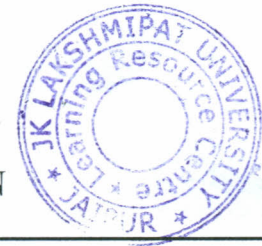




**Institute of Management
JK Lakshmipat University
Jaipur
OPEN BOOK FINAL EXAMINATION**



V 2

MBA (FT) Sem-II

Course: Management Information Systems

Max. Marks: 50 Marks

Time: 3 Hours

MBA202

You are allowed to Open Books and Notes

Student ID: _____

Please read the following examination rules. Any failure to observe the following rules will be considered cheating, and you will receive an F for the exam.

1. **Question 1-10 are from the Case "Rajpack" and Question 11 is from stated Case-Situation**
2. **Candidates MUST produce their ID cards before being admitted to the examination room.**
3. **All work must be carried out in the official answer sheet. No other paper may be used.**
4. **Candidates may not borrow anything from other candidates.**
5. **Talking to anyone other than the invigilator in the examination room is regarded as cheating.**
6. **The examination will be conducted in strict silence. Mobile phones, pagers, and clock/watch alarms must be turned off.**
7. **No questions may be asked after the examination is commenced.**
8. **All communications, in any form or looking at each other's papers are strictly prohibited.**
9. **Candidates are not allowed to leave the room after the invigilator announces a warning of 15 minutes before the end of the exam.**
10. **Any candidate continuing to work after the invigilator announced that time is up or after the "pens down" announcement will be considered to have breached the rules and committed an act of cheating.**
11. **Draw diagrams or sketches as and when required.**
12. **Your Hand Writing should be legible.**

I have read and understood the examination rules, and I take the full responsibility of the consequences of violating these rules.

(Signature) _____



Rajpack: A REAL CASE IN MIS DESIGN

By Dr. S. K. Majumdar

The amount of investment funds seeking out commercially profitable investment targets in Rajasthan is continuously growing. CentralAsiaInvest began its operations in September 20014 is a good example of a new type of financing approach, which targets small and middle-sized companies.

David Norman CEO of CentralAsiaInvest says that CentralAsiaInvest acts as the fund manager in cooperation with local partners in India (Rajasthan, Gujrat and UP), Kazakhstan, Kyrgyzstan, Tajikistan, Azerbaijan and Turkmenistan.

The First Investment in Rajasthan

CentralAsiaInvest targets investment opportunities mainly in the Northern and Western countries of Central Asia. The investment fund made its first Investment in Rajasthan where it invested USD 1.4 million in a company called Rajpack, which produces packaging materials.

Rajpack has two production facilities producing cardboard boxes in **Sikar** and **Udaipur**. The output is mostly sold in Rajasthan's agricultural sector. With the provided additional financing Rajpack intends to modernize its production facilities and products so that the packaging materials would serve not only the requirements of local fruit and vegetable growers, but would also meet the growing demands of neighboring CIS countries.

Rajpack strives to develop its products so that, among others, they would meet the packaging requirements of CIS as well as other countries of European Union. The EU countries are a growing export market for Rajasthan's agricultural producers.

The Managing Director (MD) of Rajpack, Nithin Bhandari, realized that without the support of an effective Corporate Management Information System (CMIS) it would be impossible to monitor the performance of Rajpack, and **appointed you as the Chief Information Systems Consultant of Rajpack.**

Aims of the Proposed CMIS

According to Nithin Bhandari, the proposed Corporate Management Information System must:

1. Keep management informed about: product delivery cycle time, work in progress, plant capacity utilization, order execution status and many other information of the business.
2. Help the customer relationship officers to respond to their clients' queries quickly and effectively; and assist the marketing managers to make firm decisions and commitments about the quantity and delivery time while accepting any new order.
3. Provide flexibility in production scheduling so as to 'juggle' orders according to changing priorities and market requirements
4. Release blocked capital by maintaining minimum possible levels of inventory
5. Keep MD informed about the order execution status of Rajpack.
6. Allow Customers to track of their orders, with possible automatic web-based interface to authorized high-value customers for meeting their critical information needs

SCOPE OF THE WORK

The work scopes are as follows:

1. Design a suitable CMIS that would improve the competitiveness of **Rajpack**.
2. Suggest appropriate strategic use of IT to improve the business processes of **Rajpack**.
3. Develop *Technical Specifications for the Proposed CMIS and prepare an Implementation plan*—the technical specifications should specify what Information technologies (Hardware, Software & Networking Devices) are to be used to support and accelerate the business processes of **Rajpack** and how that will improve the performance of **Rajpack**.

It was agreed that the following business capabilities are necessary for competing successfully in the European market.

- ✓ Customised Order Delivery (ability to match/service buyer requirements)
- ✓ Fastest Fulfilment of Orders (industry best response time)
- ✓ Best customer service (maximising customer satisfaction).

Rajpack stressed that the systems should take care of the following targets and objectives:

- ✓ 45 days for order fulfilment anywhere in Rajasthan
- ✓ 60 days for order fulfilment anywhere in CIS
- ✓ 95 % of all orders to be delivered on time (to start with)

Your Tasks

Your tasks are to design the required Corporate Management Information Systems. You may redefine Rajpack's business processes and make them highly responsive and flexible. However, efforts for improvement must focus on:

- ✓ The Business Strategy and Targets – feasibility and/or appropriateness
- ✓ The Information Systems and Subsystems – existing and required
- ✓ The Information Technology solutions - available vis-à-vis cost

* * *

1. Who are the Customers of Rajpack.? Where the customers of Rajpack resides?

2 Points



2. What are the objectives of Rajpack's Proposed CMIS?

3 Points

3. What data a Marketing Manager would require from his company (Rajpack) before accepting a new order?

4 Points

4. What data a Customer Relationship officer should have from various departments of Rajpack for responding to customers' enquiry?

4 Points

5. What Reports the MD (Managing Director), Mr. Nithin Bhandari, should have to monitor the operational performance of Rajpack and why?

3 + 1 = 4 Points



6. Prepare the Format of Weekly Report of Order Execution Status of Rajpack.

4 Points

7. Suggest possible strategic use of IT for improving the performance and competitive advantage of Rajpack.

4 Points

8. Prepare specifications (i.e. specify the Hardware, Software, Networking and other IT Devices that you would require) for developing an Web-enabled CMIS (Corporate Management Information System) for Rajpack

4 Points

9. What approach/ methodology would you like follow for development of the Proposed Web-enabled CMIS for Rajpack and Why?

2 +1= Points



10. What 'programme structure' and 'system implementation and integration' approach/strategy would you like to follow for the development and installation of the Proposed CMIS software for Rajpack and Why?

1+1 +1= Points

11. Please read the situation carefully and answer the subsequent questions.

National Development Corporation (NDC) – an Engineering Consultancy Company has several divisions. NDC employ number of engineers and specialists to figure out clients' requirements, prepare engineering specifications of the required equipments for every project. NDC also select vendors, place order and monitor the delivery of the same at the construction site. After receiving the orders, vendors manufacture the required equipments as per the specifications of the project prepared by the projects engineers of NDC. The employees of NDC are typically described by an employee number, their functional group and a skill-rating. The projects are uniquely identified by a project number, the project deadline, the project's projected value and the project leader's employee number. Typically, a project employs at least one or more employees, and an employee may work on multiple projects simultaneously. The success of project execution depends on accurate elicitation of specifications, selection of right vendors, in time manufacturing, delivery and on-site erection (installation) of the equipments this calls for high level of collaboration and exchange of data among heterogeneous teams of clients as well as with various divisions of NDC like marketing, purchasing, design and product development, production employees, and construction division for on-site installation.

NDC maintains the employee-project information in tabular format. The Employee table maintains a list of employees available for each project; the project database lists the current projects, while the assignment database lists the current assignment of employees to projects.

- A. Draw an Entity-Relationship Diagram that captures the relationships of **Ordering-Manufacturing and** Delivery of Equipments Process using Chen's E-R Modeling Symbols. Identify the strong and weak entities and draw or show how you would represent the weak entity in an ER model.

5 Points



- B. Identify the **cardinality relationship** between Employee-Assignment and Project-Assignment relationships?

5 Points

- C. Draw the EA diagrams of any three entities of the value Chain Entities of NDC. Identify the keys (primary and the composite if any) of each entity. Do not forget to represent the composite attributes if any with right notations. (Use Chen notations for drawing EA Diagram)

5 Points

Take Care