FBQ1: Differentiation measures _____
Answer: *Rate of Change*

FBQ2: (a+b) = (b+a) Satisfies the _____ law of matrix
Answer: *Commutative*

FBQ3: Given that y = 7x3, the derivative is _____
Answer: *21x2*

FBQ4: If the difference function is p=15q3-3q4, dp/dq is _____
Answer: *45q2-12q3*

FBQ5: Given that q = 5p + 45, the inverse derivative of the function is _____
Answer: *1/5*

FBQ6: Given that q = p5 + p, find the inverse derivative of the function is _____
Answer: *5p4+1*

FBQ7: Given that q = p5 + p, find the inverse derivative of the function _____
Answer: *5p4+1*

FBQ8: If y = x4, dy/dx is _____
Answer: *4x3*

FBQ9: If the function is given as f(j) = 20j â€“ 10, the rate of change is _____
Answer: *20*

FBQ10: Find the 5th derivative of the function y = 4x4 + 7x3 + 2x2 is _____
Answer: *0*

FBQ11: Suppose we have an equation of the form q = 4p3+ p2+ 20, _____ is the 1st derivative
Answer: *12p2 + 2p*

FBQ12: Suppose we have an equation of the form q = 4p3+ p2+ 20, _____ the 2nd derivative
Answer: *24p + 2*

FBQ13: Suppose we have an equation of the form q = 4p3+ p2+ 20, _____ the 3rd derivative
Answer: *24*

FBQ14: Differentiation is a primitive function in calculus. True or False
Answer: *False*

FBQ15: _____ is the Integrate of âˆ«xdx
Answer: x22

FBQ16: _____ is the Integrate the function of âˆ«6xdx

Answer: *6ln x + c*

FBQ17: The computed function of âˆ«3x3-x+2dx is 34x4-12
Answer: *2x + c*

FBQ18: _____ is the determined and evaluated marginal gain function of the profit function Ï€ = Q2 âˆ’16Q + 50 at Q = 4
Answer: *-8*

FBQ19: _____ is the determined and evaluated marginal gain function of the profit function Ï€ = Q2 âˆ’16Q + 50 at Q = 6
Answer: *-4*

FBQ20: _____ is the determined and evaluated marginal expenditure of the function P = Q3 + 4Q + 3 at Q = 4
Answer: *332*

FBQ 21: _____ is the determine and evaluate marginal expenditure of the function P = Q3 + 4Q + 3 at Q = 7
Answer: *2618*

FBQ22: If the total consumption function is C =1000 + 0.88Y, _____ is the marginal propensity to consume (MPC).
Answer: *0.88*

FBQ23: If the total consumption function is C =50 + 0.2Y, _____ is the marginal propensity to consume (MPC).
Answer: *0.2*

FBQ24: Assuming that marginal cost (MC) is 50 + 60Q â€“ 18Q2, if fixed cost is 75; _____ the total cost (TC).
Answer: *50Q + 30Q2 â€“ 6Q3*

FBQ25: Given that g = -2x3 + 4x2 + 9x â€“ 15, _____ is gf
Answer: *- 6x2 + 8x + 9*

FBQ 26: If g = -2x3 + 4x2 + 9x â€“ 15, at x = 3, the test is _____
Answer: *Concave*

FBQ 27: Given that g = (5x2 â€“ 8)2, at x = 3, the test is _____
Answer: *Convex*

FBQ 28: The graph and relation are not the right tools to solve optimality problems, except method of _____
Answer: *Relative extreme*

FBQ 29: In the theory of production given as Q = g (L, K), Q is said to be an _____variableÂ
Answer: *Endogenous*

FBQ 30: In the theory of production given as Q = g (L, K), L and K are said to be _____ variables
Answer: *Exogenous*

FBQ 31: The partial derivative of a two-variable function such as Z=5x2y4 with respect to x is _____Â
Answer: *10xy4*

FBQ32: The partial derivative of a two-variable function such as Z=5x2y4 with respect to y is _____
Answer: *20x2y3*

FBQ33: One of the ways through which constrained problem organisation can be resolved is _____
Answer: *Substitution of variable*

FBQ34: One of the ways through which constrained problem organisation can be resolved is _____
Answer: *Substitution of variable*

FBQ35: When there are several constraints to be considered, the methods of substitution and elimination of variables become ineffective and _____ method become the best
Answer: *Lagrange multiplier*

FBQ36: Partial differentiation will no longer be effective when _____ endogenous variables are involved
Answer: *Two*

FBQ37: A matrix is a _____
Answer: *rectangular array of numbers*

FBQ38: _____ is one in which there exists linear dependence betweenat least two rows or columns
Answer: *Singular matrix*

FBQ39: The numbers (parameters or variables) are called _____
Answer: *Elements*

FBQ40: When the rows and columns of a matrix are the same or equal, the matrix is _____
Answer: *Square matrix*

FBQ41: If the determinant of matrix is not equal to zero, it is said to be _____
Answer: *Non-singular*

FBQ42: In determining the derivatives of an implicit function of X, _____ basic steps are considered

Answer: *3*

FBQ43: If a=52 b=69 ab _____
Answer: *|48|*

FBQ 44: Special forms of matrix that has its feature direction and magnitude are _____
Answer: *Vectors*

FBQ 45: A square matrix with 1s in its principal diagonal from left to right and 0s everywhere else is _____
Answer: *Identity Matrix*

FBQ 46: _____ is the determinant of 1281418
Answer: *104*

FBQ47: Given Y=8121218Â Â Y is _____Â
Answer: *0*

FBQ48: Given Y=8121218Â Â Y is _____Â
Answer: *0*

FBQ49: Given X=415623231Â Â X is _____
Answer: *42*

FBQ50: The integral sum of difference of two or more functions is the sum or difference of the individual integral. True or False?
Answer: *True*

Multiple Choice Questions (MCQs):
MCQ1: The concept of derivative is mainly concerned with
Answer: Rate of change

MCQ2: An important feature of a linear graph is its
Answer: Line

MCQ3: The concept of differentiation measures
Answer: Line

MCB4: The following are the rules of differentiation except
Answer: Sum or difference

MCB5: Given the function y = x + y = 0, which rule can be used to solve the function?
Answer: Sum or difference

MCQ6: Given that p = 12, find dp/dxÂ
Answer: 21

MCQ7: Find the derivative of the function f(x) = 5x â€“ 3Â

Answer: 5

MCQ8: Determine the derivative of (2k4 + 5) (3k5â€“ 8)
Answer: 54k3 + 75k4

MCQ9: If y = 2x2 + 7x â€“ 18, write the derivative of the equation
Answer: dydx [2x2 + 7x â€“ 18]

MCQ10: Find the derivative of the function y = 4x2+ 6x3
Answer: 18x3 + 8x2

MCQ11: If given the function y = (3x + 2) (4x3), determine the derivative using product rule
Answer: 48

MCQ12: If y = (x2 + 5x)2 where y = u2 and u = x2 +5x . Differentiate the function using chain rule
Answer: (2x +5)

MCQ13: Assuming we have the function y3-2x2y2+x4 = 0. Find dy/dx
Answer: 4x(y2-x2)y(3y-4x2)

MCQ14: To determine the initial function of an equation, economist uses
Answer: Matrix

MCQ15: The integration function which dependent on a single variable and have no precise numerical value is known as
Answer: Finite Integral

MCQ16: Integrate âˆ«x6dx
Answer: 17x5+c

MCQ17: Marginal ____ is defined as the change in total revenue as a result of change in the sale of an additional unit of a particular product
Answer: Product

MCQ18: Graph and relation are not the right tools to solve _____ problems
Answer: Optimality

MCQ19: Determine the initial functions of âˆ«3x2dx
Answer: x4+c

MCQ20: Compute the integral âˆ«(x+2)3dx
Answer: (x+2)44+c

MCQ21: Compute the integral âˆ«274x3dx
Answer: 2390

MCQ22: Compute the integral âˆ«02(11+x+2x)dx

Answer: ln 3 + 4

MCQ23: If the total cost function TC = 5Q2 + 7Q + 20, find the marginal function and evaluate it at Q = 6
Answer: 60

MCQ24: Determine and evaluate the marginal gain function of the profit function Q2 + 16Q + 50 at Q=6
Answer: 4

MCQ25: Find the total revenue function given that marginal revenue (MR) is 40 - 4Q + Q3
Answer: 40Â -Â 2Q2Â +Q44

MCQ26: Assuming we have a consumption function (C) which is 600 + 0.4Yd, where Yd is Y â€“ T, and T is 200, find marginal propensity to consume (MPC)
Answer: 0.4

MCQ27: Find the marginal revenue (MR) function of the demand function Q = 72 â€“ 4p
Answer: 72 â€“ 2p2

MCQ28: Find the partial differential of the function z=7x3+3x2y2+6y4 with respect to y
Answer: -6x2+14y3

MCQ29: Find the partial differential of the function z=7x3+3x2y2+6y4 with respect to x
Answer: 21x2+6xy2

MCQ30: Find the partial differential of the function z=7x3+3x2y2+6y4 with respect to x
Answer: 21x2+6xy2

MCQ31: Partially differentiate the model z=5x+2(4x+3y) with respect to y
Answer: 15x+6x

MCQ32: Partially differentiate the model z=5x+2(4x+3y) with respect to x
Answer: 40x+8+15y

MCQ33: Assuming we have the function q = 5p3 + 4p2 + 20, find the differentials?
Answer: 15p2+8

MCQ34: Find the derivative of the implicit function: 14x2+2y=0
Answer: 14x+2

MCQ35: Find the derivative for the inverse of the function Q = 80 â€“ 5P
Answer: 15

MCQ36: Find the derivative for the inverse of the function yÂ =Â 1000-3x2
Answer: -16x

MCQ37: Given that a=11435 b=8213 find a + b

Answer: 19535

MCQ38: Given that a=11435 b=8213 find a â€“ b</p&g
Answer: 3035

MCQ39: Given that a=910115714 b=2146
Answer: 9015730159

MCQ40: Given that a=584693 b=122311&
Answer: 12231169

MCQ41: Given that a=584693 b=122311&
Answer: 763569

MCQ42: If Z=0, the matrix is singular and there is linear dependence among the equations. Therefore, solution is _____
Answer: Known

MCQ43: If Zâ‰ 0, the matrix is non-singular and there is linear dependence among the equations. Therefore, the matrix is _____
Answer: Solvable

MCQ44: _____ satisfies the commutative law of matrix
Answer: (a + b) = (b + a)

MCQ45: _____ if not a scalar matrix, does not satisfy the commutative law
Answer: ab=baÂ

MCQ46: (a+b) = (b+a) satisfies the _____ law of matrix
Answer: Sum and difference

MCQ47: (a+b) = (b+a) satisfies the _____ law of matrix
Answer: Sum and difference

MCQ 48: Special forms of matrix that has its feature direction and magnitude are _____
Answer: Column

MCQ49: The determinant of 10858 is _____

MCQ50: The determinant is a scalar and is found only for _____ matrices
Answer: Square