



DR. B. R. AMBEDKAR OPEN UNIVERSITY
ROAD NO. 46, JUBILEE HILLS, HYDERABAD – 500 033

Dear Student,

We are enclosing two assignments in each course, for the core (common) and specialization courses in Operations Management area of II Year - **Fourth Semester of our MBA Programme (2019-20 Batch)** You should submit the assignments of core course, i.e., Innovation and Knowledge Management, and of all the four courses in the specialization area opted by you. Please note the following points while answering these assignments:

1. Writing and submitting these given 'Assignments' are compulsory for the students of MBA Programme. They have a weightage of 30% in each course.
2. You have to submit both the assignments compulsorily. You will not be allowed to appear for the semester-end examinations of any course, unless you submit the specified number of assignments in time, for that course.
3. Each assignment carries a maximum of 15 marks and you have to score a minimum of 40% marks, i.e., 6 out of 15, to qualify in that assignment. If you fail to score the minimum marks in any assignment, you have to necessarily resubmit that particular uncleared assignment along with the regular/current batch. Repetition of the same assignment will in no case be allowed.
4. The maximum marks for each course at the semester-end examination are 70 and you have to score a minimum of 40% marks, i.e., 28 out of 70 marks.
5. Division will be awarded on the basis of the aggregate marks obtained in assignments as well as in the semester-end examinations.
6. Dates of submission for the assignments are:

All the Five Courses

FIRST AND SECOND ASSIGNMENTS:

25.08.2022

ASSIGNMENTS SUBMITTED AFTER THE DUE DATE WILL NOT BE ACCEPTED.

7. If, under unavoidable circumstances, you fail to submit the assignments within the stipulated time, your results will be declared only after the submission and evaluation of all the assignments.
8. If any student fails to submit all the assignments within the stipulated time, he/she has to answer the set of assignments that are sent to the batch-in-progress at that time.
9. You have to submit your assignments in the same Study Centre to which you are attached.

10. The first page of your response sheet should be in the following format:

Student Enrolment No. :
Name of the Student :
Address :
Mobile No. :
E-mail Id. :
Name of the Programme :
Course Code & Title :
Assignment No. :
Study Centre (Name & Code) :
Date of Submission :
Signature of the Student :

11. Please go through the relevant course units thoroughly before answering your assignments.
12. In case the assignment is in figurative / problem & solution model, you have to answer it in the required / pertinent format. You should give working notes also wherever necessary.
13. Before submitting the assignments, check them carefully to make sure that you have attempted all the main points of all the questions.
14. You are required to use only foolscap paper for your responses. Allow some margin on the left, in order to facilitate the evaluator to record his comments.
15. You have to answer the assignments in your own words.
16. Do not copy from the response sheets of other students. If copying is noticed, the assignments of all such students will be rejected.
17. Start each assignment on separate sheets of paper.
18. You can consult your counsellors and get clarification on your doubts, if any, while answering the assignments.
19. The assignments should be neatly hand written. **Typed or Computerized assignments will not be accepted.**
20. You have to prepare your responses in duplicate, submit the original at your study centre and retain the second copy with yourself as a record.
21. You can collect back the evaluated assignments from your study centre, if you want.

22. In case you request for a change of study centre, you should submit your assignments only to the original study centre until the University gives effect to such request for change of study centre.

23. Further correspondence should be made to the following address:

**The Director (SSB)
Dr. B. R. Ambedkar Open University
Prof. G. Ram Reddy Marg
Road No.46, Jubilee Hills
Hyderabad – 500 033 (T.S.)**

**HEAD
DEPARTMENT OF BUSINESS MANAGEMENT**



DR. B. R. AMBEDKAR OPEN UNIVERSITY

**DEPARTMENT OF BUSINESS MANAGEMENT
MASTER OF BUSINESS ADMINISTRATION (MBA) PROGRAMME
(BATCH: 2019-20)**

**COURSE – MBA-401: INNOVATION AND KNOWLEDGE MANAGEMENT
(Second Year - Fourth Semester)**

ASSIGNMENT – I (MARKS: 15)
ANSWER ALL QUESTIONS
ALL QUESTIONS CARRY EQUAL MARKS

1. a) “Innovations are considered as the powerful tools to stimulating the economy of country” - In the light of the above statement discuss the new innovations in 21st century and status of innovation environment in India.
b) Analyze the different types of innovative models with one example to each model.
2. a) “To reach the changing customer expectations new product development is necessary” - Examine the statement and discuss the various steps involved in the new product development.
b) Discuss the key points in diffusion theory and explain the different factors influencing the diffusion theory.
3. a) “Knowledge helps in achieving organizational goals” – Comment. Also briefly discuss different types of knowledge management cycles.
b) Distinguish between the codification and personalization. Also explain the concept of strategic vision and its importance in Knowledge Management.

ASSIGNMENT – II (MARKS: 15)
ANSWER ALL QUESTIONS
ALL QUESTIONS CARRY EQUAL MARKS

1. a) Explain the concepts of ‘Knowledge Capture’, ‘Knowledge Creation’, and ‘Knowledge Transformation’. Also describe Nonaka’s Model of Knowledge Creation and Transformation.
b) Explain Tiwana’s seven level knowledge management structures.
2. a) Write a brief note on ‘Ergonomics’ at work place. Discuss the different factors affecting ergonomics at workplace with one example for each factor.
b) What is Knowledge Transfer? Explain the process of KT. Also state the challenges to knowledge transfer.
3. Analyse the following case-let and answer the questions asked at the end:

In all knowledge-based industries, people, processes and technology are the three primary levers for the predicting and managing organizational and individual capability. Today, the IT industry is maturing and coping with a faster change in technological business environment.

And managing people who are the key assets in the organization is a tough challenge. The People Capability Maturity Model (P-CMM) was conceptualized at the software engineering institute of Carnegie Mellon University, US and belongs to the stable of SEI – software processes improvements programmes and methodologies. The principal architect of P-CMM is Bill Curtis. Knowledge is the raw material of software development. Although software tools can help record and manage knowledge, they do not create and apply it. Perhaps no industry in history has been as knowledge intense as software development, an industry whose only product is proceduralized knowledge. Not surprisingly, the level of talent in a software project is often the strongest predictor of its results, and personnel shortfalls are one of the most severe project risks.

P-CMM is an organizational change model designed on the premise that improved workforce practices will not survive unless an organization's behavior changes to support them. It provides a road map for transforming an organization by steadily improving its workforce practices. P-CMM characterizes the maturity of the people practice, provides process orientation to people programmes, improve the capability of organizations by increasing the capability of the workforce and helps an organization to become an “employer of choice”.

In August 2001, Mr. Curtis released P-CMM v 2.0 in Bangalore. This was to address areas like knowledge management, Six Sigma and bring out clarity in concepts like coaching and monitoring. It also aimed at using similar nomenclature as CMMI and focused with a view to establishing, deploying, supporting, reusing, improving the competency framework which is critical for managing individual and organizational capability.

P-CMM has five levels of maturity through which organizations progress and establish systems and processes. The relationships between these key processes are the themes of P-CMM: developing capability, managing and motivating performance, shaping the workforce, building work groups and culture.

One of the important features of P-CMM is that it encourages and makes it compulsory to have proper measures and metrication programme. These measurements quantitatively demonstrate the HR health of the organization. These measures could be climate surveys scores and their variations over the years, hiring measures also help to provide a cost effective channel of staffing, impact of training on individual performance and savings incurred thereby. Verification processes like audits and mini assessments support all the measures. P-CMM follows a CMM Appraisal Framework (CAF) to determine maturity of peoples practices. P-CMM assessments are team training, comprehensive documents review, and interviews with various categories of employees. The entire process covers over 35% of the workforce strength.

People–CMM assessments are regarded and valued by clients across the world as they are the hall mark of sound people processes and can be used as interventions with adopting excellence models like Malcolm Baldrige and EFQM. A few organizations that have undertaken People–CMM assessment include Wipro, TCS, Datamatics, PCS, SSI, SISL, Techspan and Mastek. Ajay Batra, consulting partner QAI, SW-CMM and People-CMM lead assessor believes “intent based diligent focus on people is People-CMM”.

At TCS the P-CMM assessment has helped in terms of acceptability and comfort levels. This is seen especially in terms of offshore and outsourcing work.

Questions:

- (i) Discuss the importance of PCMM keeping in view the recent rapid changes in the technologies and organizational forms.
- (ii) Do you really think that the PCMM address the issues of people management? Explain with proper justification.
- (iii) “Having knowledge in technologies may not be sufficient in personnel management”
- Comment.



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**DEPARTMENT OF BUSINESS MANAGEMENT
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**COURSE – MBA-41: SUPPLY CHAIN MANAGEMENT
(Second Year - Fourth Semester – Operations Management Specialization)**

ASSIGNMENT – I (MARKS: 15)
ANSWER ALL QUESTIONS
ALL QUESTIONS CARRY EQUAL MARKS

1. a) Define 'Supply Chain Management'. Discuss the role of modeling in supply chain.
b) Elaborate various obstacles to coordination in a supply chain. Give examples.
2. a) Discuss about Customer-Centric Supply Chain.
b) Explain the concepts of Logistics and Logistics Management. Also narrate the role, advantages and disadvantages of outsourcing of logistics.
3. a) What is Customer-Led Business? How do you develop customer service strategy?
b) Write a note on:
 - (i) Key performance indicators of warehouse management; and
 - (ii) Vendor Managed Inventory.

ASSIGNMENT – II (MARKS: 15)
ANSWER ALL QUESTIONS
ALL QUESTIONS CARRY EQUAL MARKS

1. a) State the strategic issues faced in SCM. What are the various strategic activities taken up to face them?
b) Define 'Benchmarking'. State its benefits. Discuss the role of benchmarking in SCM.
2. a) Narrate the factors contribute to quality data. Explain the importance and the benefits of high-quality data in SCM.
b) What is Outsourcing? Explain briefly various types of outsourcing. Also state the issues involved in outsourcing.
3. Analyse the following case-let and answer the questions asked at the end:

The Benetton Supply Chain

One of the best known examples of how an organization can use its supply chain to achieve a competitive advantage is the Benetton Group. Founded by the Benetton family in the 1960s, the company is now one of the largest garment retailers, with stores which bear its name

located in almost all parts of the world. Part of the reason for its success has been the way it has organized both the supply side and the demand side of its supply chain.

Although Benetton does manufacture much of its production itself, on its supply side the company relies heavily on 'contractors'. Contractors are companies (many of which are owned, or part-owned, by Benetton employees) that provide services to the Benetton factories by knitting and assembling Benetton's garments. These contractors, in turn, use the services of sub-contractors to perform some of the manufacturing tasks. Benetton's manufacturing operations gain two advantages from this. First, its production costs for woollen items are significantly below some of its competitors because the small supply companies have lower costs themselves. Second, the arrangement allows Benetton to absorb fluctuation in demand by adjusting its supply arrangements, without itself feeling the full effect of demand fluctuations.

On the demand side of the chain, Benetton operates through a number of agents, each of whom is responsible for their own geographical area. These agents are responsible for developing the stores in their area. Indeed, many of the agents actually own some stores in their area. Products are shipped from Italy to the individual stores where they are often put directly onto the shelves. Benetton stores have always been designed with relatively limited storage space so that the garments (which, typically, are brightly coloured) can be stored in the shop itself, adding colour and ambience to the appearance of the store. Because there is such limited space for inventory in the stores, store owners require that deliveries of garments are fast and dependable. Benetton factories achieve this partly through their famous policy of manufacturing garments, where possible, in greggio, or in grey, and then dyeing them only when demand for particular colours is evident. This is a slightly more expensive process than knitting directly from coloured yarn, but their supply-side economies allow them to absorb the cost of this extra flexibility, which in turn allows them to achieve relatively fast deliveries to the stores.

Questions:

- a) Draw out the Benetton supply chain.
- b) What are the major operations objectives of:
 - (i) Benetton's retail operations;
 - (ii) Benetton's physical distribution operation;
 - (iii) Benetton factory and its suppliers?
- c) How well do these three interconnecting sets of operations fit together?



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**COURSE – MBA-42: TOTAL QUALITY MANAGEMENT
(Second Year - Fourth Semester – Operations Management Specialization)**

ASSIGNMENT – I (MARKS: 15)
ANSWER ALL QUESTIONS
ALL QUESTIONS CARRY EQUAL MARKS

1. a) Explain the elements of quality and management of quality. What are the costs associated with poor quality?
b) What is the contribution of Taguchi to quality? Also explain the Quality Contribution of Kaoru Ishikawa.
2. a) Identify the differences between sampling inspection and 100% inspection.
b) What are different types of sampling plans? Explain the situations wherein to choose any one of them.
3. a) How do you define Quality Loss Function? What is its significance according to Taguchi's method?
b) How would a sequential approach to product design and introduction result in over-runs in time, cost and quality? How would quality function deployment improve the system?

ASSIGNMENT – II (MARKS: 15)
ANSWER ALL QUESTIONS
ALL QUESTIONS CARRY EQUAL MARKS

1. a) What is Six-Sigma? What are the benefits of six-sigma certification?
b) What is the procedure for selecting a project for six sigma?
2. a) Describe the process of continuous improvement and also identify the project identification tools and its stages.
b) Describe the process of DMAIC, criteria for selection of project for six sigma implementation and also the roles and responsibilities required for six sigma implementation.

3. Analyze the following case-let and answer the questions asked at the end:

Continuous Improvement

Starting a few years ago, the team in Pensacola implemented key lean tenets that allowed them to begin strengthening safety, eliminating defects and improving on-time delivery. For example, instead of sending batches of parts down the line, they reduced the flow to just a single piece. Going slow to go fast: Sounds counterintuitive? Quite the opposite. Their “single-piece flow lines” — an important lean concept — allowed them to quickly spot any safety, quality or process issues, stop the line and fix the problem.

The approach worked well, and the plant’s lean lines were among the first Larry Culp, GE chairman and CEO, visited after he rose into his role in late 2018. But lean is all about continuous improvement, and the team in Pensacola was far from finished. In 2021, for example, workers at the plant held more than a dozen kaizen exercises seeking to find ways to make production more flexible and resilient. The work has been paying off. The team in Pensacola used Kaizens to work on a lean concept known as talk time. Talk time determines the amount of time workers need to complete a task at an assembly station. Ideally, all stops along the production line take the same amount of time so that parts do not back up at some stations while workers at other stations are waiting.

Talk time is closely tied to another lean idea known as standard work. It identifies all the necessary steps, the number of workers and the number of parts needed to complete an assembly operation within a given talk time. As a result of the kaizens, the Pensacola team members now know exactly what they need to do to go from producing three turbines a week — a pace more typical for the winter and spring months, when the weather is cold — to five turbines a week in the fall and summer months, when wind farm construction picks up. “We can easily pivot from one to another,” says Momar Mattocks, site leader at the Pensacola plant. Just this year, lean has allowed the plant to reduce the number of build hours it takes to produce a turbine by 340 minutes, and shortened the time a turbine spends on the production line by 100 minutes — 6% and 12% improvements respectively. Are they done? Not quite. Says lean leader Eduardo Olivier: “Every improvement leads to another. That’s the lean way.”

Questions:

- a) Discuss the core concept the case to serve the customers better?
- b) What are the measures taken by Company to achieve the Success?



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**COURSE – MBA-43: WORLD CLASS MANUFACTURING
(Second Year - Fourth Semester – Operations Management Specialization)**

ASSIGNMENT – I (MARKS: 15)
ANSWER ALL QUESTIONS
ALL QUESTIONS CARRY EQUAL MARKS

1. a) Explain the concept of World Class Manufacturing. Also discuss the best practices of WCM.
b) What do you mean by ‘Manufacturing Excellence’? Discuss various approaches to it.
2. a) Write a note on the following:
(i) Bar Code; (ii) Kaizen; (iii) Visual Management; & (iv) Heijunka.
b) How inventory is viewed in JIT philosophy? Also narrate the three key elements in JIT approach.
3. a) Explain the following:
(i) Intelligent Robotics; (ii) Nano Manufacturing;
(iii) Electro-Chemical Machining; & (iv) Rapid Prototyping.
b) Discuss the various applications of robots. Also describe the advantages and disadvantages of robots.

ASSIGNMENT – II (MARKS: 15)
ANSWER ALL QUESTIONS
ALL QUESTIONS CARRY EQUAL MARKS

1. a) Elaborate various types of Key Performance Indicators. Also explain the KPIs for work place.
b) Examine the environmental impact factors during manufacturing with examples.
2. a) What is ‘Ergonomics’? How to implement ergonomics in manufacturing industry? Explain in detail.
b) Critically analyze and comment on the factors favouring manufacturing in India.
3. Analyze the following case-let and answer the questions asked at the end:

Mounting global competitive pressures have forced multi-national companies (MNCs) to look for the most competitive way of manufacturing and delivering products and services. Being one of the BRIC (Brazil, Russia, India, and China) countries, India seems to be an attractive location for the MNCs to invest into the future. Siemens, for instance, found that

during the recent global recession, Asia in general and both India and China in particular have escaped from the recession by showing steady growth. Siemens AG (German parent company) CEO believes that Siemens Ltd. (Indian subsidiary) will play a key role not only as a manufacturing base but also by generating own innovations and local supply chains.

The growing importance of India as a manufacturing base stems from three main factors. First is the peculiarity of the Indian market that is extremely cost sensitive. Therefore, there is an in-built need to develop products that are priced low without compromising on quality and meeting optimum specifications of the customers. In Siemens Ltd., this was addressed by developing SMART products (S- Simple to use; M - Maintenance friendly; A - Affordable; R - Reliable, and T - Timely-to-Market). For example, Siemens Ltd. delivered the world's first 1200 kV sulphur hexafluoride (SF6) circuit breaker to Power Grid Corporation of India Ltd., which requires less than half the space and fewer lines to transmit the same power. It also has the capacity to transmit 8000 MW electricity from distant generating stations. Similarly, Siemens Ltd. launched SWT-2.3-113 direct drive wind turbine targeted at low to moderate wind markets.

The second factor that drives India as an emerging manufacturing base is to utilize these capabilities and deliver cost-effective products and services to global markets. Using the capabilities in manufacturing, engineering, and redesigning tools in India, Siemens AG has been able to cut costs by 30-50%. On account of these, the attractiveness of India increases. For instance, Siemens AG in its annual internal evaluation ranked Siemens Ltd. the second best regional company in 2010-11, ahead of the US, China, and many others.

This encourages the MNCs to explore more opportunities in India. In the case of Siemens AG, it has responded to these developments by investing significantly in India in recent times. Siemens AG has invested 1 billion Euros in Siemens Ltd. in 2011. In January 2012, it opened up two new factories in India in addition to the existing 20.

India is at the central point of the global growth strategy of several firms. This is because of a vibrant domestic market and the potential to serve as a manufacturing base for the global market. It may, therefore, not be surprising to see India emerge as a global manufacturing base as the Siemens example seems to point to us.

Questions:

- a) What are the major factors to Siemens Ltd. development of market in India?
- b) Why India is considered as the manufacturing base for global market?
- c) State the BRICS nations.



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**COURSE – MBA-44: MAINTENANCE MANAGEMENT
(Second Year - Fourth Semester – Operations Management Specialization)**

ASSIGNMENT – I (MARKS: 15)
ANSWER ALL QUESTIONS
ALL QUESTIONS CARRY EQUAL MARKS

1. a) Explain the objectives and functions of maintenance management. Also discuss the challenges faced by the maintenance management professionals.
b) Describe the document required for planned maintenance management system. Also explain the maintenance management control system.
2. a) What are the strategies involved in maintenance planning and scheduling? Explain various techniques useful in forecasting maintenance.
b) Explain the types and reasons of replacement of equipments.
3. a) Identify and outline the safety and environmental aspects in maintenance management.
b) How to carry out a maintenance audit? Explain the key components of maintenance management audit.

ASSIGNMENT – II (MARKS: 15)
ANSWER ALL QUESTIONS
ALL QUESTIONS CARRY EQUAL MARKS

1. a) How do you classify and identify the spare parts in maintenance management? Also explain various types of inventory analysis available for maintenance management professionals.
b) What are types of solid waste management? Explain its principles in detail.
2. a) Briefly explain various advance techniques generally used in maintenance management.
b) Discuss the role and importance of Information and Communication Technologies (ICTs) in maintenance management.
3. Analyse the following case-let and answer the questions asked at the end:

Improve with the Changing Times

Bharat Great Furniture Limited is known for a good product range with superior quality and a premium price. It has been selling standardised products for the last 30 years, with a 70%

market share. Now, the company has started facing acute competition from small and the unorganised sector. Competitors are now selling low utility and low-priced products. They are successful in reaching remote areas. They are also giving door to door service and delivery of the product.

Bharat's furniture is known to be a 'high profile product' with very good finishing. Inputs used in the product are also of high quality. But the standardised high profile designs and uses of its products have limited the demand for its products. The company knows that 'price sensitivity of demand' is a vital factor deciding its sales in semi-urban and rural areas. In the urban areas, customers are expecting newer designs of products, to suit increasing dynamics and reducing size of their offices. Many companies are on the drive of 'cost reduction' and therefore, would like to spend only when (and where) it is necessary.

Bharat is very much in demand for the last several years; hence it did not bother much to woo the customer. It almost enjoyed 'total monopoly'. But now with the entry of new competitors and especially the 'small-size-low profile companies' has compelled the company to think seriously about a multi-front improvement. The company will have to re-study the changing concept of 'product value' or 'product utility' perceived (or expected) by the customers. It will also have to tap the niche market by introducing low-priced, newer products.

In this process of improvement, change and growth, the company's employees will also have to improve and change. 'Employee Value' will now have to coincide with 'product value'. Employees will have to consider customers' expectations closely and then assist the company in carrying out a detailed exercise of "Value Analysis".

Analysis of the present 'Value System' (i.e. business values) is also required, to introduce attitudinal and cultural changes among the employees. Business Values have been fast changing and therefore the company will also have to re look at its value system and retrain or remould the employees.

Questions

- a) What is 'Value Analysis'?
- b) Correlate between 'Value Analysis' and 'Employee Training'.
- c) Discuss the change in 'Value System' and related change in 'Employee Quality'.
