

**G 6286**

M.E. DEGREE EXAMINATION, MAY/JUNE 2007.

*Elective*

Industrial Engineering

IE 1721 — ENTERPRISE RESOURCE PLANNING

(Common to M.E. – Computer Aided Design)

(Regulation 2005)

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. What is an ERP? What are the key differences between desktop applications vs. enterprise applications?
2. What is meant by OLAP? State its use with respect to ERP?
3. What were the key principles of the Business Process Reengineering movement?
4. What will a firm have to change about its approach to business processes in order to effectively install an ERP package?
5. State the role of Vendors with respect to selection of an ERP package.
6. What is role of Sales and Distribution Department in an organization?
7. Briefly write about the hidden costs involved in ERP implementation.
8. What are the advantages of web enabled markets?
9. What is the relationship between a business process and a work system?
10. 'Information can be distinguished from 'data.' Explain this difference.

PART B — (5 × 16 = 80 marks)

11. (a) The concepts of data, information and knowledge are fundamental to organizational informatics. Discuss the significance of these ideas, and the different kinds of technological systems developed to use them. Pay particular attention to at least two of the following : the evolution of the information concept, data base management systems, data mining or knowledge management. (16)

Or

- (b) The most valuable applications of information technology are usually those that allow people to do their jobs more productively. This often requires the redesign of business processes and work systems. Discuss the ways in which IT can be used to improve the performance of work systems, and the challenges that must be overcome to achieve this. Among the topics you might want to consider are : business process reengineering, the work system concepts from the textbook, examples of the use of IT at Walmart and firms, Enterprise Resources Planning systems and groupware. (16)
12. (a) Describe briefly the following ERP modules — Human Resources, Finance and Material Management. (16)

Or

- (b) Established in 1981 in Waterloo Ontario, Canada, Northern Digital Inc. (NDI) is a leading supplier of 3D/6D measurement products used in industries as diverse as image guided surgery, robotics, aeronautics and biomechanics. The company employs 90 and generates over \$20 million in annual revenue. NDI faced a challenge when rapid growth and aging technology threatened to stand in the way of company goals. Instead of enabling operational improvements, NDI's existing systems were impeding progress. Existing technology was causing missed deliveries and creating a high number of back orders. With customer satisfaction at risk and internal morale slipping, the management team at NDI decided it was time to act. For the above case identify the modules which are to be implemented immediately, brief about those modules with respect to SAP and specify the solution to overcome them. (16)
13. (a) Contrast business processes with business functions and explain why it is necessary to accomplish the reengineering of processes and the integration of existing information systems. (16)

Or

- (b) You have been told by the company management that you will be implementing the current ERP package for each business function/department. Identify the possible reengineering situations needed for the company. Describe the implementation of ERP phases. (16)

14. (a) When evaluating impacts of ERP using information systems, in future we need :
- (i) model of change
  - (ii) theoretical variables
  - (iii) operationalization
  - (iv) research design

Explain the meaning and role of each of these. (16)

Or

- (b) State the methods which are used in faster implementation of ERP in an organization also explain briefly what changes have to be made in order to have a web enabled market for the products of an organization. (16)
15. (a) Discuss the development, challenges and current structure of the IS department. Try to chose a related set of issues and use them as the basis for a discussion of why the work of this department is important but challenging. Among the issues you might want to consider are: historical evolution, IS / governance / portfolio management, centralization / decentralization, enterprise systems, the various responsibilities of the IS department, and different roles within the IS department. (16)

Or

- (b) In most firms, information technology is not a key part of the products or services they sell and so does not directly generate revenue or profits. Instead, the successful application of IT means finding ways to let people elsewhere in the company do their jobs better. This task is often harder than you might expect, because it requires close collaboration between IT specialists and people in these "user departments". Discuss the reasons that this can be problematic, and the techniques available to overcome these problems. Among the factors you might want to consider are organization cultures, occupational subcultures, the role of the CIO as a bridge between technology and business, the concept of "strategic alignment", IS planning/governance/portfolio management, project management and analysis techniques to include users, and balancing of responsibilities between user and IS department. (16)