

Reg. No.

Question Paper Code

21297

MBA - DEGREE EXAMINATIONS, NOV/DEC 2022

Third Semester

Master of Business Administration

20MBS305 - BUSINESS ANALYTICS AND BIG DATA

(Regulations 2020)

Duration: 3 Hours

Max. Marks: 100

PART - A (10 × 2 = 20 Marks)

Answer ALL Questions

- | | <i>Marks,</i>
<i>K-Level, CO</i> |
|--|-------------------------------------|
| 1. Define data analysis. | 2,K1,CO1 |
| 2. Summarize the term descriptive analytics. | 2,K2,CO1 |
| 3. Infer the term data management. | 2,K2,CO2 |
| 4. List out the different methods of Data Collection. | 2,K1,CO2 |
| 5. Define Support vector machines. | 2,K2,CO3 |
| 6. Show decision tree with a diagram. | 2,K2,CO3 |
| 7. Infer the term segmentation. | 2,K2,CO4 |
| 8. Define Nodes. | 2,K1,CO4 |
| 9. Summarize the use of big data in retail analytics. | 2,K2,CO5 |
| 10. List out the top five applications of Big Data Analytics in Supply Chain Management. | 2,K1,CO5 |

PART - B (5 × 13 = 65 Marks)

Answer ALL Questions

- | | |
|---|----------------------|
| 11. a) Explain the skill set, roles & responsibilities required for
(i) Data Engineer
(ii) Data Analyst | 7,K5,CO1
6,K5,CO1 |
| OR | |
| b) Enumerate the various applications of Data Science. | 13,K4,CO1 |
| 12. a) Explain the steps in data life cycle project. | 13,K5,CO2 |
| OR | |
| b) Reproduce the steps in hypothesis testing and modeling. | 13,K4,CO2 |
| 13. a) Discuss the various types of neural networks. | 13,K4,CO3 |
| OR | |
| b) Illustrate the evaluation of predictive models. | 13,K2,CO3 |

K1 – Remember; K2 – Understand; K3 – Apply; K4 – Analyze; K5 – Evaluate; K6 – Create

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14. a) Explain the sequence rule with the help of market basket analysis. 13,K5,CO4
OR
 b) Explain how is social media used and who's using it. 13,K1,CO4
15. a) Discuss about Healthcare analytics. 13,K4,CO5
OR
 b) Discuss the applications of marketing analytics. 13,K4,CO5

PART - C (1 × 15 = 15 Marks)

(Compulsory)

16. Amazon is the world's largest online retailer, selling over forty categories of goods, from books to electronics to groceries to jewellery to auto parts. The company is also an ecommerce and Internet technology platform, a fulfillment and logistics platform, a search technology, an Internet advertising platform, and even an Internet start-ups incubator. In 2011 its net revenue increased 41% to \$48.08 billion. Amazon is one of the more innovative of online retailers, and has experienced great success and failure, a record reflected in a share price that has oscillated from a high of \$106 in 1999 to \$6 in 2001, rising to \$60 in 2003, only to fall to \$27 in 2006. In recent years Amazon stock has traded above \$150. 15,K6,CO6

Business Models

Amazon has three distinct businesses, plus a slew of nascent enterprises and developing opportunities

Amazon Retail

Starting in books and then expanding into electrical and other goods, Amazon built an online retail business around three aims:

1. Best prices: Amazon products are generally offered at a discount, a steep discount in the case of books.
2. Unrivalled selection: Amazon often has the largest selection of goods in a particular category, especially books (outside S/H marketplaces like Abebooks.)
3. Convenience: Amazon focus on the customer and try make purchasing an enjoyable experience, offering:
 - a. An attractive, easy-to-use customer interface (which evolved through many trials).
 - b. Fast and reliable delivery from vast, fully automated warehouses, first located in strategic spots in the US but increasingly worldwide.
 - c. A no-nonsense returns policy.
 - d. Reviews by customers of the product.
 - e. Purchase suggestions based on previous purchases and webpage viewing (an example of real-time systems).

Amazon was incorporated in 1994 in the state of Washington by Jeff Bezos, went online in 1995, and issued an IPO on May 15, 1997. Many developments, controversies and setbacks attended Amazon's eventual success:

1. Amazon aimed for market share and did not make a profit till 2001.
2. Amazon has faced lawsuits over exclusivity of contracts (Toys'R'Us: 2004-) and size claims (Barnes and Noble: 1997).
3. Amazon's auction site, founded in 1997, proved unsuccessful, but its technology was later incorporated into Amazon Marketplace.
4. Amazon Prime was launched in 2005, offering free shipping for a flat annual fee.
5. In August 2007 appeared Amazon Fresh, a grocery service offering perishable

and nonperishable foods.

6. Amazon MP3, launched in September 2007, sold MP3 downloads without digital rights management, forcing iTunes to follow suite.

7. Amazon began film production in 2008, producing the film 'The Stolen Child' with 20th Century Fox.

8. Not all growth was organic. From 1998 onwards, Amazon acquired several companies, notably Bookpages.co.uk (1998), Joyo.com, a Chinese ecommerce website (2004) and Book Surge a POD company, (2005), Mobipocket.com, an eBook software company (2005) and The Book Depository (2011).

9. Book reviews proved not to be so independent, but what authors, publishers and marketing companies shamelessly exploited in promotion.

10. Kindle, Amazon's ebook reader, proved a runaway success, inspiring many lookalikes and allowing more ebooks than hardbacks to be sold in July 2010, and books altogether by August 2012. Sales of the Kindle Fire, introduced in late 2011, captured 22% of US tablet market.

11. Amazon has conducted a running battle with US states over sales tax, collecting from only five in 2011.

Amazon Marketplace

Amazon also offers a third-party selling platform, Amazon marketplace, that allows merchants to offer goods and services through an online shopping mall. Amazon charges a commission based on a formula involving the sale price of the item, a shipping credit, a referral fee of 6-25% of the sale price, a variable closing fee and a \$0.99 fixed closing fee. This has now been augmented or replaced by four comparable services:

Sell on Amazon. Merchants pay \$39.99 per month, plus a commission varying as above, generally between 15% and \$1.35 per item.

Amazon Webstore. More complete service. Merchants pay \$24 per month plus 2% of sales.

Checkout by Amazon. Similar to PayPal and Google Checkouts, but needs to be integrated into shopping cart.

Fulfillment by Amazon. Allows merchants to use Amazon's advanced fulfillment technology.

The services are being expanded from USA, Canada, UK and Germany to other countries. Amazon does not release information on these businesses, either revenues or usage levels.

Amazon Web Services

Amazon leveraged the technology it developed in retail to offer an increasing number of web services:

SWOT Analysis

Amazon is a company in transition, moving from a innovative online retailer to a broad-based web services supplier. Because Amazon provides no breakdown in annual reports, it is not easy to discern the impact of this change, but in general:

Strengths

1. A brand well respected for prices and customer convenience.
2. Online trading company that has come through the recession relatively well.
3. Accumulated technological expertise in retailing and customer management technology.

Weaknesses

1. Amazon's net margin has been positive, but no better than many bricks and mortar retailers: 3.2% in 2007, 3.4 % in 2008, 3.7 % in 2009 and 3.4 % in 2010.

2. Amazon's self-publishing facilities will change the publishing industry business model, but the beneficiary may not be Amazon.

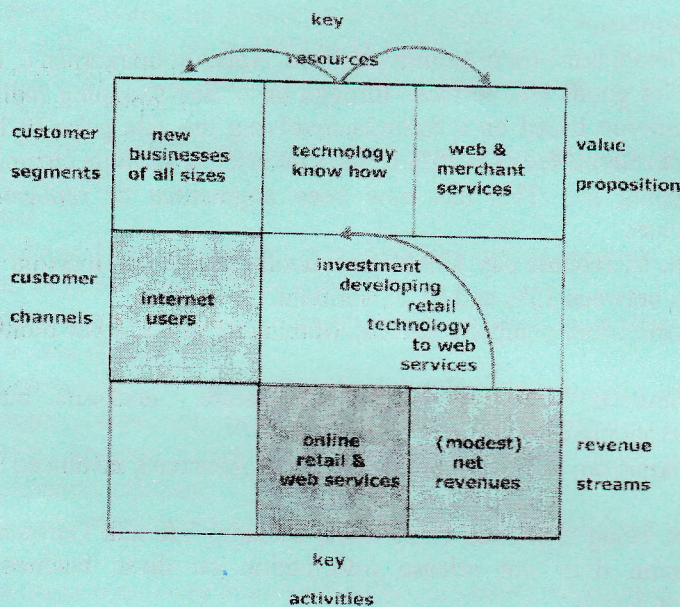
Opportunities

1. Amazon is poised to exploit the shift to cloud and other third-party services.
2. Amazon's Kindle, which has made ebooks respectable, has conquered only a small part of the publishing industry.

Threats

1. Kindle: Amazon has improved the hardware and dropped prices, but many still regard the reader and ebooks as expensive. Cheaper readers will come from China and Korea, and ebook prices may be undercut with Google etc. agreements with publishers.
2. Amazon web services face competition from established providers: Dell, Microsoft and Google.
3. Merchant services are in competition with a host of Internet Payment Service Providers located across the world.

Points to Note



1. An evolving business model.
2. Early focus on market share rather than profitability.
3. Leverage of IT retail skills into web services.

Questions:

1. What aims did Amazon build its business around?
2. Was Amazon continuously successful? Describe some successes and failures.
3. Provide a simple SWOT analysis for Amazon.