Name: **Enrolment No:**	

UNIVERSITY OF PETROLEUM AND ENERGY STUDIES
End Semester Examination, December 2019

Course: Customer Relationship Management **Semester: 5**
Program: BBA Core – Marketing **Time: 3 Hours**
Course code: MKTG3001 **Max. Marks: 100**
Instructions: Attempt all the questions.

	SECTION A **(10*2 = 20 Marks)**	
Q1.	(a) Tick True/False. i. Customer service associate work directly with the customer. ii. When a customer had any issues that need to be resolved, they cannot approach customer service representative. iii. It is important for any customer service associate to listen closely to the customer. iv. Selling the company's product and services is not the part of customer service representative. v. Making an apology to customers after things go wrong is positively related to satisfaction. (b) Fill in the blank. vi. Percentage of total number customer retained in context to the customers that approached for cancellation is __________________ rate. vii. CRM system should promote a __________________ philosophy. viii. CRM is philosophy of _______________ marketing. ix. A good CRM system allows to acquire customers and _______________. x. Retaining current customers is vital to growth of _______________.	**CO1**
	SECTION B **(4*5 = 20 Marks)** **Attempt all the questions.**	
Q2.	What areas will attract most attention in the next few years of CRM? Please illustrate and explain your answer.	**CO2**
Q3.	How do organisations have to adapt their strategy, organisation and commercial approach in order to meet the changing needs of customers? Please illustrate your answer.	**CO3**
Q4.	Indicate in what way a tour operator might measure the booking behaviour of its customers.	**CO4**
Q5.	Think of five examples of companies, which implement customer intimacy. Explain your answer.	**CO2**
	SECTION-C **(2*15 = 30 Marks)** **Attempt only two questions.**	
Q6.	Describe systematically how a CRM change and implementation project could be designed.	**CO4**
Q7.	Voice processing has its proponents as well as its opponents. Both sides are capable of shedding light on the pros and the cons from the perspective of the customers as well as the supplier. (a) Name two advantages of voice processing for the customer as well as the supplier. (b) Name two disadvantages of voice processing for the customer as well as the supplier.	**CO3**
Q8.	Within a relationship-oriented organisation, everyone must have a current, correct, complete and consistent image of the individual customers. Reality often tends to deviate from this ideal, in spite	**CO2**

	of the implementation of supportive CRM systems. Name four possible causes of this and explain your answers.	

SECTION-D **(3*10 = 30 Marks)**

Read the case and answer all the questions mentioned below:

Cross-selling within a fully automated convenience store

Background

In the past, retailers saw their job as one of buying products and putting them out for sale to the public. If the products were sold, more were ordered. If they did not sell, they were disposed of. It has been described as a product-oriented business, where talented merchants could tell by the look and feel of an item whether or not it was a winner. In order to be successful, retailing today can no longer be just a product-oriented business. It has become a customer-oriented and a full understanding of all the customer's purchasing behaviour as revealed through his or her sales transactions will become crucial, i.e. *market basket analysis*. Currently, the gradual availability of cheaper and better information technology has, in many retail organisations, resulted in an abundance of sales data. Wal-Mart, the American supermarket, stores about 20 million sales transactions per day. This explosive growth of data leads to a situation in which retailers today find it increasingly difficult to obtain the right information, since traditional methods of data analysis cannot deal effectively with such huge volumes of data. This is where knowledge discovery in databases (KDD) comes into play. Today, among the most popular techniques in KDD is the extraction of association rules from large databases. The rules describe the underlying purchase patterns in the data, such as, for instance, bread/cheese (support = 20 per cent; confidence = 75 per cent). Informally, support of an association rule indicates how frequently that rule occurs, i.e. how frequently is the purchase of bread followed up by the purchase of cheese? The higher the support of the rule, the more prevalent it is. 'Confidence is a measure of the reliability of an association rule.'

Optimal assortments

Determining the ideal product assortment has been (and still is) the dream of every retailer. It is known that the optimal product assortment should meet two important criteria. Firstly, the assortment should be qualitatively consistent with the store's image. A store's image distinguishes the retailer from its competition and is projected through its design, layout, services and, of course, its products. Therefore, retailers often distinguish between basic products and added products. Basic products are products that should not be deleted from the assortment because they are the foundation of the retailer's store formula. In contrast, added products are chosen by the retailer to confirm the store's image even more and should be selected so as to maximise cross-sales potential within basic products. Indeed, retailers are interested in adding items whose sales will not be made at the expense of currently stocked items but may help increase the sales of other items. For the convenience store, examples may include cigarette lighters, coffee whitener or tea warmers. This means that added products should be selected by the model based on their purchase affinity with basic products. Secondly, because retailing organisations are profit-seeking companies, the product assortment should be quantitatively appealing in terms of the profitability it generates for the retailer.

Product selection based on 'frequent item sets'

According to the problem situation described above, a model must be constructed that is able to select a hit list of products, i.e. a selection of a user-defined number of products, from the assortment which yields the maximum overall profit, taking into account the background knowledge of the retailer. A simple solution to this problem, which is often used is to calculate the total profit contribution generated per product and then select those products, in addition to the basic products that have already been selected by the retailer, that contribute the most to the overall profitability. We call this the product specific profitability heuristic. Although easy to calculate, it does not take cross-selling effects of products into account. In contrast, the PROFSET model, introduced in this study, implicitly takes into account cross-selling effects by using 'frequent item sets' (purchase combinations such as bread/cheese that occur quite frequently, i.e. more often than *X*).'

The empirical study

The empirical study is based on a data set of 27,148 sales transactions acquired from a fully automated convenience store over a period of 5.5 months. The concept is closely related to that of a vending machine. The product assortment of the store under study consists of 206 different items. The average sales transaction contains only 1.4 different items because in convenience stores, customers typically do not purchase many items during a single shopping visit. As the objective function in the PROFSET method requires frequent item sets as input, frequent item sets and association rules were discovered from the database. An absolute support of 10 was chosen. This means that no item or set of items will be considered frequent if it does not appear in at least 10 sales transactions. It could be argued that the choice for this support parameter is rather subjective. This is partly true; however, domain knowledge from the retailer can often indicate what level of support may be considered as relevant. In order to make the comparison between PROFSET and the product-specific profitability heuristic straightforward, we chose not to specify basic products in the model. Consequently, the model will be able to fully exploit cross-sales potential between items in the assortment without any restrictions – the PROFSET method also enables assessment of the sensitivity of product assortment decisions and, as a result, allows for identification of the impact of such decisions on the total profitability of the hitlist. In the final list, not all product combinations with high cross-selling potential are necessarily included. The profit contribution of the sales combination must be sufficiently high for the items to be included in the list. For instance, the item set {toothpaste, toothbrush} has an interest of 2,468 over 1 (extremely high) and, according to the association rules, they are always bought together. However, the support count of the item set is equal to 11 (slightly above 10). As a consequence, the total profit contribution of this item set is insufficient to influence the product selection process.

The impact on total profitability caused by product assortment decisions can easily be assessed by means of sensitivity analysis. When, for instance, product i is deleted from the optimal set, and it is replaced by the best product i' outside the hitlist, its impact on profitability can easily be observed. While most product replacements have only minor profit implications (2 per cent), some products represent major profit drivers that should not be deleted from the hitlist.

Conclusion

Results indicated that the study is able to identify cross-selling effects implicitly by using frequent item sets, instead of having to estimate cross-selling parameters explicitly (as is often done in product selection and shelf-space allocation models). The study also showed that a sensitivity analysis helps a retailer to quantitatively assess the profitability impact of product assortment decisions.

Q9a	Summarize in your own words how the optimal assortment with regard to cross-selling has been defined in this study.	**CO3**
Q9b	What are the crucial elements in this study and why?	**CO3**
Q9c	What are the strengths and weaknesses of this study? Explain your answer.	**CO3**