MBA (IB)   (Sem. – 2)
BUSINESS ANALYTICS FOR DECISION MAKING
Subject Code: MBA-201-18
M Code: 76153
Date of Examination: 13-12-2022

Time: 3 Hrs.   Max. Marks: 60

INSTRUCTIONS TO CANDIDATES :

1. **SECTION-A is COMPULSORY consisting of EIGHT questions carrying TWO marks each.**
2. **SECTIONS-B consists of FOUR Sub-sections : Units-I, II, III & IV. Student have to attempt any ONE question from each Sub-section carrying EIGHT marks each.**
3. **SECTION-C is COMPULSORY, consists of a Case Study carrying TWELVE marks.**

SECTION-A

1. **Write short notes on the following :**

    a) What is Data?

    b) What are limitations of F-Test?

    c) What is the meaning of Goodness of Fit?

    d) What is frequency distribution?

    e) What is Index Numbers?

    f) What is Least Square Method?

    g) What is auto correlation?

    h) What is Type-I error in Hypothesis testing?

SECTION-B
UNIT-I

2. What is meant by term Statistics? Discuss the applications of inferential statistics in managerial decision making.

3. Write notes on :

   a) Role of tabulation of data

   b) Relationship between sample size and errors

UNIT-II

4. What is Standard Error? Discuss the need and relevance of finding standard error.

5. Write notes on :

   a) Limitations of z-test

   b) Limitations of ANOVA

UNIT-III

6. What is Forecasting? Discuss the role and relevance of forecasting in business.

7. Write notes on:

   a) Applications of Multiple Correlation

   b) Problem of Heteroscedasticity

UNIT-IV

8. What are Index numbers? Discuss the importance of index number in managerial decision making

9. Write notes on

   a) Splicing and Deflation in Index Numbers

   b) Methods of Time Series Analysis

SECTION-C

10. Case study

Under Armour, Inc. is an American manufacturer of sports footwear and apparel, with global headquarters in Baltimore, Maryland. Under Armour's UA Record^{TM} app was built using the IBM Watson Cognitive Computing platform. The "Cognitive Coaching System" was designed to serve as a personal health assistant by providing users with real-time, data-based coaching based on sensor and manually input data for sleep, fitness, activity and nutrition. The app also draws on other data sources, such as geospatial data, to determine how weather and environment may affect training. Users are also able to view shared health insights based on other registered people in the UA Record database who share similar age, fitness, health, and other attributes. Value proposition:

- The UA Record app has a rating of 4.5 stars by users; based on sensor functionality, users are encouraged (via the company's website and the mobile app) to purchase UA HealthBox devices (like the UA Band and Headphones) that synchronize with the app.

- According to Under Armour's 2016 year-end results, revenue for Connected Fitness accessories grew 51 percent to $80 million.

Plexure is a New Zealand-based media company that uses real-time data analytics to help companies tailor marketing messages to individual customers and optimize the transaction process.

How Azure Stream Analytics is being used:

Plexure used Azure Stream to help McDonald's increase customer engagement in the Netherlands, Sweden and Japan, regions that make up 60 percent of the food service retailer's locations worldwide.

Azure Stream Analytics was used to analyze the company's stored big data (40 million+ endpoints) in the cloud, honing in on customer behavior patterns and responses to offers to ensure that targeted ads were reaching the right groups and individuals.

Plexure combined Azure Analytics technology with McDonald's mobile app, analyzing with contextual information and social engagement further customize the user experience. App users receive individualized content based on weather, location, time of day, as well as purchasing and ad response habits. For example, a customer located near a McDonald's location on a hot afternoon might receive a pushed ad for a free ice cream sundae.

Questions:

a) Discuss how Under Armour is using the analytics platform of IBM Watson Cognitive Computing platform?

b) Discuss how Plexure is using real-time data analytics to help companies to overcome stiff competition in the market.

NOTE : Disclosure of Identity by writing Mobile No. or Marking of passing request on any paper of Answer Sheet will lead to UMC against the Student.