

**A**

**Centre for Development Studies  
Thiruvananthapuram**

**MA Applied Economics  
ADMISSION EXAMINATION 2016**

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**Read the instructions carefully before answering the questions**

- This booklet consists of two parts. Part one contains 25 objective questions with multiple choices in answers. Part two contains five passages/tables and a set of questions below each passage/table. Questions are to be answered on the basis of the information given in the respective passage/table. The allowed time is two hours.
- Each correct answer for the objective questions in part one carries **two marks** and for each wrong answer **one mark will be deducted**. Non-attempted questions carry **zero mark**.
- In part one, answer the questions by writing the alphabet (A,B,C, or D in capital letters), corresponding to your answer, on the answer line given below right side of each question. If you mistakenly write a wrong choice, you can strike it out using "multiplicative sign" (×), and then write the correct choice in the remaining space.
- In part two, answer to a question should not exceed the given space provided below the question. **Write your answers legibly**. Maximum marks that a question carries is given on its right side in parenthesis.
- Write your **Register Number** in the space given in the bottom of this page.
- Please do not make any stray marks on this booklet.
- Return this booklet to the invigilator at the end of the examination.
- **Last page** of this booklet can be used for doing **rough work**.

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Register Number:

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Question Booklet Series:

**A**

× Break this seal only at 10.00 a.m.

Part One

1.  $\lim_{x \rightarrow 0} \frac{|x|}{x}$  is  
 A. 0  
 B. 1  
 C. -1  
 D. Nonexistent  
 1. \_\_\_\_\_
2. If the slope of the function  $f(X) = 4X^2 - 24X + 32$ , is 0 at  $X = 3$ , then it follows that  $X = 3$  is a  
 A. Local maximum  
 B. Local minimum  
 C. Global maximum  
 D. Saddle point  
 2. \_\_\_\_\_
3. An asset initially costs Rs. 100,000/-. It is expected to last for 5 years and it will be worthless at the end of this time. Depreciation is charged on a straight line basis over the asset's useful life. Given the following profits from the investment what is its net present value assuming a discount rate of 10%?  
 Year 1: 7500, Year 2: 12500, Year 3: 16000, Year 4: 14000, Year 5: 12500  
 A. Rs. 53500  
 B. Rs. 37509  
 C. Rs. 22284  
 D. Rs. 162479  
 3. \_\_\_\_\_
4. What is  $a$ , if  $A = \begin{bmatrix} 1 & 4 \\ 2 & a \end{bmatrix}$  is a singular matrix  
 A. 5  
 B. 6  
 C. 7  
 D. 8  
 4. \_\_\_\_\_
5. Which of the following functions is homogeneous of degree 1  
 A.  $Q = 100K^{1/4}L^{3/4}$   
 B.  $Q = 20K^\alpha L^{1+\alpha}$   
 C.  $Q = K^2 + 2KL + L^2$



D.  $Q = (K^2 + 2KL + L^2)^{1/2}$

5. \_\_\_\_\_

6. Which measure of central tendency takes into account the magnitude of scores?
- A. Mean
  - B. Median
  - C. Mode
  - D. Range

6. \_\_\_\_\_

7. Which of the following statements sounds like a null hypothesis?
- A. The coin is not fair
  - B. There is a correlation in the population
  - C. There is no difference between male and female incomes in the population
  - D. The defendant is guilty

7. \_\_\_\_\_

8. What would happen (other things equal) to a confidence interval if you calculated a 99 percent confidence interval rather than a 95 percent confidence interval?
- A. It will be narrower
  - B. It will not change
  - C. The sample size will increase
  - D. It will become wider

8. \_\_\_\_\_

9. Which one of these statistics is unaffected by outliers?
- A. Mean
  - B. Interquartile range
  - C. Standard deviation
  - D. Range

9. \_\_\_\_\_

10. The value of a correlation is reported by a researcher to be  $r = -0.5$ . Which of the following statements is correct?
- A. The x-variable explains 25% of the variability in the y-variable.
  - B. The x-variable explains -25% of the variability in the y-variable.
  - C. The x-variable explains 50% of the variability in the y-variable.
  - D. The x-variable explains -50% of the variability in the y-variable

10. \_\_\_\_\_



11. Assume that the market for computers begins in equilibrium. Then, there is a decrease in price of Pentium processors used in the production of computers. When the new equilibrium is reached
- A. The price and quantity of computers will both have risen
  - B. The price and quantity of computers will both have fallen
  - C. The price of computers will have risen and the quantity will have fallen
  - D. The price of computers will have fallen and the quantity will have risen
11. \_\_\_\_\_
12. During the 1990s, the price of VCRs fell by about 30 percent, and quantity changed by the same amount. The demand for VCRs must
- A. be inelastic
  - B. be elastic
  - C. be unit elastic
  - D. have shifted to the right
12. \_\_\_\_\_
13. Which of the following is true about a firm that sells its output in a perfectly competitive market?
- A. The demand for its product is downward sloping
  - B. The firm will earn zero economic profits in the long run
  - C. Advertising is the most important tool
  - D. The firm will increase its profit by charging a price lower than the prevailing market price
13. \_\_\_\_\_
14. Which of the following is NOT a characteristic feature of a monopolistically competitive firm
- A. Long run profits
  - B. Differentiated products
  - C. Substantive product advertising
  - D. Large number of buyers and sellers
14. \_\_\_\_\_
15. The demand curve represents,
- A. The minimum amount consumers are willing to pay for particular units of a good
  - B. The maximum amount consumers are willing to pay for particular number of units of a good



- C. The average amount consumers are willing to pay for particular unit of a good  
D. That consumers want to pay the lowest price possible

15. \_\_\_\_\_

16. India had a current account surplus after the 1973-74 oil price rise because  
A. India is a net exporter of oil  
B. inflation in India forced producers to export more  
C. real income declined leading to an increase in savings  
D. India was able to borrow from special facilities at the IMF and World Bank

16. \_\_\_\_\_

17. India has been accumulating foreign exchange reserves over time. This has led to  
A. impossibility of a foreign exchange crisis  
B. increase in domestic money supply  
C. current account surplus  
D. appreciation of Indian rupee

17. \_\_\_\_\_

18. Which five year plan was put up in the spirit of the Harrod Domar model of growth?  
A. Second five year plan  
B. First five year plan  
C. Third five year plan  
D. None of the above

18. \_\_\_\_\_

19. The second five year plan stressed investment in basic industries because  
A. India did not have the foreign exchange to import these goods  
B. such investment would maximize the rate of growth of the economy  
C. it would provide employment  
D. it would generate technical progress

19. \_\_\_\_\_

20. India was not affected by the 1997 Asian financial crisis because  
A. trade's share in GDP was very small  
B. India got large amounts of foreign aid  
C. India's short term foreign debt was very small  
D. India was growing at a very fast rate

20. \_\_\_\_\_



21. The natural rate of unemployment is  
A. everybody is employed  
B. there is an optimal rate of employment  
C. there is an optimal rate of unemployment  
D. there is no inflation  
21. \_\_\_\_\_
22. Money neutrality means  
A. money has no value  
B. in the long run real variables are not affected by changes in the money supply  
C. in the long run real variables increase proportionately with the money supply  
D. monetary policy is determined only by the central bank  
22. \_\_\_\_\_
23. Chad exports coffee. Would a devaluation  
A. improve its balance of payments  
B. have no effect on its balance of payments  
C. worsen the balance of payments  
D. improve living standard of the coffee growers in Chad  
23. \_\_\_\_\_
24. Suppose an economy is in a liquidity trap. Would an expansion in the money supply lead to  
A. no change at all in the economy  
B. a fall in the rate of interest  
C. inflation  
D. the price falls leading to increased demand and output  
24. \_\_\_\_\_
25. Sale of drugs is illegal. Al Capon buys drugs worth \$10,000 and sells them for \$25,000. Now indicate who is correct.  
A. The statistician says that he has added value of \$15,000 and hence, national income will go up.  
B. The income tax official says that he has not declared his income so it is not recorded and national income will not change.  
C. The social worker says that he is employing 100 people in his drug business and their income is raising the national income.



D. The policeman says that it is illegal and hence, it can't be included in national income.

25. \_\_\_\_\_

## Part Two

### Passage 1

Credit market plays a significant role in the functioning of a modern economy. It enables individuals to smooth their consumption over time as well as to make investments in order to enhance their future income. However, in almost all societies credit market does not function perfectly because of the problem of asymmetric information. The information problem is related to the absence of knowledge on the part of the lender regarding the *ability* and *willingness* of the borrowers to make repayment. This compels them to demand valuable assets as collateral for advancing loans and in case of default the collateral will be appropriated by the lender.

The collateral requirement for getting a loan has serious implications for access to credit market. It leaves people not having any appropriate assets unable to access the credit market. This failure is more obvious in the case of loans for investing in human capital accumulation. In this case the accumulated asset is something not attachable by the lender in case of default, making collateral necessary for advancing such loans. Hence poor people are unable to invest in the education of their children, even if the children have great potential. Thus imperfect credit market can result in sub-optimal investment in human capital and thereby results in lower economic growth. Similarly, inability to access credit market can also affect one's choice of occupation. A person, highly capable as an entrepreneur, would not be able to get a loan to start a business if he/she does not have adequate wealth, forcing him/her to join the labour force to earn an income.

To overcome the issue of collateral requirement, poor farmers and landless agricultural labourers in rural areas usually resort to what is called 'inter-linked transactions'. Transactions in two markets are interlinked when not only same persons are involved in these exchanges, but also the terms and conditions of exchange in one market influence the terms and conditions of exchange in other market. For instance, a landless labourer may borrow from a big farmer under the condition that he would repay the loan by working in his farm at a pre-fixed wage rate. The problem with the interlinked transactions is that reforms in one market get nullified by developments in other markets. For example, fixing of minimum wage for agricultural labourers may get offset by higher interest rate that they have to pay to the farmers on the loan taken from them.



1. Consider a society having higher level of economic inequality and majority are poor. Do you think that severe credit market imperfections would lead to further worsening of the existing economic inequality? If yes, explain in one or two sentences. (2)

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2. Information problem in the credit market of country X is severe. A recent survey in this country showed that around 80% of the individuals in the working age group are engaged in some business requiring significant investment. From this what conclusions can you draw regarding the distribution of assets in that country? (2)

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3. In country Y, majority of the farmers are borrowing from the traders to whom they sell their output. Now in order to ensure a *reasonable income* for the farmers, government initiated an *isolated programme* of fixing support price and procuring the output at that price. How would you judge the effectiveness of this policy? (2)

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4. Explain in one sentence the implication of imperfect credit market on resource use efficiency in a society. (2)

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5. In country Z, individuals either have to choose entrepreneurship or have to join labour force to earn income. The distribution of wealth in this country is highly unequal and around 80% of the people do not have any assets. From this information, what inference can you draw regarding the labour supply and wage rate in that country. (2)

### Passage 2

Following table presents some figures taken from the national account statistics of the country Y for the years 2012-13 and 2013-14. Use this information to answer the following questions.

	Item	2012-13	2013-14
1	Compensation of employees	900	972
2	Business interest payments	130	140
3	Rental income of persons	17	18
4	Corporate profits	80	86
5	Proprietors income	60	65
6	Corporate dividends	33	36
7	Social security contributions	126	136
8	Personal taxes	201	217
9	Interest paid by consumers	32	35
10	Interest paid by government	52	56
11	Government and business transfers	190	205
12	Personal consumption expenditures	850	918

Note: (1) The figures are in Rs. billion. (2) Values are in constant 2012-13 prices.

1. Find the national income of Y in the year 2012-13. (2)



2. Find the personal disposable income for the year 2013-14? (2)

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3. What is the share of household saving in national income in 2012-13? (2)

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4. What is the growth rate of national income between 2012-13 and 2013-14? (2)

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5. Find the share of wages in national income in the year 2012-13. (2)

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### Passage 3

A perceptible and permanent improvement in the nutrition of the people in the State would require increase in the production of food as well as income. It may be recalled that rice is the staple food of the people, and that the area under, and production of, rice have registered a decline in recent years. The fall in area under rice has occurred owing to the decline in its profitability, both in absolute and relative terms. On the one hand, the fall in the price of rice side by side with rise in money wages has steadily reduced the margin of profit; thus between 1974-75 and 1978-79, the paddy-equivalent of one man-day of hired labour increased more than two-fold. Labour cost constitutes a major share of the total cost of the cultivation of paddy, and, of the total labour input, hired labour accounts for nine-tenths of the same, according to the findings of a recent study. On the other hand, rice has suffered in comparison with alternative crops like coconut both in terms of cost and price, leading to conversion of paddy lands into garden lands. But the food situation in India has shown considerable improvement especially in respect of cereals, and the outlook for the country as a whole seems to be promising.



1. Why do the authors think that a fall in rice production will have serious consequences for the people? (2)

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2. What are the two processes identified as causing the decline of profitability of paddy cultivation? (2)

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3. What is identified as pushing up the labour cost of paddy cultivation for farmers? (2)

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4. The profitability of paddy cultivation is said to have suffered in relative terms. Relative to which crop, according to the authors? (2)

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5. The price of rice is said to have fallen. What may have caused this? (2)

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**Passage 4**

By the mid-1980s, cassettes accounted for about 95 percent of the recorded music market, but the share of Hindi film music in the total production dropped despite a phenomenal expansion of the market, from 90 percent to less than 40. The new music production was now addressed to regional and local markets of different languages and dialects that have strong oral cultures and identities (like Maithili and Bhojpur). The music produced by small new cassette-based producers now included folk music, devotional music, and various kinds of locally produced 'fusion' and 'remix'. The smaller producers themselves were of small means and often produced with very low budgets – new and young artistes singing for them free to find arenas of self-expression and promotion. All of these lived and operated in a shared economy that enters into conflict with corporate industry and the state. The backdrop of this development was the loosening of imports as well as collaborations of Indian companies with foreign partners. Television sets, audio and video cassette players and recorders, washing machines, automobiles etc. led the growth of the economy with this sector itself registering over 14 per cent annual growth.

1. From the above passage, does the expansion of the market indicate the expansion of corporate industry? (2)

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2. This passage does not tell us why are the small producers of recorded music said to enter into conflict with the corporate music industry and the state. What could be the reasons? (2)

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3. What is the larger politico-economic context of the expansion of the recorded music market? (2)

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4. Through what ways did small producers minimize costs of production? (2)

5. How important is diversity to the expansion of the music market? In what ways? (2)

### Passage 5

An observation in science is first of all something done, an act performed by the scientist; only thereby is it something seen, a product of the process in which the scientist is engaged. As process, observation is a part of a 'controlled investigation'. Scientific observation is deliberate search, carried out with care and forethought, as contrasted with the casual and largely passive perceptions of everyday life. It is this deliberateness and control of the processes of observation that is distinctive of science. The use of special instruments – say, microscopes etc. – mark scientific investigation of course, but only if they are used with the same deliberation and forethought mentioned above. So Tycho Brahe was one of the greatest astronomers though he had no telescope; Darwin had to rely entirely on the naked eye; and the greatest of social scientists do not for the most use physical instruments. In social science, observation is less likely to involve special instruments that are things; but questionnaires, interviews etc. are instruments that social scientists use to probe social issues and gather data. The root of the word Observe is not just in 'to see' but also in 'to watch over'. In other words, the scientist observes her data with the same tireless passion and energy as an anxious mother.

1. What is the difference between observation in science and perception in the every day? (2)



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2. Is 'controlled investigation' characteristic of science? (2)

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3. Does using a microscope always involve scientific observation? (2)

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4. Why do we call Tycho Brahe a great astronomer scientist though he used no scientific instruments to observe the skies? (2)

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5. How can the scientist be compared to the anxious mother? (2)

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Place for Rough Work