

34

QUESTION PAPER SERIES CODE
A

Registration No. :

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Centre of Exam. : _____

Name of Candidate : _____

Signature of Invigilator**ENTRANCE EXAMINATION, 2014**

M.Phil./Ph.D. ECONOMIC STUDIES AND PLANNING

[Field of Study Code : ECOP (136)]

Time Allowed : 3 hours

Maximum Marks : 70

INSTRUCTIONS FOR CANDIDATES

Candidates must read carefully the following instructions before attempting the Question Paper :

- (i) Write your Name and Registration Number in the space provided for the purpose on the top of this Question Paper and in the Answer Sheet.
- (ii) **Please darken the appropriate Circle of Question Paper Series Code on the Answer Sheet.**
- (iii) All questions are compulsory.
- (iv) **The question paper has two Parts : A and B. Part—A has 20 questions of 1 mark each. Part—B has 25 questions of 2 marks each.**
- (v) Answer all the 45 questions in the Answer Sheet provided for the purpose by darkening the correct choice, i.e., (a) or (b) or (c) or (d) with BALLPOINT PEN only against the corresponding circle. Any overwriting or alteration will be treated as a wrong answer.
- (vi) **There will be negative marking. For each wrong answer, $\frac{1}{4}$ mark would be deducted for 1 mark questions and $\frac{1}{2}$ mark would be deducted for 2 marks questions.**
- (vii) Answer written by the candidates inside the Question Paper will not be evaluated.
- (viii) Pages at the end have been provided for Rough Work.
- (ix) Return the Question Paper and Answer Sheet to the Invigilator at the end of the Entrance Examination. **DO NOT FOLD THE ANSWER SHEET.**

INSTRUCTIONS FOR MARKING ANSWERS

1. Use only Blue/Black Ballpoint Pen (do not use pencil) to darken the appropriate Circle.
2. Please darken the whole Circle.
3. Darken ONLY ONE CIRCLE for each question as shown in example below :

Wrong ● (b) (c) ●	Wrong ⊗ (b) (c) (d)	Wrong ⊗ (b) (c) ⊗	Wrong ⊙ (b) (c) ●	Correct ⊙ (a) (b) (c) ●
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4. Once marked, no change in the answer is allowed.
5. Please do not make any stray marks on the Answer Sheet.
6. Do rough work only on the pages provided for this purpose.
7. Mark your answer only in the appropriate space against the number corresponding to the question.
8. **Ensure that you have darkened the appropriate Circle of Question Paper Series Code on the Answer Sheet.**

PART—A

1. Which among the following States had the highest crude birthrate according to 2012 data from the Sample Registration System?
 - (a) Gujarat
 - (b) Jammu & Kashmir
 - (c) Odisha
 - (d) West Bengal

2. Which among the following States had the lowest infant mortality rate according to 2012 data from the Sample Registration System?
 - (a) Gujarat
 - (b) Jammu & Kashmir
 - (c) Odisha
 - (d) West Bengal

3. Which among the following States had the lowest poverty rate according to the Planning Commission's 2011-12 estimate using the Tendulkar method and National Sample Survey data?
 - (a) Gujarat
 - (b) Jammu & Kashmir
 - (c) Odisha
 - (d) West Bengal

4. Which of the following assumptions ensures that indifference curves drawn over two normal goods never cross?
 - (a) Decreasing marginal utility from higher consumption of each good
 - (b) Positive marginal utility from higher consumption of either good
 - (c) Non-zero substitution possibilities between the two goods
 - (d) Negative cross-price elasticity across the two goods

Direction : For Question Nos. 5 and 6, refer to the following :

There are two classes in the economy—workers and capitalists. The workers consume all their wages, whereas the capitalists consume one-third of their profits.

5. The wage-profit ratio is 1 : 3. The value of the output multiplier in this economy is
- (a) 4
 - (b) 1
 - (c) 2
 - (d) None of the above
6. An increase in the level of investment entailing price adjustment requires
- (a) wages to rise as a proportion of profit
 - (b) the price-wage ratio to fall
 - (c) the share of profit in output to rise
 - (d) All of the above
7. In Kalecki's theory of investment, for a given state of confidence about the future, the volume of investment by a firm is limited by
- (a) the marginal efficiency of investment which falls with the increase in the volume of investment
 - (b) the interest rate which rises with the increase in the volume of investment
 - (c) the risk premium which rises with the increase in the gearing ratio
 - (d) None of the above

Direction : For Question Nos. 8 and 9, refer to the following :

In Marxian terminology, s is the surplus value, c is the constant capital and v is the variable capital.

8. How did Marx define the rate of profit?
- (a) s/v
 - (b) $s/(c+s+v)$
 - (c) $s/(c+v)$
 - (d) None of the above
9. For Marx, there is a tendency for the rate of profit to fall with the development of capitalism, because
- (a) s/v rises
 - (b) $c/(c+v)$ falls
 - (c) c/v rises
 - (d) None of the above
10. If the utility function is given by $U(x, y) = \min\{2x, 3y\}$ and the budget constraint by $2x + 3y = 60$, what can be said about the equilibrium (x^*, y^*) ?
- (a) $x^*/y^* = 2/3$
 - (b) $x^*/y^* = 2/5$
 - (c) $x^* = 15, y^* = 10$
 - (d) $x^*/y^* = 3/2$

11. If the utility function is given by $U(x, y) = 2x + 3y$ and the budget constraint by $3x + 2y = 60$, what can be said about the equilibrium (x^*, y^*) ?
- (a) $x^* / y^* = 0$
 - (b) $y^* / x^* = 0$
 - (c) $x^* = 10, y^* = 15$
 - (d) None of the above
12. There are two countries—India and England; two goods—tea and textile; and one input—labour. While textile can be produced by both India and England, tea can only be grown in India. If the labour coefficient in the production of textile is lower for England than for India, what can be said about their comparative advantages?
- (a) India has a comparative advantage in tea
 - (b) India has an absolute advantage in textile
 - (c) England has a comparative advantage in textile
 - (d) The comparative advantage cannot be inferred
13. In Kaldor's response to the monetarists, he argued that in the identity $M = kpO$
- (a) the causation should be read from the left to the right
 - (b) the causation should be read from the right to the left
 - (c) the causation should be read in both directions
 - (d) there is no causal relationship between the two sides

14. With a positive externality
- (a) there is underconsumption in the free market
 - (b) there is overconsumption in the free market
 - (c) the government should tax to decrease production
 - (d) society could be made better-off if less was produced
15. The market demand function for a commodity is given as $D(p) = 1/p$; where p is the price of the commodity. Which of the following statements about the market demand curve is correct?
- (a) The price elasticity of demand for this commodity is different at different points on the demand curve and it varies from 0 to 1
 - (b) The price elasticity of demand for this commodity is different at different points on the demand curve and it varies from 0 to infinity
 - (c) The price elasticity of demand for this commodity is equal to 1 at any point on the demand curve
 - (d) The given demand curve is perfectly elastic
16. Solution for $8x + (x - 4)^{-3/2} = (4 - x)^{3/2}$ is
- (a) $x = 4$
 - (b) $x = -4$
 - (c) $x = 0$
 - (d) No solution exists
17. An individual's utility function is $U(W) = \sqrt{W}$. His initial wealth W is \$10,000 and there is a 50% chance that he will lose \$3,600 through robbery. What is this individual's expected utility?
- (a) 70
 - (b) 80
 - (c) 120
 - (d) 90

18. Economic theorists who believe in The Impossible Trinity argue that governments can choose only any two of which of the following three?
- (a) A budget deficit, external borrowing and an interest rate
 - (b) An independent monetary policy, fixed exchange rates and free movement of capital
 - (c) An investment rate, a capital output ratio and a growth rate
 - (d) Public ownership, efficiency and growth
19. The basic indicator of capital adequacy included in the Basel norms for banking is given as a ratio of
- (a) identified regulatory capital to bank assets
 - (b) bank paid-up capital to bank assets
 - (c) bank loans to bank assets
 - (d) identified regulatory capital to assets weighted by risk
20. Consider a commodity X produced using material inputs Y and Z . When calculated in terms of import prices at India's border, the ratio of the cost of Y and Z required to produce one unit of X amounts to 0.6 of the price of X . On the other hand, if using the same technology, X is produced with materials produced domestically, the cost of Y and Z required to produce a unit of X is 0.5 of the price of X . If the price of X at the border is ₹ 100 and when domestically produced is ₹ 120, what is the effective rate of protection associated with X ?
- (a) 10 percent
 - (b) 25 percent
 - (c) 50 percent
 - (d) 75 percent

PART—B

Direction : For Question Nos. 21 to 26, refer to the following :

Time t is considered as a discrete variable taking values 0, 1, 2, Consider an economy with a single producible good. The good can be consumed or stocks of the good constituting stocks of capital can be used along with labour to produce the good itself. We assume that there is no depreciation of capital. Labour in the economy is homogeneous in quality and the labour force grows at a constant rate n , where n is a non-negative constant. The rate of growth of labour productivity in the economy in any period t is denoted by μ_t and is a linear function of the rate of growth of the aggregate capital stock in the economy in period $t - 1$. That is, let

$$\mu_t = a + b \frac{I_{t-1}}{K_{t-1}}$$

where, a and b : non-negative constants

I_t = investment in period t

K_t = capital stock at the beginning of period t

Aggregate output in any period t is at a level which employs a fraction $1 - u$ of the labour force in period t , u being a positive constant less than unity, and aggregate saving equals investment at this level of output. Investment in the economy is such that aggregate capital stock in the economy at the end of a period bears a constant proportion to the level of aggregate output in the economy in the period.

21. Suppose $n = 0.02$ and $\mu_t = 0.05$. What is the rate of growth (percent) of aggregate output in the economy in period t ?
- (a) 7
(b) 7.1
(c) 7.2
(d) None of the above
22. Suppose the rate of growth of capital stock in period t is $I_t / K_t = 0.02$. What is the rate of growth of aggregate output (percent) in the economy in period t ?
- (a) 2
(b) $a + 2b$
(c) $a + 0.02b$
(d) Indeterminate

23. Which of the following is a necessary condition for the existence of a steady-state growth path with a positive rate of growth?
- (a) $a > 0$
 - (b) $n > 0$
 - (c) $a > 0$ and $n > 0$
 - (d) None of the above
24. Which of the following is a sufficient condition for the existence of a unique steady-state growth path with a positive rate of growth?
- (a) $b < \frac{1}{1+n}$
 - (b) $b \leq \frac{1}{1+n}$
 - (c) $b = \frac{1}{1+n}$
 - (d) None of the above
25. Suppose there exists a unique steady state with a positive rate of growth. It follows that if the initial rate of growth of output is different from that in the steady state, the economy will
- (a) always converge to the steady state
 - (b) converge to the steady state, given appropriate values of a and n
 - (c) converge to the steady state, given appropriate values of b
 - (d) sometimes converge to the steady state
26. Suppose $a = 0.01$, $b = 25/51$ and $n = 0.02$. What is the rate of growth (percent) in the steady state in this economy?
- (a) 3.75
 - (b) 6.04
 - (c) 8.96
 - (d) 9.25

Direction : For Question Nos. 27 to 29, read the following text taken from Sukhamoy Chakravarty, *Development Planning : The India Experience*, page 12 :

The Mahalanobis strategy, which deviated from the 'textiles first' strategy of industrial development followed by a successful late-comer in industrialization like Japan, was the object of a great deal of critical comment. Mainstream economists found it an unjustified departure from the principle of 'comparative advantage', while those who were impressed by the Soviet model of industrial development thought that the avowed priority for the capital goods sector corresponded to the logic of accumulation enunciated by Marx in his models of expanded reproduction. It can be seriously maintained that both sides overstated their respective cases. The proponents of 'comparative advantage' took a much too myopic view of the growth process, especially taking into account India's size, resource endowments and the existing trade opportunities. On the other hand, while the Mahalanobis model contained an important insight into the dynamics of a disaggregated growth process, that insight by itself did not permit far-ranging conclusions to be drawn about the primacy of the capital goods sector irrespective of initial conditions and the social valuation of consumption at different points in time. Most importantly, if the inability to employ more people productively depended as much on the absence of suitable 'machines' as on the shortage of 'food', the workability of the model, as distinguished from its analytical contribution, depended upon an adequate and effective policy frame for agriculture, which was absent from the Second Five-Year Plan.

27. The principle of comparative advantage
- (a) was an essential part of the Soviet model of industrial development
 - (b) would have argued against giving any priority to the capital goods sector in India
 - (c) drove the determination of priorities in the Second Five-Year Plan
 - (d) took into account India's size, resource endowments and existing trade opportunities as the bases for economic strategy
28. The important premise of the Mahalanobis model was that
- (a) the development of the heavy capital goods sector would lead to diversification of the production and export basket towards manufactured goods, while high employment could be generated through a capital-light consumer goods sector
 - (b) the consumer goods sector could be ignored because the expansion of the capital goods sector would make the country internationally competitive in light manufacturing
 - (c) investment in capital goods was necessary to overcome the food constraint in the economy
 - (d) the capital goods sector should be prioritized so as to encourage rapid private accumulation to generate employment

29. Chakravarty argues that the inability to employ more people productively
- (a) was also related to the inability to develop agriculture
 - (b) was because of the social valuation of consumption at different points in time
 - (c) was because the heavy capital goods sector did not expand its output fast enough
 - (d) was because of reliance on comparative advantage
30. Economy A has a debt-GDP ratio of 30%, a fiscal deficit of 4% of GDP, and its nominal GDP is expected to grow at 16% per annum. Economy B has a debt-GDP ratio of 28%, its fiscal deficit is 3.7% of GDP and its nominal GDP is expected to grow at 12% per annum. Economy C has a debt-GDP ratio of 25%, its fiscal deficit is 3% of GDP and its nominal GDP is expected to grow at 9% per annum. If fiscal deficit ratios and expected nominal GDP growth are maintained, which of the following economies is likely to sustain a long-run debt-GDP ratio of at most 30%?
- (a) Economy A
 - (b) Economy B
 - (c) Economy C
 - (d) All of the above
31. In a closed economy, population growth is 1.5% per annum and elasticity of food consumption to per capita GDP is 0.3. Suppose that the growth of food production can at most be 3% per annum. What is the maximum rate of GDP growth that is consistent with a balance in the growth of supply and demand for food?
- (a) 1.5% per annum
 - (b) 5% per annum
 - (c) 6.5% per annum
 - (d) 10% per annum
32. Assume that the workers consume all their wages but the capitalists save a portion of their profits. What will be the balanced budget multiplier if the tax is levied on wages alone?
- (a) 1
 - (b) 0
 - (c) Indeterminate
 - (d) None of the above

Direction : For Question Nos. 33 to 35, refer to the following :

In an economy, there are two classes—workers and capitalists; and two sectors—investment and consumption. L_i and L_c are the number of workers employed in the investment and consumption sectors respectively. In both the sectors, the workers consume all their wages whereas the capitalists consume half of their profits, both out of goods produced in the consumption sector. Labour productivity, wage rates and profit shares are the same for both the sectors. Profits amount to $3/4$ of total output in both the sectors. To begin with, investment is given autonomously in the short run.

33. What should be the ratio of L_c and L_i for a macroeconomic equilibrium between the two sectors?
- (a) 3 : 5
 - (b) 5 : 8
 - (c) 5 : 3
 - (d) 3 : 8
34. If the investment rises by 60 units, the overall output will rise by
- (a) 60
 - (b) 160
 - (c) 100
 - (d) None of the above
35. If the investment rises but no more workers can be employed in the consumption sector, how will the new macroeconomic equilibrium be established?
- (a) Share of wages rises in the consumption sector
 - (b) Share of profits rises in both the sectors
 - (c) Ratio of consumption to investment rises
 - (d) Share of profits rises in the consumption sector alone

36. Let S be the set of all nonempty subsets of the empty set. How many elements does S have?
- (a) 0
 - (b) 2
 - (c) 4
 - (d) 8
37. Which of the following is the solution set for $|2x - 7| > 3x - 2$?
- (a) $x \in (-\infty, -5)$
 - (b) $x \in (-\infty, 9/5)$
 - (c) $x \in (-\infty, -5) \cup (9/5, \infty)$
 - (d) $x \in (9/5, \infty)$
38. Consider the following sentences :
- (i) $|x - y| + |y - z| \leq |x - z|$ for all real numbers x , y and z .
 - (ii) If x is a rational number and y is irrational, xy is irrational.
- Which of the following is correct?
- (a) (i) is true and (ii) is false
 - (b) (ii) is true and (i) is false
 - (c) Both (i) and (ii) are true
 - (d) Both (i) and (ii) are false

Direction : For Question Nos. 39 and 40, consider the following information :

A consumer's preference for commodities 1 and 2 can be represented by the utility function $U : \mathbb{R}_+^2 \rightarrow \mathbb{R}$ defined as $U(x_1, x_2) = \max\{3x_1, 2x_2\} + \min\{3x_1, 2x_2\}$; where x_1 denotes the quantity of commodity 1 and x_2 denotes the quantity of commodity 2. The price of commodity 1 is 2 and that of commodity 2 is 3. The consumer's income is 60.

39. Which of the following is true?
- (a) U is not a continuous function
 - (b) U is a continuous but not a differentiable function
 - (c) U is a differentiable but not a continuous differentiable function
 - (d) U is a continuously differentiable function
40. Which of the following is the optimum bundle for the consumer?
- (a) (12, 12)
 - (b) (30, 0)
 - (c) (0, 20)
 - (d) None of the above
41. In 2010, the exchange rate of the Indian rupee was ₹ 50 per US dollar. By 2012, it had risen to ₹ 60 per US dollar. In 2012, the US price index was 105 with base year 2010. In India, the price index rose from 100 to 120 between 2010 and 2012. What is the difference between nominal and real exchange rates of the Indian rupee vis-à-vis the US dollar?
- (a) Around 10%
 - (b) Around 15%
 - (c) Around 20%
 - (d) None of the above

Direction : For Question Nos. 42 to 45, consider the following data on urban poverty lines and poverty estimates in the States/UTs of India :

States/UTs	Official urban poverty line (Monthly per capita spending in ₹)	Poor as percent of urban population	Urbanization percent
Andhra Pradesh	926	17.7	33.5
Arunachal Pradesh	925	24.9	22.7
Assam	871	26.1	14.1
Bihar	775	39.4	11.3
Chhattisgarh	807	23.8	23.2
Delhi	1040	14.4	97.5
Goa	1025	6.9	62.2
Gujarat	951	17.9	42.6
Haryana	975	23.0	34.8
Himachal Pradesh	888	12.6	10.0
Jammu & Kashmir	845	12.8	27.2
Jharkhand	831	31.1	24.1
Karnataka	908	19.6	38.6
Kerala	831	12.1	47.7
Madhya Pradesh	772	22.9	27.6
Maharashtra	961	18.3	45.2
Manipur	955	46.4	30.2
Meghalaya	989	24.1	20.1
Mizoram	939	11.5	51.5
Nagaland	1148	25.0	29.0
Odisha	736	25.9	16.7
Puducherry	778	1.6	68.3
Punjab	961	18.1	37.5
Rajasthan	846	19.9	24.9
Sikkim	1035	5.0	25.0
Tamil Nadu	801	12.8	48.4
Tripura	783	10.0	26.2
Uttar Pradesh	800	31.7	22.3
Uttarakhand	899	25.2	30.6
West Bengal	831	22.0	31.9
All India	860	20.9	31.2

42. The per capita daily spending above which a person would be above the poverty line in Delhi is
- below ₹ 25
 - below ₹ 30
 - below ₹ 35
 - below ₹ 40

43. The States with low urban poverty (10 percent or less)
- (a) are all more developed States
 - (b) are all those with high rates of urbanization
 - (c) are all those with lower poverty lines
 - (d) have few common characteristics
44. High rates of urbanization are generally associated with
- (a) higher rates of urban poverty
 - (b) lower rates of urban poverty
 - (c) higher urban poverty lines
 - (d) lower urban poverty lines
45. Higher official urban poverty lines across States tend to be associated with
- (a) higher urban poverty rates
 - (b) lower urban poverty rates
 - (c) higher rates of urbanization
 - (d) lower rates of urbanization