54

QUESTION PAPER SERIES CODE

A

Registration No. :

Centre of Exam. :

Name of Candidate :

Signature of Invigilator

ENTRANCE EXAMINATION, 2017

M.A. ECONOMICS (with specialization in World Economy)

[Field of Study Code : EILM (202)]

Time Allowed : 3 hours

Maximum Marks : 100

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) Answer all 50 (fifty) 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 wrong answer.

(v) Each correct answer carries **2 (two)** marks. **There will be negative marking and 1 mark will be deducted for each wrong answer.**

(vi) Answer written by the candidates inside the Question Paper will not be evaluated.

(vii) Calculators may be used.

(viii) Please use the space 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	Wrong	Wrong	Wrong	Correct
ⓞ ⓑ ⓒ ⓞ	Ⓧ ⓑ ⓒ ⓓ	Ⓧ ⓑ ⓒ Ⓓ	⦿ ⓑ ⓒ ⓞ	ⓐ ⓑ ⓒ ⓞ

4. Once marked, no change in the answer is allowed.
5. Please do not make any stray marks on the Answer Sheet.
6. Please do not do any rough work on the Answer Sheet.
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.**

1. Calculate $V(CX)$ [V represents variance; C is a constant; X is a variable].

   (a) $CV(X)$

   (b) 0

   (c) $C^2 V(X)$

   (d) $V(X)$

2. If $X \sim$ Binomial $(5, p)$ such that $\Pr(X = 1) = 0 \cdot 4096$ and $\Pr(X = 2) = 0 \cdot 2048$, then the value of p is

   (a) $0 \cdot 1$

   (b) $1 \cdot 0$

   (c) $2 \cdot 0$

   (d) $0 \cdot 2$

SPACE FOR ROUGH WORK

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3. A cake of weight 1 kg is to be shared between two consumers X and Y. A consumption vector is denoted by (x, y), where x is the consumption in kg by consumer X and y is the consumption in kg by consumer Y. Which of the following statements is true based on this information?

(a) $(0, 1)$ is a Pareto efficient and fair allocation of the cake

(b) $(0.5, 0.4)$ is a Pareto inefficient but fair allocation of the cake

(c) $(0.5, 0.5)$ is a Pareto efficient and fair allocation of the cake

(d) None of the above

4. Consider an industry with Cournot competition. The industry demand curve is $P = 200 - Q$, where P is the price of the product and Q is industry output. The industry faces a constant MC of 20 and there are no fixed costs. Suppose we are given that the equilibrium price is 56. Then in this equilibrium, the number of Cournot competitors must be

(a) 2

(b) 3

(c) 4

(d) 5

SPACE FOR ROUGH WORK

5. If the matrix $\begin{pmatrix} 1 & 2 & 1 \\ 2 & 0 & \alpha \\ 1 & \alpha & 1 \end{pmatrix}$ is singular, then the value of α must be

(a) 1

(b) 2

(c) 3

(d) 4

6. When a country allows for trade and becomes an exporter of the good, which of the following would **not** be true?

(a) The price paid by the domestic consumer of the good increases.

(b) The price received by the domestic producers of the good increases.

(c) The losses of domestic consumers exceed the gains of domestic producers.

(d) The gains of domestic producers exceed the losses of domestic consumers.

SPACE FOR ROUGH WORK

7. Consider the function U defined on $\mathbb{R}^2$, where $U(x, y) = \sqrt{3x + y}$. Which of the following statements is true?

(a) U is strictly concave.

(b) U is strictly quasi-concave.

(c) U is both strictly concave and strictly quasi-concave.

(d) U is both concave and quasi-concave.

8. In Question No. **7**, U is homogeneous to what degree?

(a) 1

(b) 3/2

(c) 2/3

(d) 1/2

SPACE FOR ROUGH WORK

9. A country experiences a sudden inflow of unemployed immigrants. The immediate effect is to

(a) move the country down its short-run Phillips curve

(b) move it up its short-run Phillips curve

(c) shift the Phillips curve to the right

(d) shift the Phillips curve to the left

10. World Bank Data show that in 1995, the poorest 20% of households accounted for 7·5% of household income in Niger, the next 20% of households accounted for 11·8% of income, the middle 20% accounted for 15·5% of income, the second richest 20% accounted for 21·1% of income, and the top 20% accounted for 44·1% of income. What is the cumulative income share of the bottom 60% of households in Niger?

(a) 15·5%

(b) 34·8%

(c) 48·1%

(d) 65·2%

SPACE FOR ROUGH WORK

11. The probability density function of x is given as $f(x) = ae^{-x/5}$ for $x > 0$. The value of a is

(a)   0·5

(b)   0·3

(c)   0·2

(d)   0·1

12. If X and Y are two random variables, then which of the following is true?

(a) $E[E(X/Y)] = E(X)$

(b) $E[E(X/Y)] = E[E(X)]$

(c) $E(X/Y) = E(Y/X)$

(d)   All of the above

SPACE FOR ROUGH WORK

13. A perfectly competitive firm produces 100 units of output. It faces a total fixed cost of ₹ 5,000. The average variable cost (AVC) of production at this output is 10. When production rises to 101, the total cost of production is ₹ 6,070. Then at this point

   (a)   the AC curve must be falling

   (b)   MC<AVC

   (c)   the MC curve lies above the AC curve

   (d)   the firm should exit the industry

14. Lalaland is part of a currency union, all of whose members have committed to a common currency. Capital moves freely across borders. In this situation

   (a)   Lalaland's fiscal policies will have no effect

   (b)   Lalaland's monetary policies will be ineffective

   (c)   the money multiplier in Lalaland will go up

   (d)   the aggregate supply curve will become horizontal

SPACE FOR ROUGH WORK

15. The domestic demand and domestic supply of shirts in a small economy are

$$Q_s = 15P - 15$$
$$Q_d = 85 - 10P$$

where Q_s and Q_d are quantity supplied and quantity demanded respectively, and P denotes the market price. The price of a shirt in the international market is given to be 2 units.

If the home country engages in free trade, then it will

(a) export 70 shirts

(b) import 65 shirts

(c) import 50 shirts

(d) import 15 shirts

16. In Question No. **15**, if the home country imposes an import tariff of 1 unit, then the government tariff revenue will be

(a) 65

(b) 55

(c) 35

(d) 25

SPACE FOR ROUGH WORK

17. In Question No. **15**, the deadweight loss due to the above tariff imposition would be

(a) 6·5

(b) 7·5

(c) 12·5

(d) 15·5

18. Expectation is called the first moment.

(a) It is true

(b) It is not true

(c) It depends

(d) None of the above

19. The deadweight loss due to a unit tax is measured as

(a) the sum of losses in consumer and producer surpluses induced by the tax minus the government's revenue

(b) the sum of losses in consumer and producer surpluses induced by the tax plus the government's revenue

(c) the sum of losses in consumer and producer surpluses induced by the tax

(d) None of the above

SPACE FOR ROUGH WORK

20. Which of the following is true of a two-person game with a finite number of strategies?

(a) A pure strategy Nash equilibrium of the game always exists

(b) A dominant strategy equilibrium of the game always exists

(c) A mixed strategy Nash equilibrium of the game always exists

(d) All of the above

21. Suppose a consumer's utility is a function of two goods x and y, and is given by the function $U(x, y) = xy$. The consumer's Engel curve is

(a) linear

(b) non-linear

(c) downward sloping

(d) None of the above

22. The solution to the minimization problem $\min y = x_1 + x_2$ subject to the constraint $1 - \sqrt{x_1} - x_2 = 0$ is

(a) $x_1 = 1, x_2 = 2$

(b) $x_1 = \frac{1}{3}, x_2 = 1$

(c) $x_1 = \frac{1}{4}, x_2 = \frac{1}{2}$

(d) None of the above

SPACE FOR ROUGH WORK

23. $\lim\limits_{x \to 1} \{(x^2 + 4)/(x^2 - 4)\}$ is

    (a)   1

    (b) $-5/3$

    (c)   0

    (d) ∞

24. Consider an Amusement Park. The Park owner has a fixed cost T and a marginal cost of 0·50 per ride. Consumers have a demand curve $Q = 10 - 2P$. The Park owner designs a two-part tariff. How much should he be charging as fixed fee, F and per unit price, P ?

    (a) $F = 25$, $P = 0·50$

    (b) $F = 42·75$, $P = 2$

    (c) $F = 20·25$, $P = 0·50$

    (d)   None of the above

25. Suppose there are two firms that face a linear demand curve $p(Y) = a - bY$ and have constant marginal costs c for each firm. The Cournot equilibrium outputs of the firms are

    (a) $(a - b)/3c$

    (b) $(a - c)/b$

    (c) $(a - c)/3b$

    (d) $(a - 3c)/b$

SPACE FOR ROUGH WORK

26. Let the demand function faced by a monopolist be $q = kp^{-2}$, where q is quantity, p is price and k is a positive constant. The marginal cost of production is constant and equal to 3. The profit maximizing price and Lerner index, respectively, are

(a) (3, 2)

(b) $(6, \dfrac{1}{2})$

(c) (6, 2)

(d) (5, 3)

27. Consider the following table :

		X			
		0	1	2	Σ
Y	0	1/6	1/3	1/12	7/12
	1	2/9	1/6	0	7/18
	2	1/36	0	0	1/36
	Σ	5/12	1/2	1/12	1

Calculate $P(X / Y = 1)$.

(a) 1

(b) 7/18

(c) 1/2

(d) 3/4

SPACE FOR ROUGH WORK

28. If A, B, C are mutually exclusive and exhaustive events associated with a random experiment, and if $\Pr(B) = \dfrac{3}{2}\Pr(A)$ and $\Pr(C) = \dfrac{1}{2}\Pr(B)$, then $\Pr(A)$ is

(a) 4/13

(b) 13/4

(c) 1/13

(d) 2/13

29. If the marginal propensity to save is equal to 0·4 in the simple Keynesian model, then a 10-unit increase in taxes will cause output to fall by

(a) 5 units

(b) 10 units

(c) 15 units

(d) 40 units

30. If the distribution of income in country X is (1, 2, 2, 3, 5), and in country Y is (1, 1, 2, 3, 5), and the poverty line in both the countries is 2·5, by the average income shortfall measure, which country has more poverty?

(a) X

(b) Y

(c) Poverty is the same in X and Y

(d) We cannot tell from the information given

SPACE FOR ROUGH WORK

31. The opportunity cost of holding money

    (a)   increases with inflation and decreases in the interest rate

    (b)   decreases with inflation and increases in the interest rate

    (c)   decreases with inflation and decreases in the interest rate

    (d)   increases with inflation and increases in the interest rate

32. If the probability density function of X is $f(x) = \dfrac{1+\alpha x}{2}$; $-1 \le x \le 1, -1 \le \alpha \le 1$, then the expectation of X is

    (a) $6/\alpha$

    (b) $\alpha/3$

    (c) $\alpha/2$

    (d) $3/\alpha$

SPACE FOR ROUGH WORK

33. One study found that the Gini coefficient for Egypt was 0·403 and that for Australia was 0·404. From this information, we can conclude that Egypt and Australia

    (a)   had virtually the same number of households in absolute poverty

    (b)   had virtually the same percentage of households in absolute poverty

    (c)   had virtually the same Human Development Index level

    (d)   None of the above

34. In country X, cigarettes are forbidden, so people trade cigarettes in a black market. The cigarette demand is $Q_D = 12 - P$ and the cigarette supply is $Q_S = 2P$. The government becomes aware of the black market and reinforces the police so that half of the cigarette supply would be seized and destroyed. How does the consumer surplus change between the two situations?

    (a)   Remains the same

    (b)   Decreases by 10

    (c)   Decreases by 14

    (d)   None of the above

SPACE FOR ROUGH WORK

35. Let $f(x) = x^3 - 3x^2 + 3$. On what interval is the function decreasing?

    (a) $(1, 1)$

    (b) $(1, 3)$

    (c) $(2, 3)$

    (d) $(0, 2)$

36. Alex consumes only two goods, X and Y, and has a utility function $U(X, Y) = XY$. Now suppose the price of X changes while the price of Y and Alex's money income stay unchanged. Then

    (a)   the Hicks compensating variation for a price rise exceeds the Slutsky compensating variation

    (b)   the Slutsky compensating variation for a price rise exceeds the Hicks compensating variation

    (c)   the Slutsky equivalent variation for a price fall exceeds the Hicks equivalent variation

    (d)   the Hicks and Slutsky variations are always equal

SPACE FOR ROUGH WORK

37. If a country allows trade and the domestic price of a good is higher than the world price, then

    (a)   the country will become an exporter of the good

    (b)   the country will become an importer of the good

    (c)   the country will neither import nor export

    (d)   Additional information about demand is needed to determine whether the country will export or import the good

38. If $P(A) = 0 \cdot 6$, $P(B) = 0 \cdot 3$, $P(A/B) = 0 \cdot 5$, then what is $P(AB)$?

    (a) $0 \cdot 10$

    (b) $0 \cdot 25$

    (c) $0 \cdot 15$

    (d) $0 \cdot 60$

SPACE FOR ROUGH WORK

39. Which one of the following would indicate a profitable capital investment?

(a) The net present value is $ 12,000

(b) The interest rate on borrowed funds is 4% and the rate of return is 3%

(c) The interest rate exceeds the net present value

(d) The rate of return exceeds the interest rate on borrowed funds

40. The mean of a Poisson distribution with parameter λ and that of an exponential distribution with parameter λ are equal

(a) for any value of λ

(b) for $\lambda = 1$

(c) for $\lambda = 0 \cdot 5$

(d) for no value of λ

SPACE FOR ROUGH WORK

41. Let the utility function be given by $u(x, y) = \ln x + y$, where x and y are two goods. Let prices of two goods be given as $p_x = 2$ and $p_y = 1$. Calculate the utility maximizing choice of x and y for (i) income = 10 and (ii) income = 20.

(a) (i) $x = 5$, $y = 5$; (ii) $x = 10$, $y = 10$

(b) (i) $x = 3$, $y = 7$; (ii) $x = 6$, $y = 14$

(c) (i) $x = \dfrac{1}{2}$, $y = 9$; (ii) $x = \dfrac{1}{2}$, $y = 19$

(d) None of the above

42. The table below gives the maximum amount of rice or cloth that countries A and B could produce if they fully utilize all the factors of production at their disposal with the best technology available to them :

	Country—A	Country—B
Rice (in million tonnes/year)	50	100
Cloth (in million yards/year)	100	300

Trade based on comparative advantage would imply

(a) export both rice and cloth

(b) export rice and import cloth

(c) import both rice and cloth

(d) export cloth and import rice

SPACE FOR ROUGH WORK

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43. In Question No. **42**, the free trade relative price of rice could be

    (a)   1·75

    (b)   1·95

    (c)   2·75

    (d)   3·15

44. For the Poisson distribution

    (a)   mean = variance

    (b)   mean > variance

    (c)   mean < variance

    (d)   None of the above

SPACE FOR ROUGH WORK

45. In an Edgeworth box, the contract curve is a locus of points where

(a) there is no excess demand

(b) the marginal rates of substitution are equalized

(c) None of the above hold

(d) Both (a) and (b) hold

46. Two events, A and B, are said to be mutually exclusive, if

(a) $P(A/B) = 1$

(b) $P(B/A) = 1$

(c) $P(A \cap B) = 1$

(d) $P(A \cap B) = 0$

SPACE FOR ROUGH WORK

47. Which of the following statements is true?

(a) If X is an inferior good, the demand curve for X is upward sloping

(b) If there is only one firm in an industry, it can never charge $P = AC$ (average cost)

(c) A Sweezy kinked demand curve reflects an atmosphere of business optimism

(d) With the same demand curves, industry output is equal in perfect competition and in a perfectly price discriminating monopoly

48. A monopolist faces a demand curve given by $D(q) = 100 - 2p$. Its cost is $c(y) = 2y$. What is its optimal level of output q^* and price p^*?

(a) $q^* = 20$ and $p^* = 10$

(b) $q^* = 45$ and $p^* = 20$

(c) $q^* = 48$ and $p^* = 26$

(d) None of the above

SPACE FOR ROUGH WORK

49. Find x and y so that the following ordered data set has a mean of 42 and a median of 35 :

17, 22, 26, 29, 34, x, 42, 67, 70, y

(a) $x = 35$, $y = 71$

(b) $x = 36$, $y = 77$

(c) $x = 38$, $y = 71$

(d) $x = 36$, $y = 72$

50. A Keynesian liquidity trap will

(a) lead to a vertical IS curve

(b) lead to a vertical LM curve

(c) lead to a vertical AD curve

(d) lead to ineffective fiscal policy

SPACE FOR ROUGH WORK

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SPACE FOR ROUGH WORK

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