**Economics for Managers**

**Assignment I:- (30 Marks)**

**(Maximum Word Limit - 1000 words)**

**Analysis of the Global Crude Oil Market**

**Note: Please use data, charts, graphics to substantiate your responses.**

Analyze the global crude oil market on the following parameters:

 Trends in global oil production, demand, reserves and prices

 Evolution of the crude oil market and creation of OPEC

 Dominance of OPEC and its influence on the global oil production and prices

 OPEC’s share in global oil production- analysis of trends and its success as a cartel

 Challenges to OPEC today & Shale Oil Revolution

 Factors impacting the demand and supply of crude oil today

 Future of Crude Oil as an essential resource for countries

**Assignment III:- (30 Marks)**

**(Maximum Word Limit - 1000 words)**

**Consumer Behaviour & Cognitive Biases**

The two videos below highlight some cognitive biases that naturally creep into human/consumer behaviour, influencing our decision-making:

<https://www.youtube.com/watch?v=jb0oxpQAZv0>

<https://www.youtube.com/watch?v=8_i3LhBO-rk>

Select about five cognitive biases from the above videos. Describe and illustrate how these biases are visible in the real world. You could give examples of how these biases are used by marketers to influence consumer behaviour in a certain way or how these biases can influence decision-making in a corporate set-up, whether for established companies or startups.

**Business Statistics**

**(90 Marks)**

**Assignment I:- (3 \* 10 Marks = 30 Marks)**

**(Maximum Word Limit – 500 words each)**

1. Charts or diagrams are more effective in attracting attention than other methods of presenting data. In view of this statement list various types of charts that can be used by the managers. Using your own examples & data explain any FIVE of them.

2. The central tendency is stated as the s**tatistical measure that represents the single value of the entire distribution or a dataset.** In view of this statement list out various types of measures of central tendencies known to you. Briefly explain any FIVE of them with your own examples.

3. In statistics, the measures of dispersion help to interpret the variability of data. In view of this statement list out various types of measures of dispersions known to you. Briefly explain any FIVE of them with your own examples.

**Assignment II:- (3 \* 10 Marks = 30 Marks)**

1**.** a) Justify how the concept of probability can help managers in business decision making?

Distinguish between the following types of probabilities:

i. Marginal probability

ii. Joint Probability

iii. Conditional probability

b) Briefly explain Bayes theorem using any one example from the probability theory.

2**.** Sampling distributions are essential for inferential statistics because they allow you to understand a specific sample statistic in the broader context of other possible values.

In view of this statement discuss different types of sampling techniques that can be used by the managers in sampling distributions. Cite suitable examples to support your discussion.

3**.** In a sample of 1000 diabetes analysis tests, the mean and standard deviation of blood sugar level is estimated to be 125 mg/dL and 20 respectively. Assuming the distribution to be normal:

a. How many patients’ blood sugar level falls below 85?

b. How many patients blood sugar level will be between 110 and 140?

c. How many patients will exceed blood sugar level more than 175?

d. How many will have blood sugar level of 125 mg/dL?

**Assignment III:- (3 \* 10 = 30 Marks)**

1. With the use of sample data, hypothesis testing makes an assumption about how true the assumption is for the entire population from where the sample is being taken. In view of this statement, elaborate the general steps involved in testing of hypothesis?

Appraise the critical values that are being considered for Z, t, F and Chi square tests in hypothesis testing at commonly used level of significance.

2. The following data for the four salesmen has been recorded for a healthcare product of certain company.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Area | | | | Number of units by the salesman | | | |
| Amar | | Bhima | | Chitra | | David | |
| Zone I | 80 | | 100 | | 95 | | 70 |
| Zone II | 82 | | 110 | | 90 | | 75 |
| Zone III | 88 | | 105 | | 100 | | 82 |
| Zone IV | 85 | | 115 | | 105 | | 88 |
| Zone V | 75 | | 90 | | 80 | | 65 |

Set up an ANOVA table. Is there a significant difference in the efficiency of these salesman?

3. a. Suppose that you are interested in using past expenditure data on R&D to predict

current expenditures on R & D. You have retrieved the data of amount spent on R&D in 2018 and 2023 as follows (All figures in ₹ Lakhs):

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Firms | A | B | C | D | E | F | G | H |
| R & D Spending in 2018 | 30 | 50 | 20 | 80 | 10 | 20 | 20 | 40 |
| R & D Spending in 2023 | 50 | 80 | 30 | 110 | 20 | 20 | 40 | 50 |

Predict the R & D spending by the firm X whose R & D spending in the year 2018 was ₹ 10 million?

b**.** An IT healthcare company is interested to determine whether an association exists between the commuting time of their employees and the level of stress related problems observed on the job. A study of 500 employees has been conducted and results were recorded as follows:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **STRESS** | | | | | | | |
| **High** | | **Moderate** | | **Low** | | **NA** | |
| Under Half an hour | 20 | | 22 | | 48 | | 28 |
| 30- 60 min | 54 | | 78 | | 42 | | 22 |
| More than an hour | 146 | | 10 | | 10 | | 20 |

At 1% level of significance, is there any evidence of a significant relationship between commuting time and stress?

**Strategic Management**

**Assignment II:- (20 Marks)**

**(Maximum Word Limit - 750 words)**

1. Identify any ONE of the industry vertical. *Automotive, FMCG/Retail, Real Estate, Consumer Electronics, Tourism, Healthcare/Pharmaceuticals, Information Technology, Jewellery, Food Processing, Hospitality Industry (Hotels/Restaurants/Resorts), Hospitals, Logistics Service Providers. Media and Entertainment, E-Commerce, Aviation, Banking, and Telecom (or any other industry that you might explore)*

2. Your assignment should contain the following contents

a. Introduction and significance of the **Industry Vertical** (1 Page) – 3 Marks

b. Choose any **two companies** (one Indian and one foreign) from the industry and conduct **VRIO / N Analysis (2 Pages) –** 8 Marks

c. Conduct an Ansoff Matrix Analysis for **the Indian Company (1 Page) –** 5 Marks

d. Relational write-up about your learning in the subject Vs. your findings from the assignment. (1/2 Page) – 2 Marks

e. Full and complete references – 2 Marks

3. The report will extensively be based on secondary data from various sources like software product websites, whitepapers, journals, magazines and other knowledge portals/search engines ***(All the sources should be fully referenced).***

4. Participants are ***strongly encouraged to choose industry and companies as uniquely as possible so as to avoid duplication by peers.***

5. The assignment needs to be submitted in the word document format.