

Marketing  
Kaizen team

Student name (.ARABIC): \_\_\_\_\_  
Student #: \_\_\_\_\_

1	-1
2	-5
3	-5
4	0
5	-10
6	-5
7	-8

$\frac{68}{100}$

-34

**Question 1. (7 Points) Answer T/F in the box.**

1.	F	Response to marketing actions often takes place instantly.
2.	T	A target market: is a market that a company chooses to serve effectively and profitably.
3.	F	A snake chart cannot be used in cluster profiling instead, it is used in market segmentation.
4.	<del>X</del>	Discriminant analysis is used in market segmentation.
5.	T	Products and services with similar use functions are in similar markets, and hence they are in competition.
6.	T	Markets may be defined and segmented by studying the switching behavior of customers
7.	F	The main dimensions of the VALS segmentation framework are consumer motivation (the vertical dimension) and consumer resources (the horizontal dimension).

**Question 2. Fill in the blank (15 Points)**

- marketing is a societal and managerial process by which exchanges are brought about in an economy to satisfy the needs and wants of individuals and organizations.
- controllable variables: those that the firm controls, such as the level of advertising and the product features to be designed into a new product.
- Aging of a population, new regulations, and industry capacity are all examples of environmental variables.
- The behavior indicated by number 1 is ~~carry over~~ response.



- marketing segmentation is the process of dividing customers into groups whose valuations of products are similar between groups and who differ within those groups.
- A segmentation model requires a dependent variable (Segmentation basis), and independent variables ( Segmentation descriptive )
- Demographic segmentation is an example of segment descriptive.
- A market is not defined by a product, rather by common customer needs.
- cluster analysis is most often used to help a marketing researcher predict the group or category to which a customer belongs.
- market segmentation comprises the identification of different needs for specific groups or segments of customers, deciding which of these groups the organization should serve (and on what basis) and then designing marketing mix programs so the needs of these groups are then more closely met.
- This basis for life stage segmentation centers on the idea that consumers pass through a series of distinct phases in their lives. Each phase is associated with different purchasing patterns and needs.
- data reduction is a tool to reduce the data.
- Communality represents the percentage of variance in a specific variable, accounted for by all the components and is thus a number ranging from zero to one.
- environmental variables are variables that are not under the control of any one player in the marketing system.
- ~~\_\_\_\_\_~~ represent the contribution of a variable to a component,

**Question 3: (20 Points) Choose the correct answer for the following questions and copy the answers to the boxes**

1	A	6	B	11	B	16	C
2	B	7	C	12	D	17	A
3	B	8	B	13	A	18	C X
4	A	9	A C N	14	B X	19	C
5	D	10	B C	15	B X	20	D



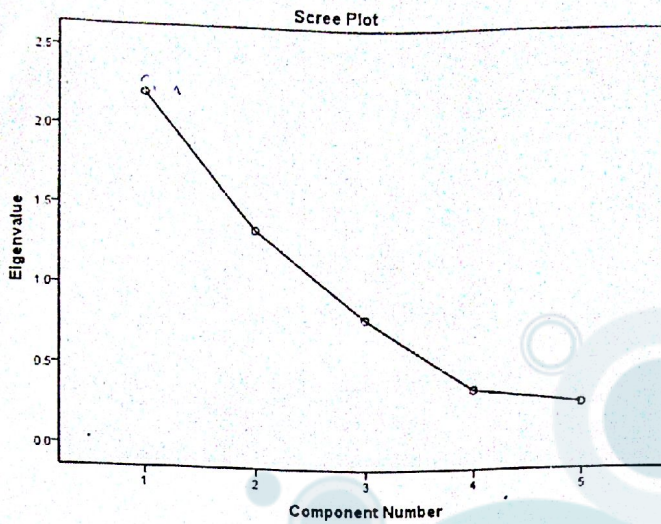
1. When using "User status" The distinction may be made between
  - A) Non-users, Ex-users, Potential users, First-time users, Regular users
  - B) Heavy users, Medium users, Light users, Non-users
  - C) Hard core loyals, split loyals, shifting loyals, switchers
  - D) Unaware of the product, aware of product, informed of product, interested in product, desire the product, and some intend to buy the product.
2. When we purchase a car it fulfils the functions of transport, prestige, convenience, etc. This is an example of segmenting a market based on:
  - A) Occasions
  - B) Benefits sought
  - C) Loyalty Status
  - D) Buyer-readiness stage
3. \_\_\_\_\_ consists of evaluating the attractiveness of different market segments and selecting one or more market segments to enter.
  - A) Market segmentation
  - B) Market targeting
  - C) Positioning
  - D) Differentiation
4. Which of the following divides buyers into segments based on their knowledge, attitudes, uses, or responses to a product?
  - A) Behavioral segmentation
  - B) Psychographic segmentation
  - C) Demographic segmentation
  - D) Gender segmentation
5. If men and women respond similarly to marketing efforts for computers, they do not constitute separate segments. In this sense, these segments are not \_\_\_\_\_.
  - A) Feasible
  - B) Manageable
  - C) Reliable
  - D) Differentiable
6. \_\_\_\_\_ divides buyers into different segments based on social class, lifestyle, or personality characteristics.
  - A) Behavioral segmentation
  - B) Psychographic segmentation
  - C) Demographic segmentation
  - D) Gender segmentation
7. Which of the following involves going after a large share of one or a few smaller segments or niches?
  - A. Micromarketing
  - B. Differentiated marketing
  - C) Concentrated marketing
  - D. Undifferentiated marketing
8. Using a \_\_\_\_\_ strategy, a firm decides to target several market segments and designs separate offers for each.
  - A. micromarketing
  - B) differentiated marketing
  - C. concentrated marketing
  - D. undifferentiated marketing
9. A(n) \_\_\_\_\_ or tree graph is a graphical device for displaying clustering results. Vertical lines represent clusters that are joined together. The position of the line on the scale indicates the distances at which clusters were joined.
  - A) dendrogram
  - B) scattergram
  - C) scree plot
  - D) icicle diagram
10. Which statement is *not* true concerning the clustering solution if the variables are measured in vastly different units?
  - A) The clustering solution will not be influenced by the units of measurement.
  - B) Standardization can reduce the differences between groups on variables that may best discriminate groups or clusters.
  - C) It is desirable to eliminate outliers.
  - D) We must standardize the data by rescaling each variable to have a mean of zero and standard deviation of unity.



11. \_\_\_\_\_ is a clustering procedure characterized by the development of a tree-like structure.
- A) Non-hierarchical clustering
  - B) Hierarchical clustering
  - C) Two Step clustering
  - D) Optimizing partitioning clustering
12. \_\_\_\_\_ is a clustering procedure where each object starts out in a separate cluster.
- A) Non-hierarchical clustering
  - B) Hierarchical clustering
  - C) Divisive clustering
  - D) Agglomerative clustering
13. The \_\_\_\_\_ method is based on minimum distance or the nearest neighbor rule.
- A) single linkage
  - B) medium linkage
  - C) complete linkage
  - D) average linkage
14. The \_\_\_\_\_ method uses information on all pairs of distances, not merely the minimum or maximum distances.
- A) single linkage
  - B) medium linkage
  - C) complete linkage
  - D) average linkage
15. \_\_\_\_\_ are agglomerative methods of hierarchical clustering in which clusters are generated to minimize the within-cluster variance.
- A) Variance methods
  - B) Linkage methods
  - C) Centroid methods
  - D) Parallel methods
16. In discriminant analysis, the criterion or dependent variable is \_\_\_\_\_ and the predictor or independent variables are \_\_\_\_\_ in nature.
- A) interval; categorical
  - B) ordinal; interval
  - C) categorical; interval
  - D) ordinal; categorical
17. The linear combinations of independent variables developed by discriminant analysis that will best discriminate between the categories of the dependent variable are \_\_\_\_\_.
- A) discriminant functions
  - B) discriminant scores
  - C) characteristic profiles
  - D) classification matrix
18. Discriminant analysis can be used to answer questions such as \_\_\_\_\_.
- A) How much of the variation in sales can be explained by advertising expenditures, prices, and level of distribution?
  - B) In terms of demographic characteristics, how do customers who exhibit store loyalty differ from those who do not?
  - C) What are the distinguishing characteristics of consumers who respond to direct mail solicitations?
  - D) Both B and C are correct.
19. In the VALS framework, the four groups with lower resources are \_\_\_\_\_.
- A) Believers, Strivers, Thinkers, Survivors
  - B) Innovators, Thinkers, Makers, Survivors
  - C) Believers, Strivers, Makers, Survivors
  - D) Believers, Strivers, Achievers, Survivors
20. The \_\_\_\_\_ is a statistic summarizing the strength of association between two metric variables.
- A) multiple regression analysis
  - B) partial correlation coefficient
  - C) ANOVA
  - D) Pearson correlation coefficient



Question 4. (5 Points)



Determine the number components to be extracted based on the above scree plot. Explain your reasoning.

2 component because eigen value  $\geq 1$

Question 5. (10 Points)

We ask respondents from four organizations that will purchase a copier to state which of its eight features (F) are essential, (F1=sorting, F2=color, etc.). Segment the market based on the following result:

	Essential Features? (Yes or No)							
	F1	F2	F3	F4	F5	F6	F7	F8
Org. A	Y	Y	N	N	Y	Y	Y	Y
Org. B	Y	Y	N	N	N	Y	Y	Y
Org. C	N	N	Y	Y	Y	N	N	N
Org. D	N	N	Y	Y	Y	N	Y	Y

Question 6. (20 Points)

Component Matrix

Variable	Component		
	F <sub>1</sub>	F <sub>2</sub>	F <sub>3</sub>
	1	2	3
X1	0.625	0.417	0.047
X2	0.297	-0.703	0.645
X3	0.913	0.066	-0.090
X4	-0.257	0.764	0.576

	$R_1^2$	$R_2^2$	$R_3^2$
	0.6806	0.1738	0.0022
	0.0882	0.4942	0.416
	0.8336	0.0043	0.0081
	0.0660	0.5836	0.3317
eigen value	1.668	1.256	0.758

Consider the above component matrix,

- Calculate the eigenvalues
- Calculate the communalities.
- What is the maximum number of components that may be extracted?
- Determine the number of components that should be extracted, explain your reasoning.

1. eigenvalue for  $F_1 = 1.668$   
 " "  $F_2 = 1.256$   
 " "  $F_3 = 0.758$

2. For  $X_1 = 0.6806 + 0.1738 + 0.0022 = 85.6\%$  &  $0.8566$   
 "  $X_2 = 0.0882 + 0.4942 + 0.416 = 99.8\%$  &  $0.9984$   
 "  $X_3 = 0.8336 + 0.0043 + 0.0081 = 84.6\%$  &  $0.8461$   
 "  $X_4 = 0.0660 + 0.5836 + 0.3317 = 98.1\%$  &  $0.9813$

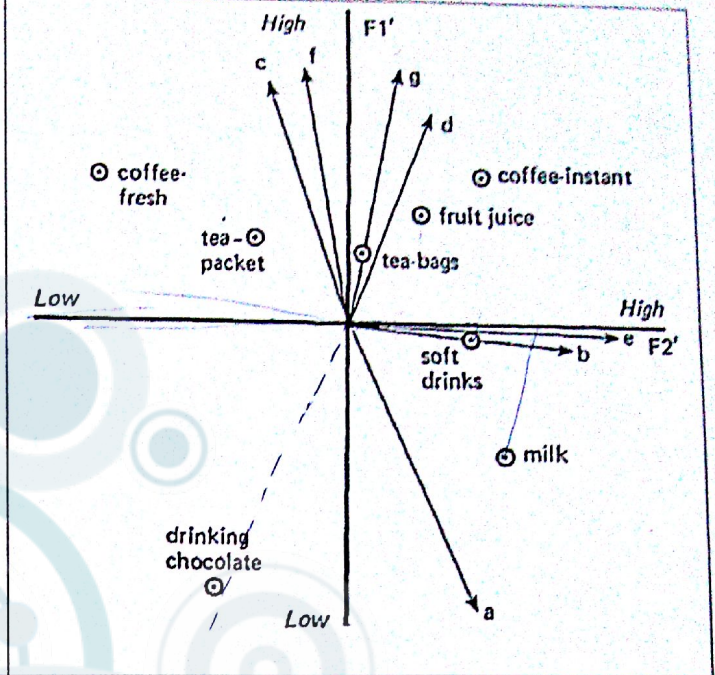
4)  $F_1$  &  $F_2$  can be extracted because their eigen value is greater than one



The products rated were in random order: (1) tea-bags, (2) coffee instant, (3) fruit juice, (4) soft drinks, (5) coffee-fresh, (6) tea-packet, (7) drinking chocolate, (8) milk.

Statements about products

- a) Expensive per drink
- b) Quick to make
- c) Suitable with all or most meals
- d) Is not harmful even if you drink a lot
- e) Is prepared easily
- f) Can be served to most people I know
- g) Can drink it throughout the day



1. Which products are in the same market? (Explain)

milk & soft drinks  
 coffee fresh & tea-packet  
 coffee-instant & fruit juice & tea bags  
 drinking chocolate

2. Which product ranks the best with respect to attribute (e)?

milk.

3. Which product ranks the worst with respect to attribute (d)?

drinking chocolate.

4. What possible name could you assign to the F1'-axis? (Explain)

F (can be served to most people I know)  
 because it is the nearest.

5. What possible name could you assign to the F2'-axis? (Explain)

e (is prepared easily) ease  
 because it is the nearest attribute

6. Which attribute correlate least with (b)? (Explain)

c it is the farthest attribute