BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI
(END SEMESTER EXAMINATION)

CLASS: IMSc. **SEMESTER: VIII**
BRANCH: CQEDS **SESSION: SP/2025**

SUBJECT: ED423 ADVANCED MACROECONOMICS

TIME: 3 Hours **FULL MARKS: 50**

INSTRUCTIONS:

1. The question paper contains 5 questions each of 10 marks and total 50 marks.
2. Attempt all questions.
3. The missing data, if any, may be assumed suitably.
***4*. Before attempting the question paper, be sure that you have got the correct question paper.**
5. Tables/Data hand book/Graph paper etc. to be supplied to the candidates in the examination hall.

			CO	BL

Recall the National Income Accounting concepts. According to this model, equilibrium income is achieved when actual expenditure equals planned expenditure. Complete the table and solve questions 1 to 2. (You need to fill the Table to answer the questions.)

Here, Consumption = C, Taxes = T, Investment = I, Disposable Income (Yd)= Y-T, Govt. Purchases of Goods and Services = G, Planned Expenditure = PE, Actual Expenditure = AE, the MPC is constant, and foreign trade is zero. In case you need, the autonomous consumption = $190.

AE=Y	T	Y-T	C	I	G	PE
2800	400		2110	400	450	
3000	400		2270	400	450	
3200	400			400	450	
3400	400			400	450	
3600	400			400	450	
3800	400			400	450	
4000	400			400	450	

Q.1(a)	What is equilibrium real gross domestic product (RGDP)? Provide detailed steps for your answer.	[5]	CO1, CO2	1
Q.1(b)	How much would investment have to rise to increase the equilibrium output by $400? Provide detail steps for your answer.	[5]	CO1, CO2	2
Q.2(a)	What happens to equilibrium Real GDP if we raise taxes by $200? Provide detail steps for your answer.	[5]	CO1, CO2	3
Q.2(b)	What would be the change in equilibrium output if we raised government spending by $200 and taxes by $200 to pay for it? Provide detail steps for your answer.	[5]	CO1, CO2	4
Q.3(a)	Remember the 'Phase Diagram' depicting the dynamics of 'c' and 'k' in the Ramsey-Cass-Koopmans model. The phase diagram shows the evolution of c and k over time to satisfy households' intertemporal optimization condition (the dynamics of c equation) and the equation relating the change in k to output and consumption (the dynamics of k equation) given the initial value of c and k. Graphically represent the dynamics of c and k in the diagram. i.e., you need to reproduce the Phase diagram.	[5]	CO3	2
Q.3(b)	Now if given initial value of k is grater than the optimal value of k. i.e. k (0) > k*. Now your task is to determine the initial value of c over the phase diagram. Show at least 4 values of c on the diagram with their direction.	[5]	CO3	3
Q.4	In the Real Business Cycle model graphically explain the situation where nominal rigidity (sticky prices) lies in the goods market but labor market is competitive, and wages are completely flexible. (Show all the steps/conditions and explanation)	[10]	CO4	4
Q.5(a)	Describe how, if at all, rise in the coefficient of relative risk aversion, θ, affect the New Keynesian IS and LM curve. (Hint: find the slope of IS & LM)	[6]	CO5	5
Q.5(b)	Depict this effect in the IS-LM framework in the graph.	[4]	CO5	5

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