1

| QUESTION PAPER SERIES CODE |
|---|
| A |

Centre Name : _____

Roll No. : _____

Name of Candidate : _____

# S A U

## Entrance Test for MA (Development Economics), 2014

**[ PROGRAMME CODE : MEC ]**

*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 Centre Name in the space provided for the purpose on the top of this Question Paper and in the OMR/Answer Sheet.

(ii) This Question Paper has Two Parts : Part—A and Part—B.

(iii) Part—A (Objective-type) has 20 questions of **1** mark each. All questions are compulsory.

(iv) Part—B (Objective-type) has 40 questions of **2** marks each. All questions are compulsory.

(v) **Please darken the appropriate Circle of 'Question Paper Series Code' and 'Programme Code' on the OMR/Answer Sheet in the space provided.**

(vi) Part—A and Part—B (Multiple Choice) questions should be answered on OMR/Answer Sheet.

(vii) Answers written by the candidates inside the Question Paper will **NOT** be evaluated.

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

(ix) Pages at the end have been provided for Rough Work.

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

(xi) **DO NOT FOLD THE OMR/ANSWER SHEET.**

## INSTRUCTIONS FOR MARKING ANSWERS IN 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.**

***Example :***

**Question Paper Series Code**

Write Question Paper Series Code A or B and darken appropriate circle.

| | A or B |
|---|---|

● Ⓑ

**Programme Code**

Write Programme Code out of 14 codes given and darken appropriate circle.

Write Programme Code

| | | | | | |
|---|---|---|---|---|---|
| MEC | ● | MAM | ○ | PCS | ○ |
| MSO | ○ | MLS | ○ | PBT | ○ |
| MIR | ○ | PEC | ○ | PAM | ○ |
| MCS | ○ | PSO | ○ | PLS | ○ |
| MBT | ○ | PIR | ○ | | |

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 allowed.
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. There will be no negative marking in evaluation.
10. Write your six digits Roll Number in small boxes provided for the purpose; and also darken 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 |
|---|---|---|---|---|---|
| ● | ① | ① | ① | ① | ① |
| ② | ② | ② | ② | ● | ② |
| ③ | ● | ③ | ③ | ③ | ③ |
| ④ | ④ | ④ | ④ | ④ | ④ |
| ⑤ | ⑤ | ● | ⑤ | ⑤ | ⑤ |
| ⑥ | ⑥ | ⑥ | ⑥ | ⑥ | ⑥ |
| ⑦ | ⑦ | ⑦ | ● | ⑦ | ⑦ |
| ⑧ | ⑧ | ⑧ | ⑧ | ⑧ | ⑧ |
| ⑨ | ⑨ | ⑨ | ⑨ | ⑨ | ⑨ |
| ⓪ | ⓪ | ⓪ | ⓪ | ⓪ | ● |

## PART—A

1. Human capital theory considers education

   (a) as an end in itself

   (b) as a means towards the end of economic growth

   (c) both as an end and a means

   (d) None of the above

2. The theory of unbalanced growth can be traced back to the writings of

   (a) Paul Rosenstein Rodan

   (b) Arthur Lewis

   (c) Albert Hirschman

   (d) John Mellor

3. A Randomized Control Trial Methodology is best suited to estimate the

   (a) proportion of poor people in a village

   (b) amount of funds required to run a health intervention in a village

   (c) impact of a health intervention on infant mortality in a village

   (d) extent of corruption in a health intervention in a village

4. In a Lewis type dual economy model, the assumption of unlimited supply of labour at a given subsistence wage rate is

   (a) a Keynesian assumption

   (b) a neo-classical assumption

   (c) a classical assumption

   (d) None of the above

5. If 50 percent of the families in a certain city subscribe to the morning newspaper, 65 percent of the families subscribe to the afternoon newspaper and 85 percent of the families subscribe to at least one of the two newspapers, then the percentage of families that subscribe to both newspapers is

   (a) 25

   (b) 45

   (c) 20

   (d) 30

6. Suppose that three random variables $X$, $Y$ and $Z$ form a random sample from a distribution for which the mean is 2. The value of $E(2X - 3Y + 4Z - 5)$ is

(a) 1

(b) 4

(c) 5

(d) 2

7. In statistics, the reliability of a point estimate is measured by its

(a) coefficient of variation

(b) coefficient of determination

(c) standard error

(d) standard deviation

8. Rejecting a true hypothesis results in

(a) type I error

(b) type II error

(c) both type I and type II errors

(d) structural error

9. For Ram, coarse rice is an inferior good. This means

(a) when price of coarse rice increases, consumption of coarse rice also increases

(b) when Ram's income decreases, his consumption of coarse rice increases

(c) when price of coarse rice falls, consumption of coarse rice falls

(d) Both (b) and (c) are true

10. Consider a consumer whose utility depends on the consumption of two commodities, $x$ and $y$. Suppose $x$ is a neuter for this consumer. If you draw an indifference curve taking $x$ on the abscissa, the indifference curve will be

(a) a vertical line

(b) a horizontal line

(c) a downward sloping straight line

(d) a concave curve

11. A monopolist will never produce a quantity where the price elasticity of demand is inelastic, because

(a) $P > MC$ in such a case

(b) $MR > MC$ in such a case

(c) $MR < 0$ in such a case

(d) $P < ATC$ in such a case

12. If marginal benefit of producing apples is greater than marginal cost associated with it, then a rational choice involves

(a) producing more or less, depending on the benefits of producing oranges

(b) producing more of apples

(c) no more of producing apples

(d) producing less of apples

13. In an open economy with free capital flows, the central bank can

(a) stabilize the exchange rate by setting the rate of interest appropriately

(b) stabilize the rate of interest by setting the exchange rate appropriately

(c) either set the rate of interest or stabilize the exchange rate, but not both

(d) neither stabilize the rate of interest nor the exchange rate

14. Which of the following represents a foreign exchange swap?

(a) Exchanging one currency with another in a foreign exchange market

(b) A spot sale of a currency combined with a forward repurchase of the currency

(c) An exchange of a part of a loan in one currency with equivalent part in terms of net present value of a loan in another currency

(d) Central Bank of a country providing the liquidity of its currency to the Central Bank of another country

15. Suppose over a given quarter, the prices in Sri Lanka rose by 4 percent, whereas the prices in Bangladesh over the same period rose by 7 percent. According to the theory of Relative Purchasing Power Parity

(a) Sri Lankan rupee should appreciate by 3 percent vis-à-vis Bangladeshi taka

(b) Sri Lankan rupee should depreciate by 3 percent vis-à-vis Bangladeshi taka

(c) the exchange rate between Sri Lankan rupee and Bangladeshi taka will remain unchanged over the given period

(d) the exchange rate movements cannot be predicted from the information provided above

16. Policies formulated on the basis of relationships observed in highly aggregated historical data (like Phillips curve) might fail because

(a) there might be errors in historical data

(b) public's expectations about future policy might affect their current decisions, which will affect policy outcomes

(c) the number of observations in historical data might be inadequate to analyse policy outcomes completely

(d) there might be an inconsistency between various policy objectives

17. The derivative of the function $f(x) = \sqrt{x^2 - 1}$ is

(a) $\frac{1}{2x\sqrt{x^2 - 1}}$

(b) $\frac{1}{2\sqrt{x^2 - 1}}$

(c) $\frac{1}{\sqrt{x^2 - 1}}$

(d) $\frac{x}{\sqrt{x^2 - 1}}$

18. The value of the determinant $A = \begin{vmatrix} 1 & 18 & 72 \\ 2 & 40 & 148 \\ 2 & 45 & 150 \end{vmatrix}$ is

(a) 12

(b) –12

(c) 24

(d) 18

19. Which statement is incorrect?

(a) A matrix $A$ is said to be singular if $|A| = 0$

(b) A matrix is said to be non-singular if $|A| \neq 0$

(c) For the inverse of the matrix, the matrix must be non-singular

(d) The inverse of the matrix is a scalar multiplied with the matrix

20. The demand curve of a monopolist is given by $p = 100 - x - x^2$. The marginal revenues at $x = 2$ and $x = 0$ are

(a) 74 and 100

(b) 84 and 100

(c) 100 and 84

(d) 74 and 90

## PART—B

**21.** Consider an economy where the existing rural wage rate for semi-skilled workers is 150 dollars a month. There are two options of employment in the urban sector— *(i)* formal employment amounting to 50000 jobs at the wage of 440 dollars a month and *(ii)* informal employment amounting to 500000 jobs at the wage of 110 dollars a month. In this economy, labour migration from rural to urban sector will

(a) continue until the rural wage rate becomes 140 dollars

(b) continue until the rural wage rate comes down to 0

(c) not take place at all

(d) continue till the entire economy has been urbanized

**22.** In the process of demographic transition, both birthrates and death rates fall over time. Which of the following is true about their movement?

(a) Birthrate and death rate start falling simultaneously

(b) Birthrate starts falling earlier than death rate

(c) Death rate starts falling earlier than birthrate

(d) There is no clear trend in their movement

**23.** In a country during a given period, the income of the top 10 percent of the population increased from ten times that of the bottom 10 percent to hundred times that of the bottom 10 percent. This implies that the Gini ratio pertaining to income of the entire population

(a) has increased

(b) has decreased

(c) has remained same

(d) may have increased, decreased or remained same

**24.** In the rural sector of a country, the head count rate of poverty fell by 10 percent from 1994 to 2004. Which of the following statements is necessarily true for this country?

(a) The number of rural poor decreased by 10 percent

(b) The number of rural poor decreased by an unknown percentage

(c) The number of rural poor increased by an unknown percentage

(d) From the available information, it cannot be determined whether the number of rural poor has increased, decreased or remained same

Read the following passage carefully to answer Question Nos. **25–28** :

[The passage has been taken from Amartya Sen (1983), "Development : Which Way Now?", *The Economic Journal*, Vol. 93, No. 372, pp. 745–762]

Perhaps the most important thematic deficiency of traditional development economics is its concentration on national product, aggregate income and total supply of particular goods rather than on 'entitlements' of people and the 'capabilities' these entitlements generate. Ultimately, the process of economic development has to be concerned with what people can or cannot do, e.g., whether they can live long, escape avoidable morbidity, be well nourished, be able to read and write and communicate, take part in literary and scientific pursuits, and so forth. It has to do, in Marx's words, with 'replacing the domination of circumstances and chance over individuals by the domination of individuals over chance and circumstances'.

Entitlement refers to the set of alternative commodity bundles that a person can command in a society using the totality of rights and opportunities that he or she faces. Entitlements are relatively simple to characterise in a purely market economy. If a person can, say, earn $200 by selling his or her labour power and other saleable objects he or she has or can produce, then his or her entitlements refer to the set of all commodity bundles costing no more than $200. He or she can buy any such bundle, but no more than that, and the limit is set by his or her ownership ('endowment') and his or her exchange possibilities ('exchange entitlement'), the two together determining his or her over-all entitlement. On the basis of this entitlement, a person can acquire some capabilities, i.e., the ability to do this or that (e.g., be well nourished), and fail to acquire some other capabilities. The process of economic development can be seen as a process of expanding the capabilities of people. Given the functional relation between entitlements of persons over goods and their capabilities, a useful—though derivative—characterisation of economic development is in terms of expansion of entitlement.

For most of humanity, about the only commodity a person has to sell is labour power, so that the person's entitlements depend crucially on his or her ability to find a job, the wage rate for that job, and the prices of commodities that he or she wishes to buy. The problems of starvation, hunger and famines in the world could be better analysed through the concept of entitlement than through the use of the traditional variables of food supply and population size. The intention here is not, of course, to argue that the supply of goods—food in this case—is irrelevant to hunger and starvation, which would be absurd, but that the supply is just one influence among many; and, in so far as supply is important, it is so precisely because it affects the entitlements of the people involved, typically through prices. Ultimately, we are concerned with what people can or cannot do, and this links directly with their 'entitlements' rather than with over-all supplies and outputs in the economy.

**25.** According to Sen, the goal of economic development should be the enhancement of

(a) utility from consumption of commodities

(b) exchange entitlements

(c) endowments

(d) both entitlements and capabilities

**26.** Entitlement of a person is dependent on his or her

(a) ability to work

(b) labour power and 'exchange entitlement'

(c) capabilities

(d) labour power, non-labour endowments and his or her ability to sell both

**27.** Suppose a person depends exclusively on his or her ability to work in order to survive. Under normal circumstances, he or she can work for 10 hours per day, and his or her labour fetches an hourly wage of $2. However, during a major famine that affects the working of both labour and commodity markets, he or she cannot find any work. Subsequently, the government steps in and provides a daily relief payment of $20. Consequently, the entitlement of this person

(a) will remain same as before

(b) will increase

(c) will decrease

(d) Cannot be determined from the given information

**28.** Suppose a country faces a major disruption in food production due to a natural disaster. In this situation, the ability of a person to avoid hunger will ultimately depend on

(a) his or her endowments and exchange entitlements

(b) the import of food from abroad

(c) the price of food

(d) his or her endowments, exchange entitlements and public provisioning of food

**29.** Consider two events $A$ and $B$ with $\Pr(A) = 0 \cdot 4$ and $\Pr(B) = 0 \cdot 7$. The maximum and minimum possible values of $\Pr(A \cap B)$ are

(a) $0 \cdot 7$ and $0 \cdot 5$

(b) 1 and $0 \cdot 1$

(c) 1 and $0 \cdot 3$

(d) $0 \cdot 7$ and $0 \cdot 1$

**30.** Suppose that one word is to be selected at random from the sentence IT IS A SUNNY DAY. If $X$ denotes the number of letters in the word that is selected, then the value of $E(X)$ is

(a) 4 / 13

(b) 17 / 4

(c) 5

(d) 13 / 5

**31.** A point $(x, y)$ is to be selected from the square $S$ containing all points $(x, y)$ such that $0 \leq x \leq 1$ and $0 \leq y \leq 1$. Suppose that the probability that the selected point will belong to each specified subset of $S$ is equal to the area of that subset. Then the probability of the subset of points such that $x = y$ is

(a) $0 \cdot 5$

(b) $0 \cdot 2$

(c) 0

(d) 1

**32.** Suppose that a random variable $X$ has a discrete distribution with the following probability function

$$f(x) = \begin{cases} \frac{c}{2^x} & \text{for } x = 0, 1, 2, \ldots \\ 0 & \text{otherwise} \end{cases}$$

The value of the constant $c$ is

(a) $\frac{1}{4}$

(b) 1

(c) $\frac{1}{2}$

(d) $\frac{1}{8}$

**33.** Suppose that $X$ and $Y$ are random variables such that $(X, Y)$ must belong to the rectangle in the $xy$-plane containing all points $(x, y)$ for which $0 \leq x \leq 3$ and $0 \leq y \leq 4$. Suppose also that the joint c.d.f. of $X$ and $Y$ at every point $(x, y)$ in this rectangle is specified as follows

$$F(x, y) = \frac{1}{156} xy(x^2 + y)$$

Then the joint p.d.f. of $X$ and $Y$ is

(a) $\frac{1}{156}(3x^2y + y^2)$

(b) $\frac{1}{156}(x^2 + y)$

(c) $\frac{1}{156}(3x^2 + 2y)$

(d) $\frac{1}{156}(x^3 + 2y^2)$

**34.** In the classical linear regression model, if we multiply both $X$ and $Y$ by 100 and re-estimate, the slope coefficient will

(a) increase by 100

(b) increase by $100^2$

(c) remain the same

(d) increase by 1/100

**35.** In the classical linear regression model, if we multiply both $X$ and $Y$ by 100 and re-estimate, the intercept coefficient will

(a) increase by 100

(b) increase by $100^2$

(c) remain the same

(d) increase by 1/100

**36.** Homoscedasticity in regression analysis refers to the error terms having

(a) zero mean

(b) positive mean

(c) positive variance

(d) constant variance

37. Let $R$ be a weak preference relation defined over a consumption set $X$. Let $P$ stand for the strict preference relation and $I$ stand for the indifference relation, derived from $R$ the usual way. Suppose a consumer has a ranking over $X = \{x, y, z\}$ as $xIy$, $yIz$ and $xPz$. Which of the following is true?

(a) Consumer's indifference relation $I$ is transitive

(b) Consumer's strict preference relation $P$ is transitive

(c) Consumer's strict preference relation $P$ is not transitive

(d) One cannot conclude anything about the transitivity of $I$ or $P$

38. A consumer's utility function is given by $U = 2x + 5y$. Suppose the consumer's income is 100, and the prices of $x$ and $y$ are 4 and 10 respectively. Then

(a) there will be infinite points of equilibria

(b) only one equilibrium point exists at (25, 0)

(c) only one equilibrium point exists at (0, 10)

(d) None of the above is true

39. Consider a Leontief production function $Q = \min[K/2, L/3]$, where $Q$ is the output, and $K$ and $L$ are the two inputs in the production process. This production function is

(a) homogenous but not homothetic

(b) homothetic but not homogenous

(c) both homogenous and homothetic

(d) neither homogenous nor homothetic

40. Consider a firm trying to minimize the cost of production with technology given by $Q = K^{1/2}.L^{1/2}$, where $Q$ is the output, and $K$ and $L$ are the two inputs. Suppose the firm wishes to produce 40 units of output and prices of $K$ and $L$ are 3 and 12 respectively. The cost minimizing input combination is

(a) $K = 40, L = 40$

(b) $K = 80, L = 20$

(c) $K = 160, L = 10$

(d) $K = 20, L = 80$

41. A monopoly faces the demand curve $P = 8 - Q$. The monopoly has a constant unit cost equal to 7 for $Q \leq 2$ and a constant unit cost equal to 5 for $Q > 2$. Its profit maximizing output equals

(a) 1/2

(b) 2

(c) 3/2

(d) both 1/2 and 3/2

42. If both supply and demand for a good increase at the same time, which of the following must also increase?

(a) The equilibrium price

(b) The use of substitutes

(c) The equilibrium quantity

(d) All of the above

43. There are only two price-taking firms in a market. Their cost functions are $C_1 = x_1^2$ and $C_2 = 3x_2^2$, where $x_i$ is the output of the $i$th firm. The market supply is sum of the two firms' output. Then the market supply function is

(a) $x = 2p$

(b) $x = 2p/3$

(c) $x = 3p/2$

(d) $x = p/2$

44. An individual prefers the option of \$1000 with certainty compared to a gamble of \$2000 with 50 percent probability and zero dollar with 50 percent probability. This makes the individual

(a) risk averse

(b) risk loving

(c) risk neutral

(d) None of the above

The following information is relevant for Question Nos. **45** and **46** :

Consider an economy where the nominal wage rate is set by a process of wage bargaining between the workers and the producers before actual production takes place. As an outcome of this process of bargaining, in any period $t$, the nominal wage rate, $W_t$, is a function of the expected price, $P_t^e$, the rate of unemployment, $u_t$ (representing the relative bargaining power of the workers vis-à-vis the employers) and the average productivity of the workers, $A_t$, i.e., $W_t = P_t^e F(u_t, A_t)$; $F_u < 0$, $F_A > 0$. Once the nominal wage is determined, the producers set the actual price level, $P_t$, as a constant mark-up $\mu$ over the nominal wage rate $P_t = (1+\mu)W_t$. The actual rate of inflation is defined as $\pi_t \equiv \frac{P_t - P_{t-1}}{P_{t-1}}$ and the expected rate of inflation as

$$\pi_t^e \equiv \frac{P_t^e - P_{t-1}}{P_{t-1}}$$

**45.** Given the above wage and price setting equations, derive the relationship between the expected rate of inflation and the actual rate of inflation. Which of the following equations represents this relationship?

(a) $\pi_t = \pi_t^e (1+\mu) F(u_t, A_t)$

(b) $\pi_t = (1+\pi_t^e)(1+\mu) F(u_t, A_t) - 1$

(c) $\pi_t = (1+\pi_t^e)[F(u_t, A_t) - \mu] - 1$

(d) None of the above

**46.** Suppose the average productivity of the workers remains constant at a level $\bar{A}$. Given the relationship in your answer to the previous question, the 'natural rate of unemployment' is given by

(a) $F(u_t, \bar{A}) = \mu$

(b) $F(u_t, \bar{A}) = \frac{1}{1+\mu}$

(c) $F(u_t, \bar{A}) = \frac{\mu}{1+\mu}$

(d) None of the above

47. Suppose the exchange rate between afghani (the currency of Afghanistan) and Nepalese rupee is in equilibrium when the uncovered interest rate parity condition is satisfied, i.e.

$$R_A = R_R + \frac{(E^e_{A/R} - E_{A/R})}{E_{A/R}}$$

where $R_A$ is the current interest rate on one-year afghani deposit, $R_R$ is the current interest rate on one-year Nepalese rupee deposit, $E_{A/R}$ is the afghani/Nepalese rupee exchange rate (number of afghani per Nepalese rupee) and $E^e_{A/R}$ is the afghani/Nepalese rupee exchange rate expected to prevail a year from now. Suppose initially the exchange rate between these two countries is in an equilibrium. An attempt by the Government of Afghanistan to encourage greater use of local currency (afghani) and restrict its illegal printing *ceteris paribus* would lead to

(a) a depreciation of afghani vis-à-vis Nepalese rupee

(b) an appreciation of afghani vis-à-vis Nepalese rupee

(c) a rise in prices in Afghanistan relative to Nepal

(d) stagflation in both Afghanistan and Nepal

48. If agents form their expectations rationally in a forward-looking manner, and the policymakers follow a credible and dynamically consistent policy to reduce the rate of inflation, then the costs of reducing inflation in terms of output loss

(a) would be much higher than the traditional estimates of sacrifice ratio

(b) would be much lower than the traditional estimates of sacrifice ratio

(c) would be exactly equal to the traditional estimates of sacrifice ratio

(d) would exceed the traditional estimates of sacrifice ratio by a fixed amount

49. Consider a basic Solow's model of growth, where the output is determined by a linearly homogeneous, increasing and concave production function satisfying the Inada conditions, with no technological progress. The rate of growth of population, the rate of depreciation and the propensity to save is constant. Suppose, to begin with, the economy saves at a rate lower than the optimal savings rate (i.e., the savings rate which maximizes steady state per capita consumption). An increase in savings rate, bringing it closer to the optimal savings rate, would lead to

(a) a reduction in per capita consumption in steady state

(b) an increase in per capita consumption in steady state

(c) initially a decrease, and then, an increase in per capita consumption in steady state

(d) initially an increase, and then, a decrease in per capita consumption in steady state

**50.** Between 2002 and 2003, Afghanistan introduced a new currency, the new afghani, at an exchange rate of 43 afghani to the US dollar. This new afghani replaced its two previous versions at two different rates—the currency issued by the Government of President Burhanuddin Rabbani was replaced at the rate of 1000 to the new afghani, whereas the currency issued by the Government of Abdul Rashid Dostum was replaced at the rate of 2000 to the new afghani. The central bank issued instructions that the new currency should be used to make all domestic transactions, replacing all other currencies in use. All existing contracts were to be rewritten in terms of the new afghani at the specified exchange rates. Assuming that the government was successful in carrying out this exercise, what will be the impact of this change on output and employment?

(a) Output and employment will fall, since less currencies are in circulation

(b) Output and employment will rise, since production will benefit from a stable currency

(c) Output and employment will remain unchanged, since the contracts are rewritten in terms of new currency

(d) Cannot be determined from the given information

**51.** Consider a simple IS-LM framework of a closed economy where output and rate of interest are determined by simultaneous equilibrium in goods and the money market. If the interest elasticity of money demand is tending to infinity

(a) an expansionary fiscal policy would be completely ineffective, as there will be complete crowding out of private investment by public expenditure

(b) an expansionary monetary policy would be completely ineffective, as the rate of interest would be completely unresponsive to expansion of money

(c) Both (a) and (b) are true

(d) Both (a) and (b) are false

**52.** Suppose the Central Bank of Pakistan conducts open market operations, which leads to an expansion of its monetary base. For this to actually result in an increase in money supply, one of the assumptions is

(a) full employment level of output

(b) a stable demand function for money

(c) a stable production function

(d) a low rate of inflation

**53.** The profit maximizing output for the revenue function $R(Q) = 1000Q - 2Q^2$ and cost function $C(Q) = Q^3 - 59Q^2 + 1315Q + 2000$ is

(a) 30

(b) 3

(c) 35

(d) 40

**54.** If the consumption function is given by $C = 8 + \frac{3Y}{4} - \frac{\sqrt{Y}}{3}$, then the marginal propensity to save when $Y = 25$ is

(a) 0·284

(b) 0·375

(c) 0·413

(d) 0·179

**55.** Suppose that $p$ rupees is the price per box of biscuits and demand function is $x = 75 - p^2$. What is the price elasticity of demand when $p = 7 \cdot 50$?

(a) 4

(b) 6

(c) 5

(d) 3

**56.** Integration of $y = \int\left(\sqrt{x} + \frac{1}{\sqrt{x}}\right)^2 dx$ is

(a) $\frac{x^2}{2} + \log_e x + 2x + c$

(b) $\frac{x^2}{2} + \log_e x + c$

(c) $x^2 + \log_e x + 2x + c$

(d) None of the above

**57.** The integration of $y = \int \frac{1}{x \log x} dx$ is

(a) $x \log x + c$

(b) $\log(\log x) + c$

(c) $\log(1 + e^x) + c$

(d) $(\log x)^2 + c$

**58.** The differential coefficient of the function $y = e^{(e^x)}$ is

(a) $\frac{dy}{dx} = xe^x$

(b) $\frac{dy}{dx} = e^x e^{e^x}$

(c) $\frac{dy}{dx} = xe^{e^x}$

(d) $\frac{dy}{dx} = e^{x^2} e^{e^x}$

**59.** The determinant of the matrix $\begin{pmatrix} \log_a b & 1 \\ 1 & \log_b a \end{pmatrix}$ is

(a) 1

(b) 0

(c) 2

(d) None of the above

**60.** The derivative of $y = \frac{e^x + e^{-x}}{e^x - e^{-x}}$ is

(a) $\frac{-4}{(e^x - e^{-x})^2}$

(b) $\frac{-1}{(e^x + e^{-x})^2}$

(c) $\frac{4}{(e^x - e^{-x})^2}$

(d) $\frac{-4}{(e^x + e^{-x})^2}$

★★★