**DEBRE MARKOS UNIVERSITY**

**Postgraduate Directorate**

**College of Business and Economics**

**Department of Economics**

**Development Economics Summer Program**

**Assignment for Policy Analysis and Modeling**

**Maximum mark 40**

1. What can you recommend to the government to cope up with the severe shortage of foreign currency and Balance of Payment deficit? (10 pts)
2. If an economy has three active primary sectors (Agriculture, Industry and Service) that regenerate new products after they have purchase initial inputs that worth 300 from the government. Share of the initial purchase and the input requirements are presented below.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Agriculture  | Industry  | Service  | Total | Share from the initial purchase  |
| Agriculture  | 20 | 50 | 20 | 90 | 50 |
| Industry | 30 | 60 | 30 | 120 | 100 |
| Service | 40 | 10 | 90 | 140 | 150 |
| Total | 90 | 120 | 140 |  | 300 |

Considering the values in above table calculate and carefully interpret the per-unit direct requirement of each sector (5pts). Moreover, use the initial purchase and sectoral share, and calculate the type I and II multiplier only (10pts).

1. You know that our economy is seriously suffering from skyrocketing inflation especially on food items. As to your perception, what are the potential reasons behind and possible solutions (10pts).

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**Development Economics Weekend Program**

**Final exam for Economic Policy Modeling and Analysis**

Maximum mark 65% **Start at** 3:00 Local time

**Name**s \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ ID\_\_\_\_\_\_\_\_

**Attempt all questions and write your answers clearly.**

* **Attempt all questions**
* **Write you ID Number only on each answer page**
* **Neatness and clarity may have unconscious rewards**
1. The following table shows the initial and simulation result of CGE model. Discuss about the change in the economic system due to a 10% capital budget increment and inflation of 10% (10pts).

|  |  |  |  |
| --- | --- | --- | --- |
| Variable  | Initial | Capital budget increment | After inflation  |
| Lower  | Level  | Upper  | Lower  | Level  | Upper  | Lower  | Level  | Upper  |
| Consumption  | -INF | 1700 | +INF | -INF | 1750 | +INF | -INF | 1546 | +INF |
| National income  | -INF | 17000 | +INF | -INF | 17500 | +INF | -INF | 17000 | +INF |
| National production | -INF | 1700 | +INF | -INF | 1750 | +INF | -INF | 1546 | +INF |
| Capital demand | -INF | 1000 | +INF | -INF | 1100 | +INF | -INF | 1100 | +INF |
| Capital supply  | 1000 | 1000 | 1000 | 1100 | 1100 | 1100 | 1100 | 1100 | 1100 |
| Labor demand  | -INF | 2000 | +INF | -INF | 2000 | +INF | -INF | 2000 | +INF |
| Labor supply  | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 |
| Price  | 10 | 10 | 10 | 10 | 10 | 10 | 11 | 11 | 11 |
| Rent  | -INF | 5 | +INF | -INF | 5 | +INF | -INF | 5 | +INF |
| Wage  | -INF | 6 | +INF | -INF | 6 | +INF | -INF | 6 | +INF |

1. If an economy has the following transaction among sectors, then interpret each cell (5pts)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Consumption  | Government | Manufactures | Rest of the World  | **Total** |
| Consumption  | 50 | 60 | 100 | 50 | **260** |
| Government  | 110 | 40 | 40 |  | **190** |
| Manufactures  | 80 | 10 | 20 | 110 | **220** |
| Rest of the World  | 20 | 80 | 60 |  | **160** |
| **Total**  | **260** | **190** | **220** | **160** |  |

1. Considering the values in above table calculate to compute the per-unit direct requirement of each sector (5pts).
2. If a society has Stone-Geary consumption function, wherein the consumption purely depend on only two items (X and Y), and a minimum of x and y from the two items, respectively; then calculate the demand equations for the two items (10pts).

C = αln(X-x) +(1-α) ln(Y-y) PxX + PyY < M

Given the function you compute for the above question and the following information, calculate the amount of the two items demanded (5 pts).

|  |  |  |  |
| --- | --- | --- | --- |
| X | 2 | M  |  120 |
| Y | 4 | The consumers do have equal probability of consuming the two items.  |
| Px | 5 |
| Py | 6 |

1. If an economy has two active primary sectors (Agriculture and Industry) that regenerate new products after they have initial input purchase that worth 200. Share of the initial purchase and the input requirements are presented below.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Agriculture  | Industry  | Service  | Total | Share from the initial purchase |
| Agriculture  | 20 | 50 | 20 | 90 | 120 |
| Industry | 30 | 60 | 30 | 120 | 80 |
| Service | 40 | 10 | 90 | 140 |  |
| Total | 90 | 120 | 140 |  | 200 |

Considering the initial sale and sectoral share and calculate the type I and II multiplier only (10pts).

1. Clearly explain and differentiate the growing family of PEP models (8pts).
2. You know that our economy is seriously suffering from skyrocketing inflation. As to your perception, what are the potential reasons behind and possible solutions you ought to recommend for the concerned party (7pts).
3. What type of issues can be addressed by MAMS model? (5pts)