



M.E. DEGREE EXAMINATIONS: NOV/DEC 2023

(Regulation 2018)

Third Semester

INDUSTRIAL ENGINEERING

P18IEE3013: Productivity and Reengineering

COURSE OUTCOMES

- CO1:** Apply and analyze the productivity measures and models.
- CO2:** Deduce the working definition of business process reengineering and its importance.
- CO3:** Discuss steps to create vision, mission and guiding principles and applying the three. to five years strategic plans by using various reengineering approaches.
- CO4:** Analyze the business process creation and evaluation in reengineering steps.
- CO5:** Contrast roles of leaders, process owners, reengineering team and czar.

Time: Three Hours

Maximum Marks: 100

Answer all the Questions:-

PART A (10 x 1 = 10 Marks)

1. Assertion (A): After identification of the organizations core competencies, the executive and senior leadership will establish the dimensions of organizations vision. Reason (R): Senior leadership chooses attributes of a best in class organization and determines other applications of the organization's core competencies. CO5 [K₁]
 - a) Both A & R are true and R is the correct explanation of A
 - b) Both A & R are true but R is not the correct explanation of A
 - c) A is true R is false
 - d) A is false R is true
2. Consider the following terms associated to productivity and sequence them Higher productivity 2. Higher GDP per capita 3. Higher standard of living. CO1 [K₁]
 - a) 1-3-2
 - b) 1-2-3
 - c) 2-3-1
 - d) 3-1-2
3. Which of the following is not an example for outputs in a production system? CO1 [K₁]
 - a) Number of customers served
 - b) Number of pieces produced
 - c) Number of documents processed
 - d) Man hours
4. Matching type item with multiple choice code. CO1 [K₁]

List I	List II
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A. Productivity improvement	i. Output/Input
B. Multi factor productivity	ii. The total of all outputs produced by the transformation process divided by the total of the inputs
C. Productivity Index	iii. Effectiveness/Efficiency
D. Productivity	iv. decreasing inputs while holding outputs steady

A B C D

- a) ii iii i iv
- b) ii i iii iv
- c) iii iv ii i
- d) iv ii iii i

5. Assertion (A): Common Business drivers in RE are Competitive environment, Internal changes and IT infrastructure. CO2 [K₁]

Reason (R): Associated Business driver terminologies include increased globalization, Layoffs, downsizing, ERP, DBMS etc

- a) Both A & R are true and R is the correct explanation of A
- b) Both A & R are true but R is not the correct explanation of A
- c) A is true R is false
- d) A is false R is true

6. The largest contributor to productivity increases is the _____, and is estimated to be responsible for _____ of annual increase. CO3 [K₁]

- a) Management, 1/3 rd
- b) Labour, 2/3 rd
- c) Capital, 90 %
- d) Technology, 75 %

7. Consider the following and pick those factors which outline the internal fortitude to keep going despite slings and arrows of outraged constituencies. CO4 [K₁]

1. Enthusiasm 2. Luck 3. Tact 4. Teamwork 5. Optimism

- a) 1,5
- b) 1,3,5
- c) 2,4,6
- d) 1,2,4

8. Assertion (A): Healthy ratio of insiders to outsiders in a Reengineering team is 3:1. Reason (R): A healthy Reengineering team will have 5 -10 members. CO5 [K₁]

- a) Both A & R are true and R is the correct explanation of A
- b) Both A & R are true but R is not the correct explanation of A
- c) A is true R is false
- d) A is false R is true

9. The basic purpose of overcoming resistance through information sharing is to dispel CO4 [K_L1]

_____ and _____

- | | | |
|-------------------------|----------------------|--|
| a) Quality, Reliability | b) Lethargy, Fatigue | |
| c) Uncertainty, Fear | d) Vision, Mission | |
10. Consider the following phases of Business process reengineering and pick the right sequence. CO2 [K₁]
1. Business drivers of engineering
 2. Reengineering and the product
 3. The reengineering process
 4. Reengineering facilitators
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|------------|------------|
| a) 3-2-4-1 | b) 1-2-3-4 |
| c) 4-3-2-1 | d) 1-3-4-2 |

PART B (10 x 2 = 20 Marks)

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| 11. Contrast between internal and external factors of productivity. | CO1 [K ₃] |
| 12. UVW plant produces 500 cypress packing boxes in two 10-hour shifts. What is the productivity of the plant? | CO1 [K ₁] |
| 13. Recall the limitations of lack of planning in BPR. | CO2 [K ₁] |
| 14. List the key points for succeeding at Reengineering. | CO2 [K ₁] |
| 15. Pick the 3 C's as elements of effective change. | CO3 [K ₁] |
| 16. Outline the steps involved in yearly operational planning. | CO3 [K ₂] |
| 17. List the four phases of Business Process Reengineering. | CO4 [K ₁] |
| 18. Build the steps involved in testing the new process. | CO4 [K ₃] |
| 19. Plan the steps involved in workforce preparation for involvement and change. | CO5 [K ₃] |
| 20. Rephrase the functioning of cross functional teams. | CO5 [K ₂] |

PART C (10 x 5 = 50 Marks)

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| 21. Define Production and Productivity with examples. | CO1 [K ₁] |
| 22. Label productivity benefits and its influencing factors. | CO1 [K ₄] |
| 23. Distinguish the driving forces which instigate a need for a change in organizations. | CO2 [K ₂] |
| 24. Dramatize the historical outlook of Business Process Reengineering efforts. | CO2 [K ₁] |
| 25. Recall the criteria for meaningful measurements. | CO3 [K _L] |
| 26. Define the 3 planning approaches for a RE team. | CO3 [K ₂] |
| 27. Spell the elements of an IFD and define its purpose. | CO4 [K ₁] |
| 28. Illustrate the steps in a reengineering project. | CO4 [K ₂] |
| 29. Discuss the steps taken by top management for Reengineering. | CO5 [K ₂] |
| 30. Quote examples of signals used by effective leaders. | CO5 [K ₁] |

Answer any TWO Questions
PART D (2 x 10 = 20 Marks)

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| 31. Organize the working definition of Business Process Reengineering. | CO2 [K ₃] |
| 32. Examine the encumbrances in developing a vision and mission statements. | CO3 [K ₂] |
| 33. Identify the roles of a leader, RE Czar, Process owner and functions of RSC within the context of reengineering. | CO5 [K ₄] |
