

**University of Sargodha**  
**Department of Computer Science & Information Technology**  
**Mid Term Examination Spring 2020**

**Course Title: Enterprise Resource Planning Systems**

**Degree Program: BSIT 8<sup>th</sup> (Regular/Self-Support/ PPP-BSIT 8<sup>th</sup>)**

**Dated: 7<sup>th</sup> April 2020**

**Total Marks: 30**

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**Guidelines:**

- The deadline for the submission of the assignment is 20<sup>th</sup> April 2020.
  - You should submit your assignment in the soft form in your google classroom.
  - Students with connectivity issues can mail assignments till 14<sup>th</sup> April 2020 at [mahamkhalid42@yahoo.com](mailto:mahamkhalid42@yahoo.com).
  - Read the following case study and attempt all questions with logical Reasoning.
  - Plagiarism will be checked, so don't copy each other's assignments.
  - Copied Assignments will be marked 0.
  - For any queries regarding the assignment, you may mail at [mahamkhalid42@yahoo.com](mailto:mahamkhalid42@yahoo.com).
  - The students with Roll Number between 1 to 10 and 40 to 45 will attempt case study 1.
  - The students with Roll Number between 11 to 20 and 46 to 50 will attempt case study 2.
  - The students with Roll Number between 21 and 30 and 51 to 55 will attempt case study 3.
  - The students with Roll Number between 31 and 40 and 56 to 60 will attempt case study 4.
  - The list containing serial numbers is uploaded in your google classroom, please consult that.
  - Define the problem statement in 1 to 2 lines and then attempt the questions.
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**Case Study 1:**

The Honeywell industrial automation and control (IAC) business unit designs, manufactures, and configures the sophisticated TDC 3000X family of systems. These systems enable its customers (refineries, chemical plants, and paper mills around the world) to achieve world-class process-control capability. In late 1989, the management team began a three-year world-class-manufacturing (WCM) program to examine lagging performance results. WCM established ambitious goals for defect reduction, short-cycle production, and materials management. Specific goals included reducing defects by a factor of ten (1,000 percent) and cycle time by a factor of five (500 percent). WCM was created to provide resources and take a system-wide view of the plant. WCM supported a focused-factory environment that harnesses the potential of teams. Instead of workers being assigned to a specific area on the factory floor, teams of multi-skilled workers were charged with building entire products or modules from start to finish. WCM provided resources to teams based on the process rather than piecemeal events or tasks. Training took on a system-wide view. In 1990, the entire plant was shut down and everyone was taken to another location for an intensive six-hour session. During the session, the need for radical change was articulated. In addition, management explained what the broad changes would be and how the changes would impact the workers. To support the factory-focused paradigm, the "all-salaried" workforce was evaluated on a "pay for performance" basis. Factory-focused teams were rewarded for their performance. In a little over three years, teams helped reduce defect rates by 70 percent, customer rejects by 57 percent, cycle time on parts by 72 percent, inventory investment by 46 percent, and customer lead times by over 70 percent. Improvements did not come without struggle. One problem was management of "white spaces". White spaces are gaps between different links in

the internal-supply chain. Management found out that teams along the value chain for each product line had a tendency to sub-optimize the total supply chain because they were primarily focused on their own areas. To get the teams to think in unison, the Director of Strategic Planning and Organizational Development took the three team managers aside and told them that they were responsible for the whole product line. Performance evaluations would be based on how the entire product line performed. Honeywell calls their factory-focused program the TotalPlant™. The mission of TotalPlant™ is to unify business and control information to enable global customer satisfaction. To accomplish this mission, the plant is migrating to fully integrated hardware, software, and services that support plant management, process management, and field management. TotalPlant™ business and control information is also used to facilitate planning, implementation, and world-class applications. The TotalPlant™ paradigm is not limited to the IAC site. It is intended to support global delivery of its manufactured products, serve the needs of over 40 regional TotalPlants and delivery centers worldwide, and align with global suppliers. You need to propose an effective solution by answering the following questions.

1. State the ERP related technology you intend to use while performing BPR and enlist the reasons for the selection of the ERP related technology? **(06)**
  2. Perform Business Process Reengineering (BPR) along with its elements to implement a framework that overcomes the problem? **(08)**
  3. Draw 2 process maps, one should visualize the current framework of the enterprise and the second process map should visualize the proposed solution while performing BPR? **(08)**
  4. Explain the dependency between the functional areas of an enterprise data center through a diagram? **(08)**
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### **Case Study 2:**

In recent years, growth has been observed in the number of the center, their size, breadth and the complexity of the operations of enterprise data centers. As it facilitates the customers to access the complex applications or systems online. The enterprise data center may provide service to many organizations or may be devoted to a single organization. Therefore, it is not wrong to say that it can become a part of every organization such as a bank, hospital, restaurant or academy.

However, some of the problems related to enterprise data center service has been discovered and requires a solution. These problems are related to the issue of increased waiting time while requesting documentation and service. Data analysts through the data analysis found that the process of the request of the documentation contains unnecessary steps. Due to these steps, it takes a long time to assign the task process. Thereby, the request could not be responded in time. Moreover, there exist a chance that the problem of delayed waiting time may become a more complicate problem i.e. virus. As it may damage the data and functionality of the computer system. It affects the performance of the overall organization. For these reasons, it is necessary to create a new process to solve all problems. You need to propose an effective solution by answering the following questions.

1. State the ERP related technology you intend to use while performing BPR and enlist the reasons for the selection of the ERP related technology? **(06)**
2. Perform Business Process Reengineering (BPR) along with its elements to implement a framework that overcomes the problem of waiting time? **(08)**
3. Draw 2 process maps, one should visualize the current framework of the enterprise and the second process map should visualize the proposed solution while performing BPR? **(08)**

4. Explain the dependency between the functional areas of an enterprise data center through a diagram? (08)
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### **Case Study 3:**

The traditional order and delivery activities have been characterized by manual routines and paper-based workflow management. Problems such as the time-consuming processes in which a laboratory service order is created or that of getting the laboratory service report with results from the requested investigations from the laboratories and the entry of the same information by different persons at different points in the workflow with the possibilities of transfer errors are well known. The development of modern information technology, along with the development of standards for communication protocols and the message structure for the electronic interchange of information (EDI) gives us the tools to change the way we work and manage workflow. An important input to the business process reengineering process is a thorough knowledge of the context within which the order/delivery activities exist. One has to take into account that the activities are:

- i. Heavily integrated into the whole treatment and care process,
- ii. together with routines and the taking of samples and related requests many times are a part of the daily work of a ward, and
- iii. various decisions about the treatment of a patient are based on the results in the laboratory service report from the laboratories.

You need to propose an effective solution by answering the following questions.

1. State the ERP related technology you intend to use while performing BPR and enlist the reasons for the selection of the ERP related technology? (06)
  2. Perform Business Process Reengineering (BPR) along with its elements to implement a framework that overcomes the problem? (08)
  3. Draw 2 process maps, one should visualize the current framework of the enterprise and the second process map should visualize the proposed solution while performing BPR? (08)
  4. Explain the dependency between the functional areas of an enterprise data center through a diagram? (08)
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### **Case Study 4:**

Kellogg is among the famous cereal production company. In order to manufacture cereal products, the process of manufacturing begins on the farm with the harvest. Further, it is followed by primary processing, packing, and transportation to the processing plants (depending on the grain). The company faced the logistical problem i.e. it lost almost 20% of the grains harvested during transportation from farms to the factories, located near the biggest consumption centers, due to the precariousness of the roads. You need to propose an effective solution by answering the following questions.

1. State the ERP related technology you intend to use while performing BPR and enlist the reasons for the selection of the ERP related technology? (06)
  2. Perform Business Process Reengineering (BPR) along with its elements to implement a framework that overcomes the problem? (08)
  3. Draw 2 process maps, one should visualize the current framework of the enterprise and the second process map should visualize the proposed solution while performing BPR? (08)
  4. Explain the dependency between the functional areas of an enterprise data center through a diagram? (08)
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