Test Centre : _____

Roll No. : _____

Name of the Candidate : _____

S A U

Entrance Test for MA (Economics) 2018

[PROGRAMME CODE : 30002]

Question Paper Series Code : A

QUESTION PAPER

Time : 3 hours *Maximum Marks* : 100

INSTRUCTIONS FOR CANDIDATES

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

(i) Write your Name, Roll Number and Name of the Test Centre in the space provided for the purpose on the top of this Question Paper and on the OMR Sheet.

(ii) This Question Paper has 50 questions of 2 marks each. All questions are compulsory.

(iii) **A wrong answer will lead to the deduction of one-fourth (¼) of the marks assigned to that question.**

(iv) **Please darken the appropriate circle of 'Question Paper Series Code' and 'Programme Code' on the OMR Sheet in the space provided.**

(v) All questions should be answered on the OMR Sheet.

(vi) Answers written inside the Question Paper will **NOT** be evaluated.

(vii) **Calculators and Log Tables may be used. Mobile Phones are NOT allowed.**

(viii) Pages at the end of the Question Paper have been provided for Rough Work.

(ix) **Return the Question Paper and the OMR Sheet** to the Invigilator at the end of the Entrance Test.

(x) **DO NOT FOLD THE OMR SHEET.**

INSTRUCTIONS FOR MARKING ANSWERS ON THE 'OMR SHEET'

Use BLUE/BLACK Ballpoint Pen Only

1. **Please ensure that you have darkened the appropriate circle of 'Question Paper Series Code' and 'Programme Code' on the OMR Sheet in the space provided.**

   Question Paper Series Code

   Write Question Paper Series Code **A** or **B** in the box and darken the appropriate circle.

   ☐ **A** or **B**

   ● Ⓑ

2. Use only Blue/Black Ballpoint Pen to darken the circle. Do not use Pencil to darken the circle for Final Answer.
3. Please darken the whole circle. ●
4. Darken ONLY ONE CIRCLE for each question as shown below in the example :

Example :

Wrong	Wrong	Wrong	Wrong	Correct
● ⓑ ⓒ ●	Ⓐ ⓑ ⓒ ⓓ	Ⓐ ⓑ ⓒ Ⓓ	◉ ⓑ ⓒ ●	ⓐ ⓑ ⓒ ●

5. Once marked, no change in the answer is possible.
6. Please do not make any stray marks on the OMR Sheet.
7. Please do not do any rough work on the OMR Sheet.
8. Mark your answer only in the appropriate circle against the number corresponding to the question.
9. **A wrong answer will lead to the deduction of one-fourth of the marks assigned to that question.**
10. Write your seven-digit Roll Number in small boxes provided for the purpose; and also darken the appropriate circle corresponding to respective digits of your Roll Number as shown in the example below.

Example :

ROLL NUMBER

1	3	5	7	2	0	2
●	①	①	①	①	①	①
②	②	②	②	●	②	●
③	●	③	③	③	③	③
④	④	④	④	④	④	④
⑤	⑤	●	⑤	⑤	⑤	⑤
⑥	⑥	⑥	⑥	⑥	⑥	⑥
⑦	⑦	⑦	●	⑦	⑦	⑦
⑧	⑧	⑧	⑧	⑧	⑧	⑧
⑨	⑨	⑨	⑨	⑨	⑨	⑨
⑩	⑩	⑩	⑩	⑩	●	⑩

1. Which of the following countries is the newest entrant to the SAARC?

   a. Nepal

   b. Bhutan

   c. Afghanistan

   d. Maldives

2. In the Lewis model of development, the earning of workers in the subsistence sector is determined by

   a. the average product

   b. the marginal product

   c. the value of marginal product

   d. None of the above

3. Suppose the Gini ratio for rural Afghanistan is 0·35 and that for urban Afghanistan is 0·45, the combined Gini ratio for the entire country will be

   a. 0·40

   b. between 0·35 and 0·45

   c. between 0 and 1

   d. less than 0·40

4. The infant industry argument for protection of domestic industries from international competition was originally postulated for

   a. presently rich economies

   b. ex-Soviet transition economies

   c. socialist economies

   d. presently poor economies

5. The share of poor people in a country came down from 40 percent to 30 percent in a ten-year period. This implies

   a. exactly 10 percent of the population moved from being poor to non-poor

   b. exactly 10 percent of the poor population have now become non-poor

   c. exactly 10 percent of the population experienced an increase in their income

   d. None of the above

6. The environmental Kuznets curve relating levels of per capita income to pollution shows

a. a U-shaped relationship

b. an inverted U-shaped relationship

c. a positive relationship

d. a negative relationship

7. According to the Big Push theory of economic development, low-income traps exist due to

a. problems of moral hazard

b. decreasing returns

c. coordination failures

d. population pressure

8. Which of the following South Asian Countries is ranked highest in terms of the Human Development Index?

a. India

b. Pakistan

c. Maldives

d. Sri Lanka

9. In the capability approach, the capability set of an individual *necessarily* expands due to

a. higher consumption of goods and services

b. higher income

c. higher endowment

d. None of the above

10. Which of the following poverty measures is sensitive to the inequality of income among the poor?

a. Squared poverty gap

b. Poverty gap

c. Head count ratio

d. Dalton's measure

11. A consumer has a utility function $U = 2x + 3y$ and faces a budget constraint $4x + 6y = 12$. Consumer equilibrium will be attained at

a. (0, 2) only

b. (3, 0) only

c. (1, 1·5) only

d. any point on the budget constraint

12. A consumer's utility function is given by $U = x_2 + x_1^{1/2}$. Then an increase in income

a. increases consumption of both goods

b. increases consumption of x_2 but does not affect consumption of x_1

c. increases consumption of x_1 but does not affect consumption of x_2

d. does not affect consumption of x_1 or x_2

13. Consider a competitive firm with a production function $Q = KL$, where Q is output, K and L are inputs. Suppose price of output is p, price of K is r and price of L is w. The profit maximizing output for this firm

a. will be obtained when marginal products of both inputs are equal

b. will be equal to rw/p^2

c. will be equal to p^2/rw

d. will not exist

14. If $U = x_1^{\alpha_1} x_2^{\alpha_2}$, then the proportion of income that the consumer will spend on each good will be

a. $\alpha_i / \alpha_1 + \alpha_2$

b. $\alpha_1 \alpha_2 / \alpha_1 + \alpha_2$

c. $\alpha_1 + \alpha_2$

d. $\alpha_1 + \alpha_2 / \alpha_i$

15. Consider two statements (i) $p \rightarrow q$ and (ii) $r \rightarrow s$. Suppose we know that $p \rightarrow r$ and $s \rightarrow q$, then it logically follows that

a. (i) $\rightarrow$ (ii)

b. (ii) $\rightarrow$ (i)

c. (i) and (ii) are independent

d. (i) and (ii) are logically equivalent

16. Given that a monopolist has decreasing average costs, setting the price equal to average cost will lead to

a. too little output in comparison to the competitive output

b. too much output in comparison to the competitive output

c. too much 'excess profit'

d. bankruptcy

17. Let some initial prices be $(p_1, p_2) = (1, 2)$, where the individual, with quasi-concave preferences, consumes $(x_1, x_2) = (4, 4)$. Allow the prices to change to (1, 3). Hence

a. it is still optimal for her to consume (4, 4)

b. she is worse off due to the higher price of good-2

c. she is better off due to the low relative price of good-1

d. her wellbeing depends on the precise location of her endowment point

18. Given the pay-off matrix below :

A's choice ↓	*B's choice*	
	Low	High
Low	1,0	2, 1
High	3, 1	1, 0

a. There is one dominant strategy equilibrium in this game

b. There is one Nash equilibrium

c. There are two Nash equilibria

d. There is no equilibrium in the above game

19. A risk averse individual is offered a choice between a direct cash payment of \$2,000 or accepting a lottery that pays \$10,000 with probability 25 percent and \$500 with probability 75 percent. Then which of the following is true?

a. The individual might accept the lottery depending upon the degree of risk aversion

b. The individual will accept the direct cash payment

c. The individual will be indifferent between the lottery and the direct cash payment

d. None of the above

20. A and B consume two goods 1 and 2. The utility function for A is $u_A = 2x_{A_1} + x_{A_2}$ and that for B is $u_B = x_{B_1} x_{B_2}$. They trade only with each other. In this context, an equilibrium price configuration is

a. $p_1 = 1/2,\ p_2 = 1$

b. $p_1 = 1,\ p_2 = 2$

c. $p_1 = 2,\ p_2 = 1$

d. $p_1 = p_2 = 1$

21. If $x\sqrt{f(x)} = 2$, then $f'(x)$ is

a. $\dfrac{f(x)}{x}$

b. $\dfrac{2f(x)}{x}$

c. $-\dfrac{2f(x)}{x}$

d. $-f(x)/x$

22. Let A and B be $n \times n$ matrices. Assume that $AB = I_n$. Then $BA = I_n$ is

a. always true

b. always false

c. not always true

d. None of the above

23. If $f : X \to Y$ be a function and if x, x' be elements of X such that $x = x'$, then which of the following statements will allow us to conclude that $f(x)$ is equal to $f(x')$?

a. We need f to be one-to-one.

b. Nothing; this is true for all functions of f.

c. We need f to be invertible.

d. We need f to be continuous.

24. If A is a 3×5 matrix, then the inverse of A is

a. 3×5 matrix

b. 5×3 matrix

c. undefined

d. zero

25. If one is solving three linear equations involving two unknowns, then what happens?

a. There will never be a solution

b. There will always be a solution

c. There will always be infinitely many solutions

d. In some cases, there will be no solution, but sometimes there will be one or more solutions

26. Which one of the following gives us the intervals at which the given function is increasing?

$$f(x) = 2x^4 - 4x^2 + 1$$

a. $(-\infty, \infty)$

b. The function is never increasing

c. $(-\infty, -1)$ and $(-1, \infty)$

d. $(-1, 0)$ and $(1, \infty)$

27. Solve for $\frac{dy}{dx}$, given that

$$2x^2 + 3y^2 = 6xy$$

a. $\frac{dy}{dx} = \frac{2x - 3y}{3(x - y)}$

b. $\frac{dy}{dx} = \frac{2(x + 3y)}{3y}$

c. $\frac{dy}{dx} = \frac{4x - 3y}{6x}$

d. $\frac{dy}{dx} = \frac{2x + 3y}{3(x + y)}$

28. The sequence $\frac{1}{2}, \frac{2}{3}, \frac{3}{4}, \frac{4}{5}, \frac{5}{6}, \cdots, \frac{n}{n+1}$ is

a. monotonically increasing

b. increasing and bounded

c. non-increasing and bounded

d. non-increasing but not bounded

29. Evaluate $\lim_{x \to \infty} \frac{x^2}{3x^2 + 2x + 100}$.

a. ∞

b. 1/3

c. 3/4

d. Undefined

30. If A and B are matrices, then which of the following is ***not*** always true?

a. $A + B = B + A$

b. $(A^t)^t = A$

c. $AB = BA$

d. Not sure

31. If your results say that the value of p is $< 0{\cdot}001$, then which one of the following statements would you agree with?

a. This is a significant result and this would have only resulted 1/100 through chance.

b. This is not a significant result and the null hypothesis can be rejected.

c. This is a significant result and would have only resulted 10/100 through chance.

d. None of the above

32. Which one of the following types of distribution is observed when most of the scores cluster around the lower end of the scale?

a. A normal distribution

b. A bimodal distribution

c. A negatively skewed distribution

d. A positively skewed distribution

33. A Spearman's test statistic of $-0{\cdot}207$ with a $p = 0{\cdot}057$ would suggest

a. a strong negative relationship which is approaching significance

b. a strong, significant, negative relationship

c. a weak, non-significant, positive relationship

d. a weak negative relationship that is approaching significance

34. If events A and B are disjoint, under what conditions will A^c and B^c be disjoint?

a. $A^c \cap B^c = S$

b. A^c and B^c are complements of each other

c. $A \cup B = S$

d. All of the above

35. If X and Y have a discrete joint distribution for which the joint p.f. is defined as

$$f(x, y) = \begin{cases} c|x+y|, & \text{for } x = -2, -1, 0, 1, 2 \text{ and } y = -2, -1, 0, 1, 2 \\ 0, & \text{otherwise} \end{cases}$$

the probability of the event $|x+y| \leq 1$ is

a. 0·12

b. 0·7

c. 0·126

d. 0·8

36. Suppose that A, B and C are three events such that A and B are disjoint, A and C are independent, and B and C are independent. Suppose also that $4\Pr(A) = 2\Pr(B) = \Pr(C) > 0$ and $\Pr(A \cup B \cup C) = 5\Pr(A)$. The value of $\Pr(A)$ is

a. 0·3

b. Cannot be determined

c. 0·16

d. None of the above

37. If $X_1, \cdots, X_n$ are random variables such that the variance of each variable is 1 and the correlation between each pair of different variables is $1/4$, then $\text{var}(X_1 + \cdots + X_n)$ is

a. $(2n+1)/4$

b. $(4+n^2)/18$

c. $(n(n-1))/2$

d. $n + (n(n-1))/4$

38. Which of the following statements is true?

a. The Chebyshev inequality is related to the idea that the variance of a random variable is a measure of how spread out its distribution is.

b. The Chebyshev inequality is required for proving the normality of a random sample.

c. The Markov inequality is a special case of the Chebyshev inequality.

d. None of the above

39. If a random variable X has a continuous distribution with the probability function

$$f(x) = \begin{cases} ce^{-2x}, & \text{for } x > 0 \\ 0, & \text{otherwise} \end{cases}$$

then the probability of $1 < X < 2$ is

a. e^{-2}

b. $e^{-2} - e^{-4}$

c. $e^{4} - e^{-2}$

d. None of the above

40. Which one of the following statements is true for a distribution function of a discrete random variable?

a. It is always left continuous.

b. It is always right continuous.

c. It is always continuous.

d. There is no requirement of continuity.

41. In the Solow growth model, natural resource may not be a binding constraint on growth as the production function confirms

a. diminishing return to a variable factor

b. Inada conditions

c. possibility of perfect substitution among factors of production

d. All of the above

42. Diminishing returns to scale in adjustment costs imply which one of the following regarding Tobin's q?

a. Marginal q < Average q

b. Marginal q = Average q

c. Marginal q > Average q

d. Marginal $q \geq$ Average q

43. The 'impossible trinity' refers to a condition where it is not possible to have which of the following at the same time?

a. Fixed foreign exchange rate, perfect capital movement and an independent monetary policy

b. Flexible foreign exchange rate, perfect capital movement and an independent monetary policy

c. Fixed foreign exchange rate, control on capital movement and an independent monetary policy

d. None of the above

44. If agents form their expectations of future prices by extrapolating historical data

a. they will always underestimate future prices

b. they will always overestimate future prices

c. they might make systematic errors in either direction

d. they will make the most accurate expectations on an average

45. Discretionary countercyclical policies which were popular and successful during the 1950s and 1960s failed in the 1970s. Which of the following English proverbs best expresses the reason for this failure?

a. You cannot kill two birds with one stone

b. Too many cooks spoil the broth

c. You can fool some people some of the time but you cannot fool all the people all the time

d. Familiarity breeds contempt

46. Suppose Bangladesh suddenly receives a large amount of foreign capital inflow. Which one of the following is ***not*** a possible outcome of the above event?

a. A pressure on the Bangladeshi Taka to appreciate

b. An increase in the foreign exchange reserves with the Central Bank of Bangladesh

c. An improvement in competitiveness of the producers in Bangladesh

d. A fall in the rate of interest in Bangladesh

47. Which one of the following is a stock variable, which can be measured at a point in time?

a. Physical capital

b. Gross domestic product

c. Consumption

d. Investment

48. Historically, Germany has been saving at a higher rate than most other contemporary economies at similar levels of income. This might have resulted in, ceteris paribus

a. loss of markets and jobs in other parts of the world

b. capital outflows from Germany to other countries

c. None of the above

d. All of the above

49. Which one of the following constitutes a component of Solow residual?

a. Physical capital

b. Human capital

c. Labor supply

d. None of the above

50. If a person suddenly wins a very large sum of money in a lottery, then which one of the following statements will be true?

a. The Keynesian theory of consumption would predict an increase in consumption with a lag, but the modern theory of consumption would predict an immediate rise in consumption.

b. The Keynesian theory of consumption would predict a large one-time increase in consumption, whereas the modern theory of consumption would predict a small increase in consumption distributed over the person's lifetime.

c. The Keynesian theory of consumption would predict no increase in consumption, whereas the modern theory of consumption would predict an increase in consumption which follows a random walk.

d. The Keynesian theory of consumption would predict a small increase in consumption distributed over the person's lifetime, whereas the modern theory of consumption would predict a large one-time increase in consumption.

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