



ENTRANCE EXAMINATION, 2016

**M.Phil./Ph.D.
REGIONAL DEVELOPMENT
(ECONOMICS)**

[Field of Study Code : ECNP (143)]

Time Allowed : 3 hours

Maximum Marks : 70

INSTRUCTIONS FOR CANDIDATES

- (i) All questions are compulsory.
- (ii) All questions must be answered in the Question Paper itself.
- (iii) This Question Paper consists of *four* Sections, viz.,—Sections A, B, C and D.
- (iv) Answer the questions of Section—A as per directions given.
- (v) Questions of Sections B, C and D have to be answered in the space given in the Question Paper.
- (vi) Calculators are allowed.
- (vii) Extra pages are provided for Rough Work at the end of the booklet.

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**M.Phil./Ph.D.
REGIONAL DEVELOPMENT
(ECONOMICS)**

SUBJECT
(Field of Study/Language)

FIELD OF STUDY CODE

NAME OF THE CANDIDATE

REGISTRATION NO.

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CENTRE OF EXAMINATION

DATE

.....
(Signature of Candidate)

.....
(Signature of Invigilator)

.....
*(Signature and Seal of
Presiding Officer)*

Sections	Question Nos.	Marks Obtained
SECTION—A	1 to 10	
SECTION—B	11 (a)	
	11 (b)	
	11 (c)	
	11 (d)	
	11 (e)	
	11 (f)	
SECTION—C	12 (a)	
	12 (b)	
	12 (c)	
	13	
	14	
	15	
SECTION—D	16	
	17	
	18	
	19	
	20	
	21	
Total		

Encircle the correct answer :

1×10=10

1. The estimated production function for wheat farmers is given as $Y = aX_1^{0.7} X_2^{0.5}$. Indicate which one of the following the wheat farmers experience.
 - a. Constant returns to scale
 - b. Increasing returns to scale
 - c. Decreasing returns to scale
 - d. None of the above

2. Innovation in production process leads to
 - a. downward shift in isoquant
 - b. upward shift in isoquant
 - c. movement along the isoquant
 - d. No shift in isoquant

3. If the production function of a firm is $q = \sqrt{xy}$, where x and y are the inputs, then the cost function $C(q)$ takes the form
 - a. Aq^2
 - b. Aq
 - c. Aq^4
 - d. Does not exist

4. According to the Rybczynski theorem, the growth of only one factor, at constant relative commodity prices, leads to an absolute expansion in the output of
 - a. both commodities
 - b. the commodity using the growing factor intensively
 - c. the commodity using the non-growing factor intensively
 - d. Any of the above

5. Using the numbers

<i>National Income</i>	<i>Taxes</i>	<i>Disposable Income</i>	<i>Consumption</i>	<i>Investment</i>	<i>Government Expenditure</i>
100	100	0	50	25	100
200	100	100	125	25	100
300	100	200	200	25	100
400	100	300	275	25	100
500	100	400	350	25	100
600	100	500	425	25	100
700	100	600	500	25	100
800	100	700	575	25	100

the equilibrium real GDP (equal to National Income) is

- 300
- 400
- 500
- 600

6. Suppose you have a cubic Total Cost

$$TC(q) = ax^3 + bx^2 + cx + d$$

The standard parametric restrictions to be imposed on the TC function are

- $a > 0, b < 0, c > 0, d > 0$
- $a > 0, b > 0, c > 0, d > 0$
- $a < 0, b > 0, c < 0, d > 0$
- $a > 0, b > 0, c < 0, d < 0$

7. All of the following would cause the productivity in a country to increase, **except**

- an improvement in technology
- an increase in the amount of resources per worker
- an increase in the size of the labor force
- an increase in the amount of capital per worker

8. Which of the following statements is correct ?

- a. The 'worker effort' type of efficiency wage theory suggests that overpaying workers lead to shirking and is thus inefficient.
- b. The efficiency wage is the wage that maximizes the cost of a unit of labor of standard efficiency.
- c. According to the 'worker quality' type of efficiency wage theory, by paying a higher wage than the market-clearing wage, employers will be able to attract more highly qualified job applicants.
- d. Although it is useful in a number of aspects, efficiency wage theory fails to explain involuntary unemployment.

9. Which of the following is **not** correct?

- a. Phillips curve proposes that the lower the unemployment rate, the higher is the rate of inflation.
- b. Laffer curve suggests that higher tax rates would always increase revenue.
- c. According to Engel's law, people generally spend a smaller share of their income on food as their income rises.
- d. Stagflation refers to a situation where both inflation and unemployment remain high.

10. The government levying taxes on polluting industries is an example of

- a. Coase's theorem
- b. internalization of negative spillover effects
- c. government failure
- d. free riding

SECTION—B

11. Explain any *four* of the following (maximum word limit 50) :

2×4=8

- (a) Lerner's Index of Monopoly Power
- (b) Poverty Line
- (c) GDP Deflator
- (d) Theory of Immiserising Growth
- (e) Tragedy of the Commons
- (f) Myrdal's Theory of Cumulative Causation

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SECTION—C

(All questions are compulsory in this Section)

5×4=20

12. Write short notes in 100 words each on any *two* of the following :

- (a) Scatter diagram
- (b) Pearson correlation
- (c) R^2 and adjusted $R^2(\bar{R}^2)$

13. What is eigenvalue? Find the eigenvalues of the following matrix :

$$\begin{bmatrix} 2 & 0 & 1 \\ -1 & 4 & -1 \\ -1 & 2 & 0 \end{bmatrix}$$

Find the trace and determinant of the above matrix using eigenvalues.

14. A fair coin is tossed 500 times. Find the probability that number of heads will not differ from 250 by (a) more than 10 and (b) more than 30.

15. Consider two variables, viz., price in rupees (Y) and flat size (X) measured in square feet. Assume that these variables are linearly related. Suppose $N = 80$, $\sum X = 110$, $\sum Y = 6450$, $\sum X^2 = 230$ and $\sum XY = 13400$. Fit a linear regression by using above information. Interpret the results.

SECTION—D

Answer any *four* of the following :

8×4=32

16. Critically examine India's economic development pattern from the perspectives of Lewis model.

17. What are the main causes of the Agrarian Crisis in India? Discuss how the specific initiatives suggested in this year's budget address or not the current Agrarian Crisis.

18. Critically examine the role of the Fiscal Responsibility and Budget Management (FRBM) Act in ensuring macroeconomic stability and growth in the Indian economy.

19. Explain the trends in inter-State disparities in economic performance in India since the early 1990s.

20. Evaluate the performance of the Mahatma Gandhi National Rural Employment Guarantee Act in reducing poverty.

21. What is labor market discrimination? Discuss various forms of labor market discrimination and its possible causes.

SPACE FOR ROUGH WORK

SPACE FOR ROUGH WORK
