BIRLA INSTITUTE OF TECHNOLOGY & SCIENCE, PILANI
SECOND SEMESTER – 2016-17

Course No.: ECON F343 **Course Title: Economic Analysis of Public Policy**
Date: 07 MARCH 2017 **Max. Marks: 30**
Time: 90 minutes

MID SEMESTER TEST (CLOSED BOOK)

ID. No: **NAME:**

NOTE:

- Answer to the point. Please write in the space provided. If necessary, write on the back of the page. To receive full credit you have to carefully explain all your answers and show all your work.

1 Respond TRUE, FALSE, or UNCERTAIN to each assertion and write a brief justification of your answer, including a write up or graph and/or equations if helpful. No marks will be awarded to undefended answers.

(9.0)

A A new road safety policy requires all automobiles in India to be equipped with side airbags. Assuming the airbags increase the safety of vehicle occupants in the event of a crash, the policy will save lives.

B Suppose that, for every person, an increase in income causes an increase in health.

a) In this society, we would find that people with more education tend to be healthier.

b) It follows that costless income redistribution from relatively high to relatively low income people would increase average health.

C 1,00,000 residents live in the city of Amravati, where city planners are deciding whether to build a Rs.10,00,00,000 public park. A survey has asked residents how much they would be willing to pay for the public park. Claim: As long as residents indicate their willingness to pay to be, on average, at least Rs.1000 per resident, the park should be built.

D Talk about how government goals such as "justice," "equity," and "national identity" may be confusing and contradictory. Really, this is because such policy goals are Unidimensional.

E A public policy that is not doing what it is supposed to do but is nevertheless very popular among the public:

Will surely be extensively altered despite public opinion
Will surely be scrapped by the government immediately
Will surely be considered by the government to be a success
Cannot be considered a success in the rational sense

F Cost-benefit analysis assumes that the value of human life is infinite.

2 For the given each of the public policy programs below, list what market failures (externalities, asymmetric information, adverse selection, public good, monopoly) might be (or are) used as partial rationale for having the program:

a. Automobile safety belt requirements -

b. Regulations on automobile pollution -

c. Ballistic missile defense shield -

d. Unemployment compensation -

e. Medicare (medical care for the age)-

h. Law requiring appliances to disclose energy usage-

i. National Weather Service -

j. Imposing marketing constraints on Microsoft -

(4.0)

3 What inefficiency results if consumers are required to pay in order to use non-rival goods? How is it that consumers could be made worse off if producers of non-rival but potentially excludable goods are not allowed to make them actually excludable (that is, not allowed to deny access to the goods to those who do not pay)? Give an example of each.

(4.0)

4 You are a Policy Expert and thinking of bringing a health insurance policy for the country. Suppose that there are a large number of people in a country. These people have identical incomes and preferences. Assume that all people are different with respect to their probability to get sick and require medical care (assume no two persons have the same probability) and that insurance companies have no way of differentiating among different risk types.

Briefly explain the situation that when health insurance market can be destroyed?

Name at least two reasons why insurance market may not be destroyed (at least not completely) in reality?

(4.0)

5 In your own country each year almost 8000 people die waiting for organ transplants. This makes cadaveric organs extremely valuable resources whose allocation literally has life and death implications. Waste not, want not: new organ transplants and donation policy could save lives and you are designing such policy. *Which, if any, of the following factors should be relevant to allocation:* medical condition, probability of success, geographic location, ability to pay, age, family status, waiting time, and behavioral causes of organ failure? As a policy maker *what goals* might be relevant for assessing allocation systems for transplant organs?

(5.0)

6 The city of Gurgaon is considering building a public subway system to help relieve urban traffic congestion. Gurgaon politicians in favor of the project argue that the system would benefit the population by drastically reducing commuting time, not to mention the jobs the project would create during the subway construction process. The Gurgaon city planning board has hired you to perform a cost-benefit analysis to determine whether the project should be undertaken. You have been provided with the following information:

In 2013, Delhi (a city neighboring Gurgaon) built a subway system similar to the one proposed in Gurgaon. The following chart shows total annual commuting hours for both cities in the years 2012and 2014:

	2012	2014
Delhi	10,000,000	9,500,000
Gurgaon	7,500,000	8,000,000

Using the available data, construct the best estimate of the effect of the subway on Commuting hours in Delhi. Describe any concerns about the validity of this estimate.

Labor and construction materials are needed to build the subway. Gurgaon's labor market is competitive, and the wage rate is Rs.20/hr. Total labor costs would come to Rs.90,000,000. However, monopolies own the materials factories, and therefore material costs would come to Rs.150,000,000. A reputable economist has estimated that the cost of materials would fall to Rs.100,000,000 if they could be purchased in a competitive market (which they can't, politicians lament).

All costs would be paid upfront and the subway would be built instantaneously. After project completion, Gurgaon would annually experience the time-savings reduction in commuting hours found in part 1. If the interest rate is r=10%, calculate the Present discounted value (PDV) of this project and use this value to recommend whether or not the subway system should be built. Comment on the results.

(4.0)