

Improvement Test – May/June 2017 (Answer Key)

Sub:	Enterprise Resource Planning	Code:	13MCA455
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1. a. **Define ERP. Explain benefits of ERP.**

ERP stands for enterprise resource planning. ERP is the technique and concepts for integrating business as whole with the objective of efficient use of management resources and to improve the efficiency of enterprise management.

Enterprise: An enterprise is a group of people with common goal, which has certain resources to achieve this goal.

Benefits of ERP:

- Information Integration
- Reduction of Lead-time
- On-time Shipment
- Cycle-time reduction
- Better Customer satisfaction
- Improved supplier performance
- Increased flexibility
- Reduced quality cost
- Improved resource utilization
- Better analysis and planning capabilities
- Improved information accuracy & decision making capabilities
- Use of latest technology

2. a. **Define Business Process Re-Engineering? Explain the different phases of a BPR.**

Business Process Engineering means not just changes but dramatic change & improvement

Begin Organizational change:

Activities:

- Assess the current state of the organization
- Explain the need for change
- Illustrate the desired state
- Create a communications campaign for change

Begin the reengineering organization

Activities:

- Establish a BPR organizational structure
- Establish the roles for performing BPR
- Choose the personnel who will reengineer

Identifying BPR opportunities

Activities:

- Identify the core/high-level processes
- Recognize potential change enablers
- Gather performance metrics within industry
- Gather performance metrics outside industry
- Select processes that should be reengineered
- Prioritize selected processes
- Evaluate pre-existing business strategies
- Consult with customers for their desires
- Determine customer's actual needs
- Formulate new process performance objectives
- Establish key process characteristics
- Identify potential barriers to implementation

Understanding the existing process

Activities:

- Understand why the current steps are performed
- Model the current process
- Understand how technology is currently used
- Understand how information is currently used
- Understand the current organizational structure
- Compare current process with the new objectives

Re-Engineering the process

Activities:

- Ensure the diversity of the reengineering team
- Question current operating assumptions
- Brainstorm using change levers
- Brainstorm using BPR principles
- Evaluate the impact of new technologies
- Consider the perspectives of stakeholders
- Use customer value as the focal point

Blue-print the new business system

Activities:

- Define the new flow of work
- Model the new process steps
- Model the new information requirements
- Document the new organizational structure
- Describe the new technology specifications
- Record the new personnel management systems
- Describe the new values and culture required

Perform the transformation

Activities:

- Develop a migration strategy
- Create a migration action plan
- Develop metrics for measuring performance during implementation
- Involve the impacted staff
- Implement in an iterative fashion
- Establish the new organizational structures
- Assess current skills and capabilities of workforce

- Map new tasks and skill requirements to staff
- Re-allocate workforce
- Develop a training curriculum
- Educate staff about the new process
- Educate the staff about new technology used
- Educate management on facilitation skills
- Decide how new technologies will be introduced
- Transition to the new technologies
- Incorporate process improvement mechanisms

3. a. **Explain uses and key features of OLAP with an example.**

OLAP (online analytical processing) is computer processing that enables a user to easily and selectively extract and view data from different points of view.

Features of OLAP

There are the following key features of OLAP:

- Multi-dimensional views of data;
- Support for complex calculations;
- Time intelligence

Multi-dimensional views of data

A multi-dimensional view of data provides the basis for analytical processing through flexible access to corporate data. It enables users to analyze data across any dimension at any level of aggregation with equal functionality and ease.

Support for complex calculations

OLAP software must provide a range of powerful computational methods such as that required by sales forecasting such as moving averages and percentage growth.

Time intelligence

Time intelligence is used to judge the performance of almost any analytical application over time. For example, this month versus last month or this month versus the same month last year or a user may require to view, the sales of the month of Mayor the sales for the first five months of 2007. Concepts such as year-to-date and period-over-period comparisons should be easily defined in an OLAP system.

Different Styles:

- Multi dimensional
- Hybrid
- Desktop
- Relational

Advantages:

OLAP servers provide better performance for accessing multidimensional data.
 OLAP systems give analytical capabilities that are not in SQL or are more difficult to obtain
 OLAP is a technology that can be distributed to many users using a variety of platforms.

4. a. **Explain the various phases in ERP implementation life cycle. Illustrate with examples.**

Pre-evaluation Screening:

When the company has decided to implement the ERP the search for the convenient and suitable ERP package begins.

Package Evaluation:

The objective of this phase is to find the package that is flexible enough to meet the company's need or in

other words, software that could be customized to obtain a ‘good fit’.

Project Planning Phase

This is the phase that designs the implementation process. Time schedules, deadlines, etc. for the project are arrived at. The project plan is developed in this phase.

Gap-Analysis

This is the most crucial phase for the success of the ERP implementation.

Simply it is the process through which companies create a complete model of where they are now, and in which direction they want to head in the future

Reengineering

The second use of the word ‘reengineering’ in the ERP field focus on the Business

Process Reengineering (BPR)

Configuration

In this case business process have to be understood and mapped in such a way that the incoming ERP solutions match up with the overall goals of the company.

Implementation Team Training

This is the phase where the company trains its employees to implement and later, run the system.

Testing

The test cases must be designed to specifically to find the weak links in the system and these bugs should be fixed before going live.

Going Live

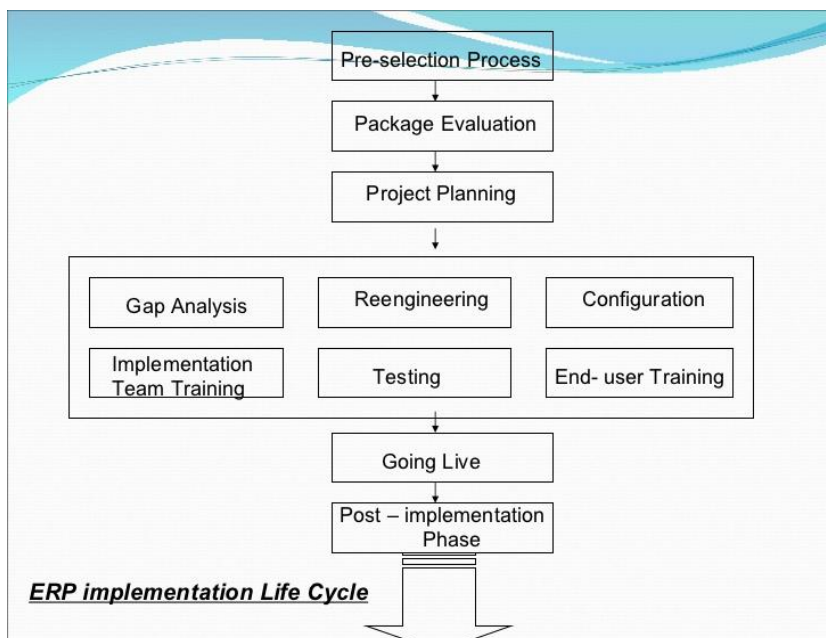
In this phase all data conversion must have been done, and databases are up and running; and the prototype is fully configured and tested.

End-user training

The employees who are going to use the new system are identified and their skills are noted.

Post – implementation

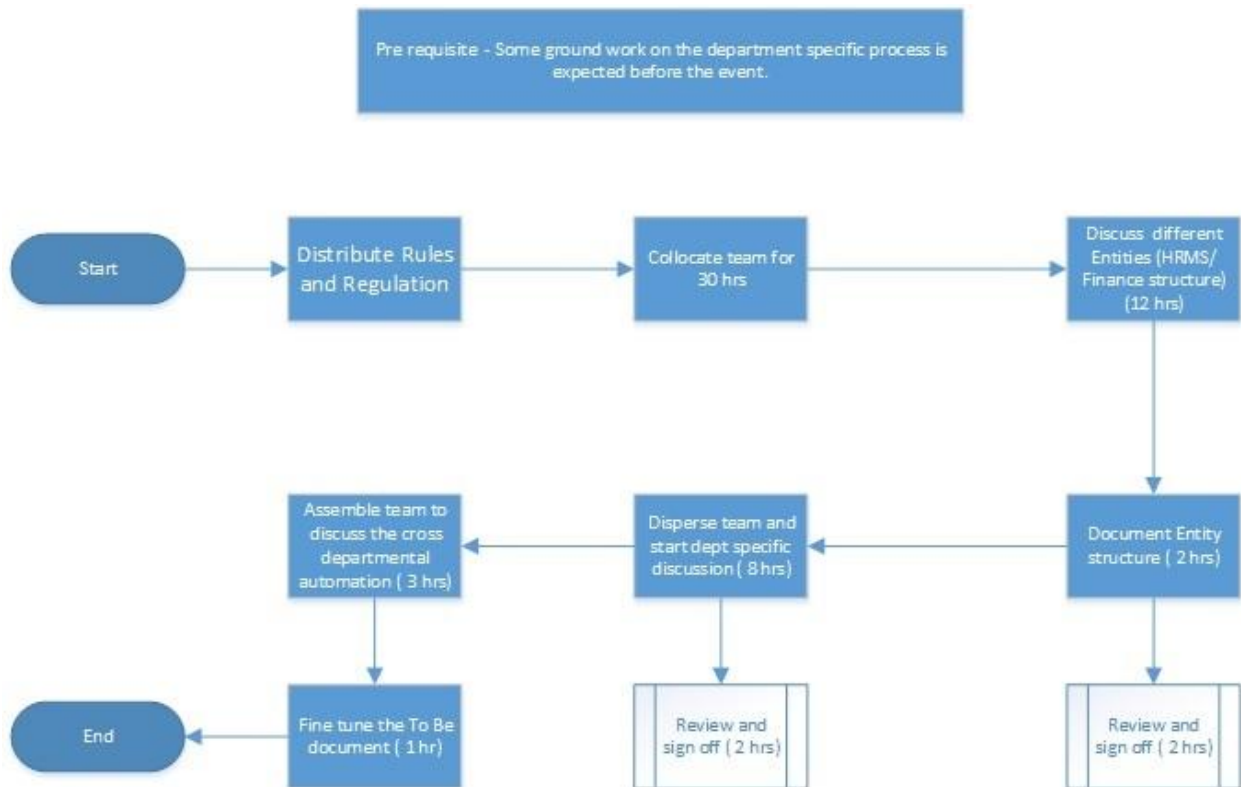
There must be enough employees who are trained to handle the problem that might occurred when the system is running.



5. a. With necessary diagram, explain the ERP implementation methodology also discuss the major phases of

the ERP implementation methodology.

A methodology is a roadmap to an implementation. The purpose of a methodology is to deliver an implementation on time, according to specification and within budgets.



Accelerated SAP:

1. Project Preparation
2. Business Blue-Print
3. Realization
4. Final Preparation
5. Go-Live and support continuous change.

Perfect Path:

Program management of vendor and internal client resources, project plan, and budget
 Comprehensive business process re-engineering and workflow definition
 Incorporation of lean manufacturing, six-sigma
 Improvement of technical infrastructure
 Alignment of ERP implementation with business requirements
 Risk management and mitigation planning activities
 Organization change management, communication and training activities
 Integration between the core ERP system and business processes, systems and stake holders
 Definition of ERP measure of success
 Optimization of measurable business benefits
 Functional and technical development and support

ERP Implementation method:

Fugo Consulting:

Project Planning, Gather requirements, Critical business processes, Customizing, Prototyping, Testing, Additional functionality, Go-Live, Warranty support.

Off-Shore-Onsite ERP Implementation methodology:

Define:

- Project scope
- Work content definition
- Project plan
- Business requirements

Conversions and interfaces
User signoff

Design:

Gap analysis
Configuration of the base system
Development of customization or extension
Design of conversions
Interface designs
Solution footprint design signoff

Configure:

Business process mapping to establish functional flows
Development of custom code over and above base application functionality
Solution footprint unit testing

Deploy

Migration of tested code to the target instance for production
Creation of base instance setups followed by conversions, interfaces and customization
Ready for go-live

Support

Help the client to build necessary skills
Planning of transition for handover of the system to the client team.

- 6 a. **Discuss in detail the market dynamics of on-premise ERP and on-demand ERP with Suitable example.**

Dynamics: On-Premise ERP

ERP vendors are continuing to expand market presence by offering new applications such as supply chain management, sales force automation, customer relationship management, business analytics and business intelligence, and human resources.

To sustain their rapid growth, ERP vendors will look to sell more licenses into their installed base.

While ERP originated in the manufacturing market, ERP usage has spread nearly to every type of enterprise.

On-Demand

In 2011, the on-demand or SaaS-ERP comprised just two percent of the ERP market. SaaS-ERP accounted for 14.1% of the total SaaS market. The other solutions that are part of the SaaS

market are CRM (31.4%), Content Communication and Collaboration (26.4%) and others (28.1%). According to a Forrester study [3], the SaaS ERP which is just 2% of the ERP market is expected to grow by about 21% annually through 2015 to reach 4%.

SaaS-ERP gained momentum as SMEs started opting for it because of the low initial cost. Another factor that led to the growth of the on-demand ERP market was the decision by SAP and Oracle to come out with SaaS products. IT departments are attracted to the SaaS model because it provides relief from disruptive version upgrades and manages a large number of disparate applications.

As SaaS ERP solutions eliminate the need to install hardware and ensure easier and faster

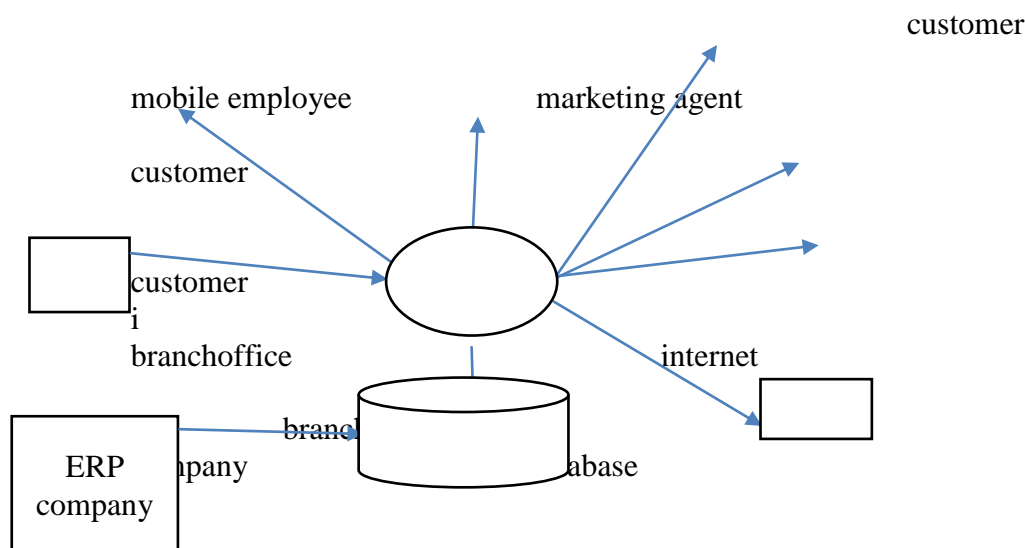
implementation, executives involved in technology decision-making across businesses are increasingly turning to these solutions. However, the penetration of SaaS within ERP varies greatly between sub-segments, with Human Capital Management (HCM) having the most penetration. The availability of HR systems as SaaS-which can be paid for on a monthly subscription basis-

helps companies manage HR data in real time. Some of the core HR areas for SaaS that are gaining importance are labor management, HR administration, payroll and recruitment.

According to KPMG International [1], in 2011, the worldwide SaaS ERP market revenue reached \$1.7 billion, up by 13.3% from \$1.5 billion in 2010. In 2012, the worldwide SaaS market revenue is expected to reach \$2 billion. The global SaaS market is expected to reach \$3 billion by 2015, growing at a CAGR of 14.7% during 2011-2015. Companies across industries are increasing their investments, shifting their projects from on-premise to SaaS. In 2011, North America accounted for 63.4% of the global SaaS market. In 2011, SaaS revenue in the region reached \$1.1 billion; a 20% increase over the revenue generated in 2010 and is expected to grow to \$1.8 billion by 2015. Ease and speed of deployment and lower Total Cost of Ownership (TCO) are driving the growth. In Latin America, SaaS revenue is forecast to total \$97.9 million in 2015, up from \$46.7 million last year.

In Western Europe, SaaS revenue grew 23.3%, from \$300 million in 2010 to \$400 million in 2011 and it is expected to grow to \$700 million in 2015. In the Eastern European region, it is projected to reach \$38.1 million in 2015, up from \$19.1 million last year. Apart from these regions, Northern Europe, which comprises the UK, Ireland, the Netherlands and Nordic countries, is also experiencing a robust SaaS adoption. Major factors contributing to the robust growth in the European SaaS market include culturally open outlook toward technology adoption, well-established internet infrastructure and English as the primary language.

In the Asia Pacific region, SaaS market revenue grew 21.5%, from \$84.9 million in 2010 to \$103.1 million in 2011 and is expected to grow to \$200 million by 2015. Australia, New Zealand, Hong Kong, Singapore, and South Korea are some of the key SaaS markets that offer growth opportunities for service providers. In Japan, SaaS revenue reached \$60.2 million in 2011, up 35.4% from \$44.5 million in 2010 and is expected to grow to \$88.7 million by 2015. Major factors spurring growth include established infrastructure, more stable networks and availability of vendor sales, marketing and support service structures)



- 7 a. **Discuss the limitation of ERP system. What are the implementation requirements of integrating BA as the front to an ERP system?**

Limitations of ERP System:

Managers cannot generate custom reports

ERP Systems provide only current status

Data in ERP application is not integrated with other enterprises

Implementation of Successful BA front-end to an ERP solution

Clarify business objectives and obtain executive sponsorship

Begin with a reasonable scope and ensure adequate resource

Choose a vendor with industry expertise in both DW and ERP

Choose a DW platform that delivers high availability

Select tools that speed implementation and reduce cost

Increase the velocity of information

Plan for Performance and growth

Close the loop for continual improvements

8. a. **What are the sub systems of finance module of an ERP package? Explain the function of each of these sub system in detail.**

Finance module sub systems:

- Financial accounting
- Investment management
- Controlling
- Treasury
- Enterprise controlling

Financial accounting:

General Ledger

Special Ledger

Accounts receivables & payables

Asset accounting

Legal Consolidation

Controlling:

Over-head cost controlling

Cost-Center controlling

Overhead Orders

Activity based costing

Product cost controlling

Cost-Object Controlling

Investment Management: Provides support for investment process from planning to settlement.

Treasury Module:

Cash management

Treasury management

Market risk management

Funds management

Enterprise Controlling:
Executive Information System
Calculation of ROI
Profit Center Accounting