements required for market to function well
- Hard governments
- Soft governments.
- Four East Asian Tigers (S. Korea, Taiwan, Hong Kong, Singapore)

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#### Chapter 6

- Size distribution
- Lorenz Curve
- Frequency distribution
- Gini coefficient
- Absolute poverty
- Head-count index

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### Chapter 6

- Poverty gap
- Destitution poverty line
- Poverty line
- Poverty line arguments
- Pro-poor growth policy
- Conditional cash transfers (CCTs)

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#### Chapter 6

- Social safety nets
- International inequality
- Calculate international inequality using population as weights

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### Chapter 7

#### Population-carrying capacity

- Population explosion
- Demographic transition
- Crude birth rate
- Crude death rate
- Natural increase

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### Chapter 7

- Total fertility rates
- Population momentum
- Population pessimists
- Population optimists
- Population revisionists (neutralists)
- Children as economic decision-implications

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#### Chapter 7

- Market failures
- One child policy



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### Chapter 8

- Primary, secondary, tertiary education
- Gross enrollment rates
- Net enrollment rates
- Grade survival rates
- Age-earnings profiles
- Private return

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### Chapter 8

- Present value
- Discounted
- Internal rate of return
- Social return
- Externality
- Natural experiment
- Randomized controlled trials (RCTs)

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### Chapter 4

Solow (Neoclassical) Growth Model

- Production function: y = F(1, k).
- Change in capital:  $\delta k = sy (n+d)k$

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### Chapter 4

Solow (Neoclassical) Growth Model

- Change in capital per worker depends on savings, pop growth, and depreciation of capital.
- Production function needs constant returns to scale and diminishing returns to capital.

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#### Chapter 5

Firm Maximization and Efficiency of markets

- Monopoly profit maximization
- 2 and 3 firm market profit maximization

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#### Chapter 5: Example

Let the product demand be described as Q = 10 - P.

- Find the equilibrium quantity when the one firm in the market has a constant marginal cost of 2.
- Find the equilibrium quantity when two firms in the market each have a constant marginal cost of 2.
- Find the equilibrium quantity when three firms in the market each have a constant marginal cost of 2.

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#### Chapter 6

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#### Chapter 6

#### Gini coefficient Gini $\frac{A}{A+B}$



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#### Chapter 8

#### Rates of Return

 $PV_B = \sum_{t=1}^n B_t / (1+i)^t$ 

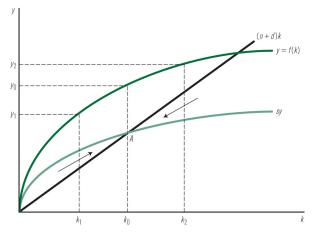
$$PV_C = \sum_{t=1}^n C_t / (1+i)^t$$

$$0 = \sum_{t=1}^{n} (B_t - C_t) / (1 + r)^t$$

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### Chapter 4



#### FIGURE 4-4 The Basic Solow Growth Model Diagram

In the basic Solow diagram, point A is the only place where the amount of new saving, sy, is exactly equal to the amount of new capital needed to compensate for growth in the workforce and  $10^{-10} = 10^{-10}$ 

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#### Chapter 6

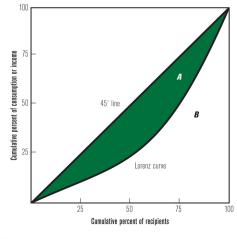


FIGURE 6-2 Lorenz Curve

Review for Midterm

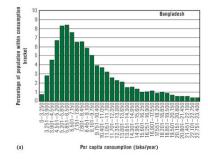
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