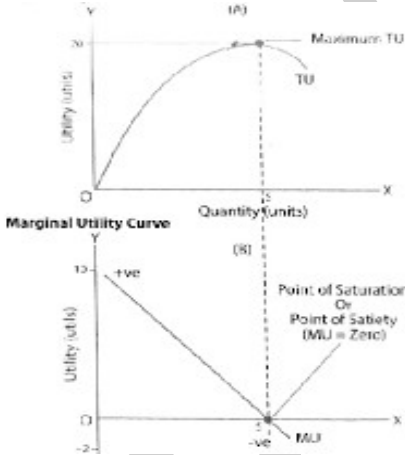# PART B: MICRO

Chapter 2 : Consumer's Equilibrium
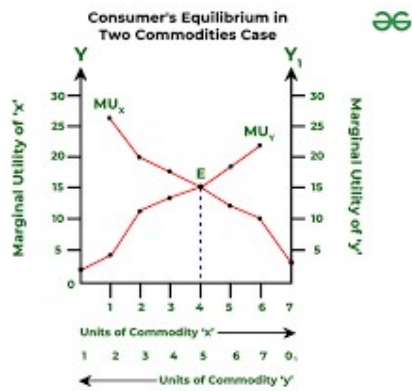
Q. NO	QUESTION	MARKS
1	Which of the following statement is true in connection with marginal utility and total utility? a) When MU is negative, TU increases at a diminishing rate. b) When MU is falling but remains positive, the TU is decreasing. c)When MU is zero, TU is maximum and constant. d)MU and TU are proportionately increases as consumption increases.	1
2	As Sakshi goes on consuming additional units of masala panipuri , her marginal utility on the golguppa will : a) Increases b) Decreases c) May increase or decrease d) None of these	1
3	Monika asks Devika that which condition must be fulfilled when the price-line / budget line is drawn. a) M/P_1 b) M/P_2 c) $M = P_xQ_x + P_yQ_y$ d) $M > P_xQ_x + P_yQ_y$	1
4	If two indifference curves intersect each other, then what will be its effect on the consumer satisfaction level. a) The consumer will be indifferent between the two curves. b) The consumer derives more and more satisfaction from both the indifference curves. c) At one point, he will derive the same level of satisfaction and at another point different level of satisfaction. d) The curve lying above before the intersection will give him more satisfaction.	1
5	The slope of the typical indifference curve: a) Is a downward sloping curve and straight line. b) Is a downward sloping curve and convex to the origin. c) Is a downward sloping curve and concave to the origin. d)Is an upward sloping curve and concave to the origin.	1
6	In the case Marshallian utility analysis , the consumer equilibrium in case of several commodities attained at that point where : a)$\frac{MU_x}{P_x} = \frac{MU_y}{P_y}$ b) $\frac{MU_x}{P_x} > \frac{MU_y}{P_y}$ c) $\frac{MU_x}{P_x} < \frac{MU_y}{P_y}$ d) Anyone of the above	1

7	The convexity of the indifference curve is shown due to: a) Increasing marginal rate of the transformation. b) Increasing marginal rate of the substitution. c) Diminishing marginal rate of the transformation. d) Diminishing marginal rate of substitution	1
8	Which of the following is not an assumption for the law of diminishing marginal utility ? a) Homogenous units of the commodity consumed b) Continuous consumption without the time gap c) Constant marginal utility of money d) Change of taste , preference and choice of the consumer.	1
9	Suppose at a particular point of time , the consumer finds $MRS_{xy} > P_x / P_y$, what does it imply ? a) He will buy more of good X b) He will buy more of good Y c) He can buy more of good X or good Y d) He will not buy any good	1
10	Nitesh asks Mita that can an indifference touch any axis ? Mita replied that yes, it can. Is Mita right? a) Yes, she might be right b) No, she is wrong c) Yes, she is practically right d) None of the above	1
11	**The ratio of exchange between two goods in indifference curve analysis is shown by: -** **(a) The price ratio** **(b) The indifference curve** **(c) The indifference map** **(d) All of the above**	1
12	**If a consumer spends his entire income (M) on Y commodity and nothing on X commodity, he will purchase what quantity of Y commodity?** **(a) $\frac{M}{Py}$** **(b) $5 > 5$** **(c) MRS$> \frac{Px}{Py}$** **None of the above**	1
13	**The statement A=B=10 Utils implies: -** **(a) An ordinal measure of utility** **(b) An ordinal and a cardinal measure of utility** **(c) A cardinal measure of utility** **None of the above**	1
14	**At the saturation point for commodity X, the MU is: -** **(a) Positive** **(b) Negative** **(c) Zero** **Any of the above.**	1
15	**If the consumer is below his budget line, the consumer:-** **(a) Is not spending all of his income.** **(b) May or may not spending all of his income.** **(c) Is spending all of his income.** **(d) Is in equilibrium**	1

16	Assertion (A): Budget Line / Price Line is a line showing different combinations of two goods which a consumer can attain when he spends his entire income on these goods, and the market price of the goods are known.	1
	Reason (R): Slope of Budget Line / Price Line shows the rate at which market price allows the consumer to substitute Good-X for Good-Y. It is expressed as Px / Py (a) Both Assertion (A) and Reason (R) are true and Reason (R) is the correct explanation of Assertion (A). (b) Both Assertion (A) and Reason (R) are true and Reason (R) is not the correct explanation of Assertion (A). (c) Assertion (A) is true but Reason (R) is false. (d) Assertion (A) is false but Reason (R) is true	
17	Which of the following utility approaches is based on the theory of Alfred Marshall? (a) Ordinal utility approach (b) Cardinal utility approach (c) Independent utility approach (d) None of the above	1
18	Identify the diagram of consumer equilibrium under the case of two commodities through cardinal utility approach. (a) (b) (c)	1

Consumer's Equilibrium in case of Single Commodity (X)

Consumer's Equilibrium ($MU_x = P_x$)

P_x

Zero MU (Point of Satiety)

MU and Price of commodity x (in ₹)

Units of Commodity X

MU_x

(d)

Consumer's Equilibrium in Two Commodities Case

MU_x

MU_y

Marginal Utility of 'x'

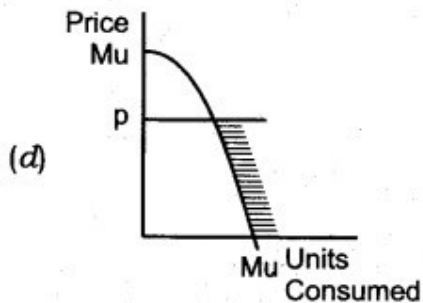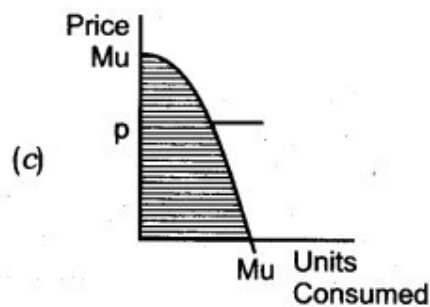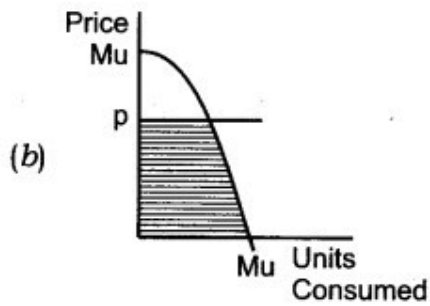Marginal Utility of 'y'

Units of Commodity 'x'

Units of Commodity 'y'
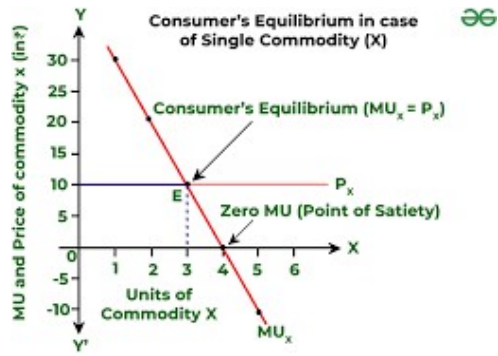
| 19 | Which of the shaded area in the diagrams below represent total utility? | 1 |

(a)

(b)

(c)

(d)
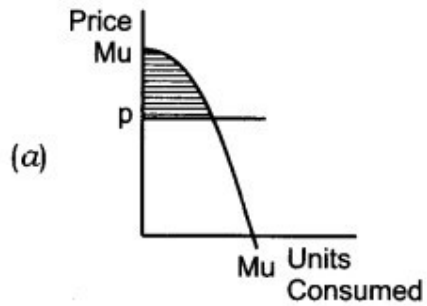
20	**What is meant by MU of one rupee?**	1
21	Why a consumer does wants to buy goods and services?	1
22	When does total utility becomes zero?	1
23	What happens at the point of satiety?	1
24	State the characteristics of marginal utility (MU) in the law of diminishing marginal utility?	1
25	Which curve is called equal satisfaction curve or iso-utility curve?	1
26	If monotonic preference of consumption increases, total utility (TU) increases or decreases?	1
27	Explain the behaviour of rational consumer?	1

28	How is total utility (TU) derived from the marginal utility?	1
29	Explain the budget line does not slope upward ?	1
30	If total utility of a person increases from 10 utils to 20 utils. What is the marginal utility (MU)	1
31	What do you understand by the term utils?	3
32	What do you mean by market rate of exchange?	3
33	What is consumer surplus?	3
34	Given the price of a good and income of the consumer, how will a consumer decide as to how much quantity of the good the consumer will buy ? Use utility analysis.	3
35	A consumer consumes only two goods, say good X and good Y. At a particular print of time P_x = Rs. 5/- and P_y = Rs. 4/- and MU_x = 50 utils and MU_x = 48 utls . Is the consumer in equilibrium? If not what mechanisms should be followed for the consumer equilibrium.	3
36	Higher indifference curve represents higher level of satisfaction . Justify the statement with reference to monotonicity of preference principle with a suitable diagram.	3
37	**State with reasons if the following statements are true or false:** **1. At a grand family get-together party you go on eating and eating since you have not to pay.** **2. As we consume more units of a commodity, our total utility from its consumption keeps falling.** **3. Total Utility remains the same, whether Marginal Utility is positive or negative.**	3
38	**Suppose a consumer wants to consume two goods which are available only in integer units. The two goods are equally priced at Rs 10 and the consumer's income is Rs 40.** **Write down all the bundles that are available to the consumer.** **Among the bundles that are available to the consumer. Identify those which cost her exactly 40.**	3
39	**Read the following and answer the questions on the basis of the same: -** **A consumer is an economic agent who uses goods and services for the direct satisfaction of his / her wants. Consumer consists of institution, individuals and groups of individuals or households. Consumer behavior refers to the way in which consumers spend their income. The consumer derives utility from his expenditure. The consumer chooses his expenditures and maximums his utility with the given income and given prices of goods and services.** **Consumption of goods and services leads to satisfaction of human wants. This satisfaction is called "Utility". Utility may be defined as "satisfaction derived from the consumption of a commodity" or it may be defined as "want-satisfying power of a commodity". Total Utility (TU) It is the sum**	3

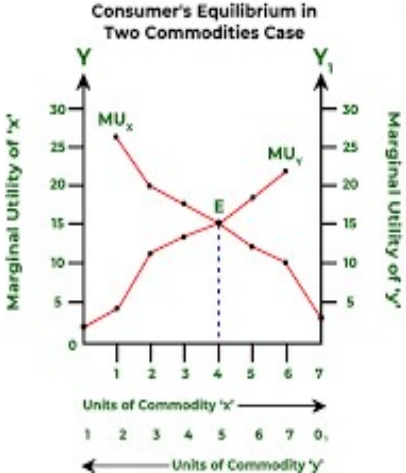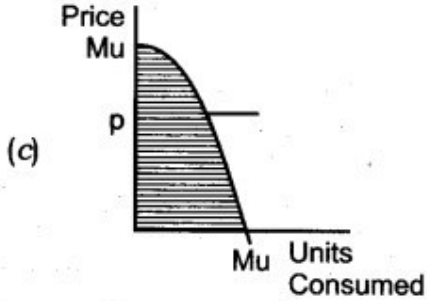|		
	total of utility derived from the consumption of all the units of a commodity. **Marginal Utility (MU)** It refers to additional utility on account of the consumption of an additional unit of a commodity. Q.(I) Utility in economics means: - (a) Want satisfying power of a commodity (b) Pleasure (c) Happiness (d) Usefulness Q.(II) Marginal utility is: - (a) Total minus average utility (b) Addition to total utility (c) Total plus average utility (d) Total utility divided by the number of units Q. (III) How is total utility derive from marginal utility?	
40	A consumer wants to consume two goods. The prices of the two goods are Rs 4 and Rs 5 respectively. The consumer's income is Rs 20. 1. Write down the equation of the budget line. 2. How much quantify of good 1 can the consumer consume if she spends her entire income on that good? 3. How much of good 2 can she consume if she spends her entire income on that good? 4. What is the slope of the budget line?	4
41	'Higher indifference curve represents higher level of satisfaction to the consumer'. Explain the statement, also state the underlying assumption related to this property of indifference curve.	4
42	How many chocolates will a consumer have, if they are available free of cost? Also define the relationship between TU and MU with an appropriate labeled diagram.	4
43	Explain the following statements:- In indifference curve, increase of one good requires decrease of other goods and vice-versa.	4
44	Explain the law of Equi-marginal utility or Gossen's second law in brief.	4
45	Explain with the help of a diagram:- total utility is summation of marginal utility.	4
46	Briefly explain the law of the diminishing marginal utility.	4

47	With an hypothetical example and diagram , explain the relationship between marginal utility and total utility.	4
48	Why does an indifference slope downwards from left to right? Cite the reasons.	4
49	How is consumer equilibrium in case of commodities under Marshallian utility analysis differ from Hicksian Indifference curve analysis.	6
50	Why does a consumer attain equilibrium under indifference analysis at point of tangency between indifference curve and price line?	6
51	Diminishing marginal rate of substitution operates in the indifference curve analysis. Do you agree? If so, justify it.	6
52	**Derive the inverse relation between price of the good and its demand from single commodity equilibrium condition "marginal utility = price".**	6
53	**Why is an Indifference curve generally convex to the origin? And justify the validation of negatively sloped of Indifference curve.**	6
54	**Once a consumer reaches the point of equilibrium, he would not like to change his allocation of expenditure on good X and Y even if price of one commodity changes. Do you agree? Give reasons.**	6

55	**Read the following Case Study carefully and answer the questions on the basis of the same:**
	
	If our income rises, we generally tend to buy more of the goods. More income would mean more pens, more shirts, more shoes, more cars and so on. But there are exceptions. If initially, you are buying coarse grain, how would you take your increase in income now? Perhaps, as a first step, you would discard the consumption of inferiors. Surely, this happens in the deserts of Rajasthan where the rich minority eats wheat while the poor majority eats Bajra as their staple food.
	
	1. The law of demand does not apply to _____goods. (Normal/ Giffen)
	2. Inferior goods are those whose income effect is_____. (Negative/ Positive)
	3. A fall in income of the consumer (in case of normal goods) will cause
	    1. upward movement on the demand curve.
	    2. downward movement on the demand curve
	    3. rightward shift of the demand curve
	    4. leftward shift of the demand curve
		6

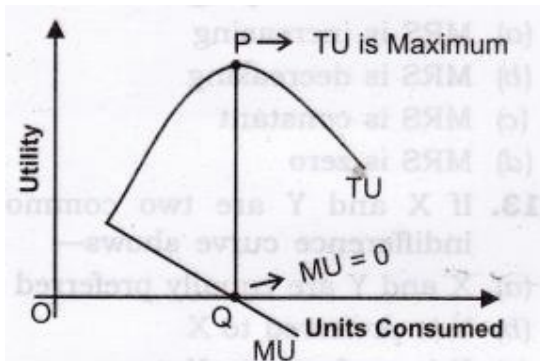|		

	4. As a result of rise in consumer's income, the demand curve for coarse-grain (inferior good)
	    1. becomes a horizontal straight line
	    2. becomes a vertical straight line
	    3. shifts to the right
	    4. shifts to the left	

56	**Read the following Case Study carefully and answer the questions on the basis of the same:**
	
	Census of India is a decennial publication of the Government of India. It is published by Registrar General and Census Commissioner, Under Ministry of Home Affairs, Government of India. It is a very comprehensive source of secondary data. It relates to population size and various aspects of demographic changes in India. Under the Ministry of Home Affairs, Government of India. It may be of historical interest that though the population census of India is a major administrative function; the Census Organisation was set up on an ad-hoc basis for each Census till the 1951 Census. The Census Act was enacted in 1948 to provide for the scheme of conducting population census with duties and responsibilities of census officers. The Government of India decided in May 1949 to initiate steps for developing systematic collection of statistics on the size of the population, its growth, etc., and established an organisation in the Ministry of Home Affairs under Registrar General and ex-Officio Census Commissioner, India.
	    1. Data originally collected in the process of investigation are known as _____(Primary data/ Secondary data).
	    2. The problem of double conclusion arises in _____(indirect oral investigation/ direct personal interview).
	    3. Post independence, the first census of India was conducted in _____ (1949/1951)
	    4. Census of India is carried out once in _____years. (10/ 5)
		6

57	**Read the following Case Study carefully and answer the questions on the basis of the same:**
	Unpublished data or literature is known as grey literature in research. (The term 'grey literature' also includes data published in a non-commercial form, such as a conference proceeding.) These data are collected by the government organisations and others, generally for their self-use or office record. Unpublished data is useful mainly in secondary research, such as literature reviews and systematic reviews. It provides pointers to new research and perhaps also research paths to avoid. Preprints are a growing form of unpublished data these days and have proved very useful in guiding research in critical areas such as COVID-19. Published sources of secondary data are government publications, semi-government publications, publications of research institutions, international publications etc.
	    1. _data are collected from published or unpublished reports. (Primary/ Secondary)
	    2. In the case of a _____, answers are to be written by the enumerators specifically hired for the purpose. (Questionnaire/ Schedule)
		6

| | 3. _ publish data relating to education, health, births and deaths. (Government publications/ Semi- Government Publications)
 4. 76th round of NSSO was on _____ (Persons with disabilities and drinking water/ density of population) | |

ANSWER

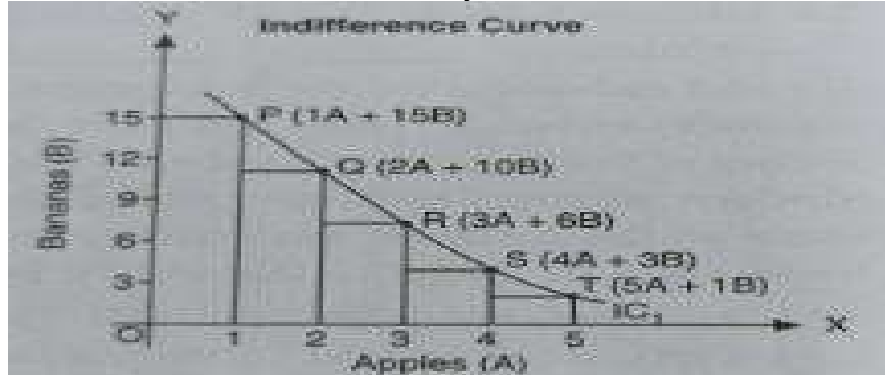|	
1	c) : When MU is zero, TU is maximum and constant.
2	b) : decrease.
3	c) : $M = P_xQ_x + P_yP_y$
4	c) At one point, he will derive the same level of satisfaction and at another point different level of satisfaction.
5	b) Is a downward sloping curve and convex to the origin.
6	a) : $\dfrac{MU_x}{P_x} = \dfrac{MU_y}{P_y}$
7	d) Diminishing marginal rate of substitution
8	d) Change of taste , preference and choice of the consumer.
9	(a) : He will buy more of good X
10	(b) : No , she is wrong
11	**(a) – The price ratio.**
12	**(a)- M/PV.**
13	**(c) - A cardinal measure of utility.**
14	**(c) – Zero.**
15	**(a) - Is not spending all of his income.**
16	**(b) Both Assertion (A) and Reason (R) are true and Reason (R) is not the correct explanation of Assertion (A).**
17	(b) cardinal utility approach
18	**(d)**

	Consumer's Equilibrium in Two Commodities Case
19	
20	**MU of one rupee refers to the utility obtained from purchase of commodities with one rupee.**
21	A consumer is one who buys goods and survives for satisfaction of wants.
22	Total utility becomes zero at zero level of consumption.
23	At the point of satiety, maximum satisfaction is obtained as Total Utility (TU) reaches at maximum level.
24	Marginal Utility (MU) drops to zero or becomes negative.
25	Indifference Curve.
26	Total Utility increases.
27	A rational consumer only aims to maximise his total satisfaction.
28	The Total Utility is the total sum of Marginal Utilities of different units of goods. $TU_n = MU_1 + MU_2 + MU_3 + \cdots MU_n$
29	In Budget line as more and more goods are added the lines start to slope downward because some units of other goods are sacrificed.
30	Solution $TU_1 = 10$ $TU_2 = 20$ $MU = TU_2 - TU_1$ $= 20 - 10$ $= 10$ utils
31	Utils are imaginary and psychological units which are used to measure satisfaction (Utility) obtained from the consumption of a certain quantity of a commodity.
32	Market rate of exchange (MRE) is the rate at which one good is sacrificed in the market to obtained and extra unit of other goods.
33	Consumer surplus is defined as the difference between what the consumer wants to pay for a product and what he actually pays for that product.

34	Given the income of the consumer and price of the good , the consumer decide to buy that quantity of the good where $$\frac{MU_x}{P_x} = MU_m$$ This means the marginal utility derived from the commodity in terms of money is equal to its price.
35	To remain in equilibriumin case of several commodities, the condition to be fulfilled is $\frac{MU_x}{P_x} = \frac{MU_y}{P_y}$ But at a particular point of time, $MU_X=50$, $MU_Y=48$, $P_X=$Rs 5/- & $P_Y =$Rs 4/-. So 50/5<48/4. This implies that the consumer derives more satisfaction from the consumption of good-Y. Hence he will more and more units ot. As he consumes more, his marginal utility will decrease. This process will continue till $\frac{MU_x}{P_x} = \frac{MU_y}{P_y}$
36	The monotonicity of the preference states that between two bundles of the goods, the consumer will prefer that the bundle that has at least one unit more than the other good. Accordingly, between the two indifference curves, the higher indifference shows more units with more goods and not less of the other good. So the consumer prefers higher indifference curve to lower indifference curve.
37	**1. False: For free goods, a consumer will limit his consumption of a commodity to a point where the point of full satisfaction is reached. Consumption beyond this point will only generate disutility.** **2. False: As we consume more units of a commodity, its marginal utility keeps on diminishing. Total utility keeps on rising, but at a diminishing rate till marginal utility becomes zero.** **3.The given statement is refuted. When Marginal Utility is positive till point Q as shown in figure of Question 1, then total Utility increases at a diminishing rate and when Marginal Utility is negative after point Q, total Utility decreases.**
38	**Bundles available to consumer are: (0,0), (0,1), (0,2), (0,3), (0,4), (1,0), (1,1), (1,2), (1,3), (2,0), (2, 1), (2, 2), (3, 0), (3, 1) and (4, 0).** **(0, 4), (1, 3), (2, 2), (3, 1) and (4, 0) cost exactly Rs 40. All the other bundles cost less than Rs 40.**
39	**(I) (A) - Want satisfying power of a commodity** **(II) (D)- Total utility divided by the number of units** **TU = MU1 + MU2 + MU3 +———— +** **MUn=ΣMU.**
40	**(1). Let the two quantities of goods be X and Y. We are given Px = Rs 4,**

Py = Rs 5, Consumer's income (M) = Rs 20. Budget line equation is

Px.X+Py.Y=M or = 4X+5Y=20.

(2). If quantity consumed of good Y = 0, Budget equation becomes

Px.X + 0 = M

or

  4. X = 20 = X = 20/4 = 5 units.

(3). If quantity consumed of good X = 0, Budget equation becomes,

0 + Py.Y = M

or

  5. Y = 20 = Y = 20/5 = 4 units.

(4). Slope of budget line = Px/Py = 4/5 = 0.8

41	
	Higher IC lying above and to the right of another IC represents a higher level of satisfaction. All combinations of goods X and Y lying on the higher indifference curve IC2 have more satisfaction than lower indifference curve IC1 as shown in figure given here.

42	
	In case of free chocolates, consumer will carry on the consumption till his total utility is maximum. It means, till the additional chocolates gives positive satisfaction, consumer will keep on having chocolates. Let us understand this with the help of the figure shown in Question 1. Consumer will stop the consumption at the point of satiety (Point 'Q'), i.e., where marginal utility is equal to zero. 1. When MU decreases, TU increases at a diminishing rate. (As shown in figure till consumption level OQ). 2. When MU is zero, TU is constant and maximum at P. 3. When MU is negative, TU starts diminishing.

| 43	In case of Indifference Curve, each combination of two goods equal satisfaction. So, when a consumer increases the consumption of one good then consumption of other good must be decreased, so as to maintain same level of satisfaction. In the diagram, apples are measured along the x-asis and bananas on the y-axis. All points (P,Q,R,S and T) on the curve shows different combinations of apples and bananas. Now, when a consumer moves from combination P to Q, consumption of apples increases by 1 unit while that of bananas decreases by 5 units.
44	According to the law of Equi-Marginal Utility, a consumer gets maximum satisfaction, when ratio of MU of two commodities and their respective price are equal and MU falls as consumption increases. It means there are two necessary conditions to attain consumer's equilibrium in case of two commodities (i) The ratio of marginal utility to price is same in case of both the goods. As we know when a consumer in consumption of single commodity (say x) is at equilibrium When $MUx / Px = MUm$.......................(1) Similarly, consumer consuming another commodity (say y) will be at equilibrium When $MUy / Py = Mum$.........................(2) Equating (1) and (2) we get $MUx/Px = MUy/Py = Mum$ As marginal Utility of money (MUm) is assumed to be constant, the above equilibrium condition can be related as :[$MUx/Px = MUy/Py$ or $MUx/MUy = Px/Py$ When $Px = Py$ then the equilibrium condition can be related as $MUx = MUy$ (ii) MU falls as consumption increases :- The second condition needed to attain consumer's equilibrium is that MU of a commodity must fall as more of it is consumed. If MU does not fall as consumption increases, the consumer will end up buying only one good which is unrealistic and consumer will never reach the equilibrium point. Finally, it can be concluded that a consumer in consumption of two commodities will be at equilibrium when he spends his limited income in such a way that the ratio of Marginal Utilities of the two commodities and their irrespective prices are equal and MU falls as consumption increases.
45	Total Utility can be calculated as the sum of marginal utilities from all units, i.e. $TUn = MU1 + MU2 + MU3 + $.................. MUn $TUn = \sum MU$ The concept of TU and MU can be better understood from the following schedule and diagram Table of TU and MU <table><tr><td>Ice-Cream consumed</td><td>Marginal Utility (MU)</td><td>Total Utility (TU)</td></tr><tr><td>1</td><td>20</td><td>20</td></tr></table>

2	16	36
3	10	46
4	4	50
5	0	50
6	-6	44

In the diagram, un
along the y-axis. N
consumption the 5
After consumption
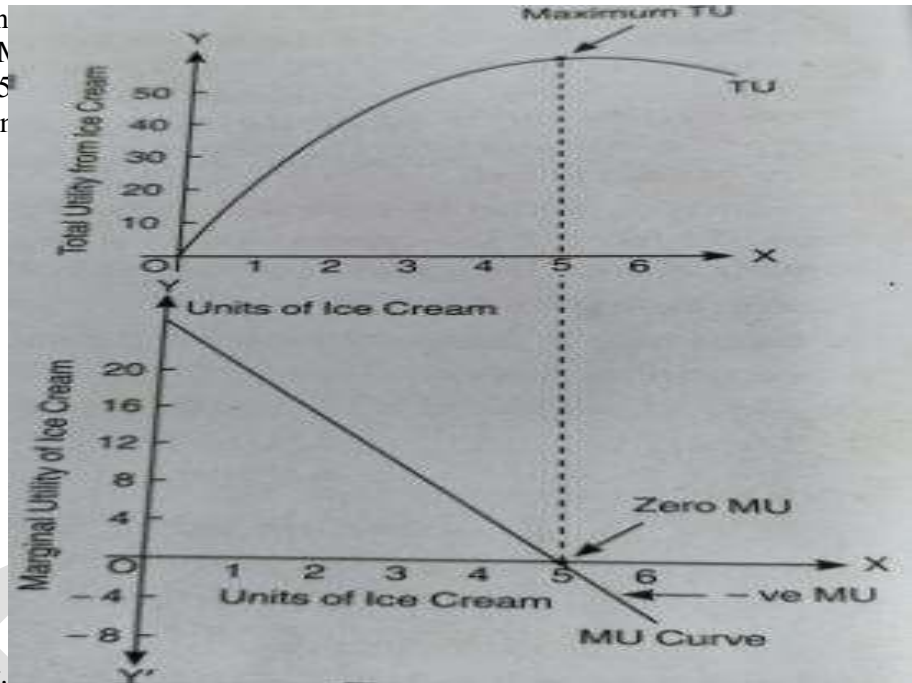
starts diminishing.

46	The law of the diminishing marginal utility states that as the consumer goes on consuming additional units of a particular good or commodity , the marginal utility derived from energy successive units goes on the diminishing or decreasing. MU/TU

Units of Good X   MU$_x$
 Consumed
  1   17
  2   07
  3   04
  4   0
 5   -2

Units of good consumed
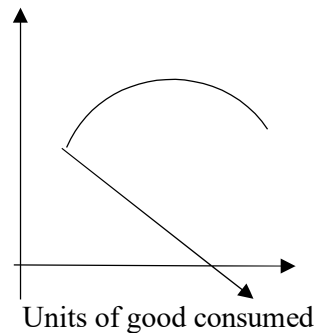
| 47	• When the first unit of the good is consumed, MU=TU. • When the MU falls but remains positive, TU increases at a diminishing rate. • When MU is zero, TU is maximum and constant. When MU is negative , TU starts falling.

48	An indifference curve slopes downward from left to the right because of the reason that if the consumer prefer to consume more and more units of one commodity , then he will sacrifice some units of the other commodity in order to remain indifferent among all possible combinations of two goods.
49	Marshallian utility Analysis 1.Utility cardinally measured 2. equilibrium is attained where MU derived from both the units gives same level of satisfaction 3 $\dfrac{MU_x}{P_x} = \dfrac{MU_y}{P_y}$ Hicksian indifference curve Analysis : measured. 1. Utility ordinally line = slope of indifference curve. 2. Slope of the price and price line 3. Tangency between IC
50	a. At this point the slope of the price line equals to the slope of indifference curve. b. The consumer derives maximum satisfaction. c. At any intersection point, the satisfaction level is less.
51	As the consumes additional units of one commodity, he is ready to sacrifice lesser units of the other commodity. As the consumer buys additional units of one good, then the saturation level is achieved , hence he derives lesser and lesser satisfaction. So he is ready to lesser units of the other good, so diminishing the marginal rate of substitution is operated.
52	**As we know a consumer purchases a good up to the point where marginal utility of the good becomes equal to the price of that good.** **MU = Price** **1. Figure B is derived from Figure A.** **2. In figure A, initially, consumer equilibrium is attained at point E, where let MU (10) = Price (10). Corresponding to point E, we derive point E1 in figure B.**

Figure A

Figure B
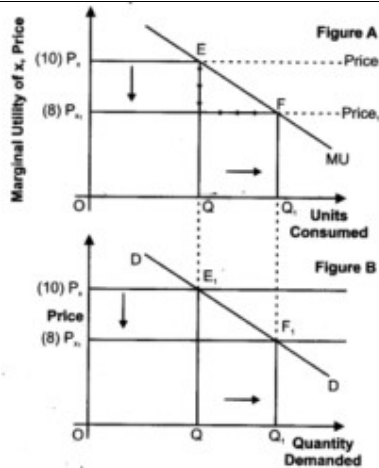
3. Due to fall in price (suppose from 10 to 8), MU > Price at the given quantity. So, we can say that benefit is greater than cost and the consumer increases the quantity till MU = Price condition is attained at F. Corresponding to point F, we derive the point F1; in figure B. So, by joining point E1 and F1 together, we derive the demand curve.

| 53 | 1. As, we know quantity of one commodity increases, its marginal rate of substitution falls because of law of diminishing marginal utility. Marginal rate of substitution is a slope of Indifference curve and whenever slope [MRS] decreases it makes the curve convex to the point of origin. |
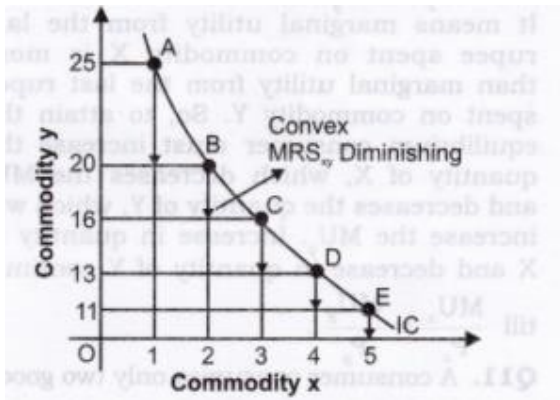
2. In the above diagram, units of y are measured on vertical axis and units of x on horizontal axis. When the consumer moves from combination A (1 x + 25y) to B (2x + 20y), he acquires one additional unit of x and forgoes (sacrifice) 5 units of y, if he wants to get the same level of satisfaction. The consumer has to reduce the consumption of y when he increases the consumption of x. The number of units of good y that the consumer is willing to sacrifice for an additional unit of good x, so as to maintain the same level of satisfaction is technically called the marginal rate of substitution of x for y and is denoted by MRSxy.

3. So, the MRSxy when the consumer move from combination A to B is 5 : 1, further as the consumer move from combination B to C, he acquires one more units of x, but the consumer forgoes a smaller number of y, i.e., MRSxy at this stage is 4 : 1. It may be observed now that MRS diminishes as the consumer moves from combination A to B, B to C, C to D, and D to E. The consumer forgoes less and less units of y as he acquires additional unit of x.

The above points also justify the validity of negatively sloped indifference curve.

| 54 | No, I do not agree. |
| | If a consumer is in equilibrium and price of one commodity changes then this disturbs the equilibrium. Let us understand this from the cases below: |

Cardinal Approach (Two Commodity Cases)	Ordinal approach
If Px falls	If Px Falls
MUx/Px > MUy/Py	MRSxy > Px/Py
It implies that marginal utility of money from commodity X is greater than Marginal utility of money from commodity Y	It implies that a consumer is willing to sacrifice more unit of Y for additional X than what is required in the market
A rational consumer will therefore, increase the	A rational consumer will therefore, increase the

	consumption of X and decrease the consumption	consumption of X and decrease the consumption Y.	
	Law of DMU operates.	Law of DMU operates.	
	MUx falls and MUy rises till the time, MUx/Px = MUy/Py	MRSxy falls till the time, MRSxy = Px/Py	
55	1. Giffen 2. Negative 3. Leftward shift of the demand curve 4. Shifts to the left		
56	1. Primary data 2. Indirect oral investigation 3. 1951 4. 10		
57	1. Secondary Data 2. Schedule 3. Semi- Government Publications 4. Persons with disabilities and drinking water		