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Internal Assesment Test - III

Sub:	MARKETING RESEARCH ANALYTICS						Code:	20MBAMM304	
Date:	11-03-2023	Duration:	90 mins	Max Marks:	50	Sem:	III	Branch:	MBA

			OBE	
SET - 1		Marks	CO	RBT

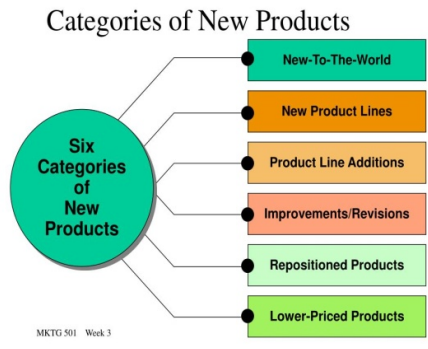|	Part A - Answer Any Two Full Questions (2* 20 = 40 marks)			
1 (a)	**Define Data Mining.** **Answer:** Data mining, also known as knowledge discovery in data (KDD), is **the process of uncovering patterns and other valuable information from large data sets**.	[03]	L1	CO4
(b)	How good are predictive models at predicting behavior? Support your answer with suitable examples. **Answer:** When marketers can target specific customers with the specific marketing actions likely to have the most desirable impact, **every marketing campaign and retention action will be more successful**. The ROI of upsell, cross-sell and retention campaigns will be greater. Predictive behavior modeling is the science of applying mathematical and statistical techniques to historical and transactional data in order to predict the future behavior of customers. Artificial Intelligence (AI) and machine learning (ML) have been shiny objects for marketers for the past several years. Chief marketers, or their CEOs, have demanded to have it—without fully grasping what "it" is. Over that same time frame, marketers have been deluged with ever-expanding sources of customer data, leading data-driven marketing to shift from being humdrum to being as sexy as branding. If data-driven marketers want to be true A-listers, though, they need to optimize the way they use AI and ML in their marketing. Many marketers grasp AI and ML at a high level. What they really need is a deeper understanding of what AI and ML can do to support and improve their marketing and how to get the most from them.	[07]	L5	CO4

(c)	Analyze different myths and misconceptions of Predictive analytics, Data Mining and Big Data by Stephen Finlay
	Answer:
	Myth #1: Predictive analytics is easy
	
	    • Sure, new tools, like the ones listed above, make it easy to analyze big data and derive "answers". In fact, you can throw in data and basically just let the machine run until it spits out something. The problem is, the answers might not be worth the energy it took to make the calculations.
	
	Myth #2: Scientific evidence is proof
	
	    • Just because folks say something, doesn't mean it's true.
		[10]	L4	CO4

Myth #3: Only what you can measure matters

- Predictive analytics relies on metrics — many of them reflecting historical company data, some from research studies and others from external sources. There's the prevailing notion that things only matter if you can measure them.

Myth #4: Correlation = causation

- Predictions are primarily based on correlations (relationships) between the data you have.

- But, correlations don't mean that one factor CAUSED the other factor. Just because 2 things are related doesn't mean one caused the other.

Myth #5: Predictions are perfect

- Predictive analytics produce probabilistic estimates of the future. No one has a crystal ball that predicts with complete accuracy.

Myth #6: Predictions are forever

- Not so, as we saw with our horse race. More data usually results in better predictions. As time goes on and you add new data into your model your predictions get better, assuming no unexpected changes intervene.

Myth #7: You need a skilled consultant to implement predictive analytics

- Not so. Go back to Myth #1 and you see the skill necessary to run accurate predictions. But, hiring an outsider might not be the best way to step up your predictive analytics program.

Myth #8: Predictive analytics is mostly a machine problem

- Somewhat related to some earlier myths is the notion that predictive analytics is a black box. You pour data in and something happens in the box (computer) that yields accurate predictions. It's an appealing notion, but not completely accurate.

Myth #9: Predictive analytics are expensive

- Predictive analytics doesn't have to break the bank. New software and cloud storage make software to run predictive analytics within reach of most businesses.

Myth #10: Insights = action

- This may be the granddaddy of all myths about predictive analytics.

- Predictive analytics, done effectively, produce insights. But, unlike a pregnancy test, the results aren't an answer. Instead, managers must struggle to make sense of the data, to parse results into meaningful segments.

Misconceptions:

- While data analytics helps companies make informed decisions and gain a competitive edge, misconceptions surrounding it can hamper its impact.

- If you are an organization set out to embrace data analytics, here's a list of the top 5 misconceptions you need to be aware of.

2 (a)	Explain the Myth "Predictive Models are expensive" **Answer:**	[03]		
	- Predictive modeling is beneficial for an organization as it gives futuristic insights		L2	CO4

that will help you in maintaining a competitive advantage. How will you feed the predictive model? The following are the sources that your analyst can use for the predictive model.

- Survey Data/Polling
- Advertising and Digital marketing data
- Economic data
- Web Traffic Stats
- Data from sensors and beacons
- Transaction data
- CRM software data

- To be the leader in the business, you must align the predictive model with your enterprise's strategic goals. Data organization is another aspect that an analyst must focus on. The model must align with the data so that machines (computers) can create outputs and forecast for hypothesis testing. Then the business intelligence tools will give you insights in visuals or graphs or report format. So, when you are integrating predictive models in your business process modeling, the following are the things you need to consider:

- Data-gathering
- Benchmark analysis
- Data-segmentation
- Goals & KPIs evaluation
- Plan execution
- Process streamlining
- Action plan `as per the report

| (b) | Outline different pitfalls in Predictive analysis. | [07] | | |

Answer:

The following is just a small selection of some of the other things that predictive models are being used for today:

1. Identifying people who don't pay their taxes.

2. Calculating the probability of having a stroke in the next 10 years.

3. Spotting which credit card transactions are fraudulent.

4. Selecting suspects in criminal cases.

5. Deciding which candidate to offer a job to.

6. Predicting how likely it is that a customer will become bankrupt.

7. Establishing which customers are likely to defect to a rival phone plan when their current contract is up.

8. Producing lists of people who would enjoy going on a date with you.

9. Determining what books, music and films you are likely to purchase next. Predictive Analytics, Data Mining and Big Data

| | | | L4 | CO4 |

10. Predicting how much you are likely to spend at your local supermarket next week.		
11. Forecasting life expectancy.		
12. Estimating how much someone will spend on their credit card this year.		
13. Inferring when someone is likely to be at home (so best time to call them).		

(c) Predictive models analyze past performance to assess how likely a customer is to exhibit a specific behavior in the future. - comment **[10]**

Answer:

Applications of Predictive Analysis sector wise:

1. **CRM:** Through predictive analytics marketing campaigns, sales, and customer services are objectively achieved. This can be used in analytical customer relationship management throughout the customer life cycle right from the acquisition, relationship growth, retention and customer win back can be better planned and strategically addressed for retaining customers and addressing them more clearly.

2. **Health care:** Usage of predictive analytics in the health care domain can aid to determine and prevent cases and risks of those developing certain health related complications like diabetics, asthma and other life threatening ailments. Through the administering of predictive analytics in health care better clinical decisions can be made.

3. **Collection Analytics:** These applications optimise the allocation of collection resources by identifying collection agencies, contact strategies to reach out to them, legal actions to increase recovery and cost reduction of collection.

4. **Cross Sell:** Through predictive analytics applications attached to various touch points connected to the customers a detailed analysis on the customer spends, usage pattern of certain purchases they make regularly, customer behavior can obtained with which ultimately to efficient cross sales or selling additional products to customers. This way organizations dealing with multiple products can effectively increase its sales volume and profits ultimately.

5. **Fraud Detection:** Predictive Analytics can aid to spot inaccurate credit application, deviant transactions leading to frauds both online and offline, identity thefts and false insurance claims saving financial and insurance institutions of lots of security issues and damages to their operations.

6. **Risk Management:** The best portfolio prediction to maximize returns on the capital invested, probabilistic risk assessment to yield accurate forecasts are some of the important benefits of using predictive analytics.

7. **Direct Marketing:** Predictive Analytics also aids in identifying the most effective combination of product versions, marketing material, communication channels and the timing to be used to target a given consumer in the current environment where the dynamics are constantly changing and gets challenging for a business to compete and run successfully.

Underwriting: Perhaps one of the biggest benefits that can infiltrate into underwriting is providing information about the likelihood of illness, default of loan/insurance and bankruptcy. Predictive Analytics streamline the process of customer acquisition by closely predicting the future risk behavior of a customer through the application data. | L4 | CO4 |

3 (a) What is Product Adoption? **[03]**	L1	CO4

	Answer: • Product research is the process of marketing research that is done to get information on the desired characteristics and specifications of a product expected by the potential customers mainly before the launch and availability of the product. • Product research helps companies to understand what the customers really want, so that the product can be tailored to match the needs of the customer.			
(b)	Recommend the need of evaluating prototypes. **Answer:** • Prototype testing and evaluation is one of the most rewarding phases of new product development (NPD). • Developing a prototype of your product allows you to bring your product to life for the first time and test it in its market. • Your investment in market testing your prototype will help you prepare your product for market entry. • It is important to be careful and considered in this exciting stage of NPD. Take your time and invest in the human resources and expertise you need to perfect your new product. *Put someone in charge* • Assign a member of your team (if not you) with strong project management skills to manage or coordinate the product development and delivery process. Ask your product development manager to maintain a practical, informative schedule and project plan that details the steps involved in developing your prototype and running your market testing. *Consult the experts* • Product development specialists can help you streamline your process and avoid costly mistakes. Consider commissioning consultants who specialize in product engineering and design - for example, graphic or industrial designers, product engineers, product quality consultants, computer-aided design (CAD) specialists. *Protect your intellectual property (IP)* • Make sure your patents are in place and your IP is protected before you take your product out for a test run.	[07]	L5	CO4
(c)	Evaluate different factors affecting adoption process. **Answer:** • Building a prototype helps establish whether your idea or invention will function, provides information necessary to building your new product or system, and highlights any flaws or defects in your design.	[10]	L5	CO4

	• A product mock-up will help you determine how to package, brand and market your new product. It will also help you test the look and feel of the product in sample segments of your market. Calling on technical expertise to help you at this stage is prudent, especially if you are not experienced in product development. Categories of New Products			

Test the product in action

- Put your prototype into use in the type of situations it's required in. Identify the characteristics that are most important to your customers and test those attributes, repeatedly.

Run focus groups

- Enlist the help of a market researcher to facilitate a focus group that will help you gauge the response of your sample target market. Interview your customers and take your prototype to as many informed people as possible.

Make improvements

You may need to improve your product based on feedback. Use this opportunity to make changes that will increase your product's chances of success. Retest the product within more specific conditions that help you evaluate your changes - for example, by conducting a further focus group with a market segment that your product changes will affect most.

#		Marks	Level	CO
4	**Case Study – Predictive Analytics** B2C transportation platform and app Uber aced the awareness stage of product adoption with a killer marketing campaign that helped it disrupt the taxi industry. Uber first targeted innovators and early adopters in the San Francisco tech community who matched its ideal customer profile (ICP), focusing on tech-savvy risk-takers who were up for trying new solutions to improve their lifestyles. Uber started capturing customer attention by hosting tech events and offering free rides, which helped generate word of mouth. It also offered a referral program to encourage sign-ups among both riders and drivers. For example, riders and drivers can refer friends using a personal referral code. The referrer then gets free or discounted rides if new users sign up with their code. Once Uber generated a buzz around its product, it leveraged brand partnerships. Brands like Capital One and Starwood Hotels helped introduce their product to new audiences. Uber also lets Spotify users connect their playlists during rides.	[10]	L6	CO4

Q. Plan How can you apply Uber's product adoption strategy to your business.
Answer:

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Test it in your industry

- Attend industry events and trade or consumer expos to get feedback on your prototype. Take the opportunity to generate market interest and capture details of interested customers who want to hear about your product launch or even place advance orders. Consider whether you need to prepare an initial run at this stage to test customer acceptance more broadly.

Develop a marketing strategy

- Your marketing strategy will help you accurately segment and target the right market for your product, set clear marketing objectives, and develop marketing strategies and tactics for your market segments. Start by reviewing all the information you have gathered in your business and market analysis and market testing. Learn how to develop a marketing strategy.

Develop a marketing plan

Your marketing plan will help you organize and implement the marketing tactics for your new product, plan your sales and product marketing activities, and reach your sales targets.

Course Outcomes (COs)		PO1	PO2	PO3	PO4	PO5
CO1:	Identify different emerging technologies					
CO2:	Select appropriate technology and tools for a given task					
CO3:	Identify necessary inputs for application of emerging technologies					
CO4:	Understand the latest developments in the area of technology to support business	1a, 3a	1b, 1c, 2a, 2b, 2c	3b	3c	4

Cognitive level	KEYWORDS
L1 - Remember	list, define, tell, describe, recite, recall, identify, show, label, tabulate, quote, name, who, when, where, etc.
L2 - Understand	describe, explain, paraphrase, restate, associate, contrast, summarize, differentiate interpret, discuss
L3 - Apply	calculate, predict, apply, solve, illustrate, use, demonstrate, determine, model, experiment, show, examine, modify
L4 - Analyze	classify, outline, break down, categorize, analyze, diagram, illustrate, infer, select
L5 - Evaluate	asses, decide, choose, rank, grade, test, measure, defend, recommend, convince, select, judge, support, conclude, argue, justify, compare, summarize, evaluate
L6 - Create	design, formulate, build, invent, create, compose, generate, derive, modify, develop, integrate

PO1–*Theoretical Knowledge;* PO2–*Effective Communication Skills;* PO3–*Leadership Qualities;* PO4 –*Sustained Research Orientation;* PO5 –*Self-Sustaining Entrepreneurship*