

Course Code: OPE4228					
O P JINDAL UNIVERSITY					
B. Tech. VIII Semester Backlog Examinations (Mechanical)					
VALUE ENGINEERING					
Time: 3 Hrs.			Max. Marks: 100		
Answer any one question from each unit					
All questions carry equal marks					
			M	CO	KL
Unit-I (20 marks)					
1	a.	Define Function and its classification with suitable example.	6	1	
	b.	What is Value Engineering? How value addition is ensured, Explain in detail.	14	1	
OR					
2	a.	What values do you see while procuring a wrist watch? Explain in brief.	6	1,2	
	b.	Distinguish the thinking of conventional management and total quality management. Which is having upper hand and why?	14	1	
Unit-II (20 marks)					
3	a.	Write short notes on Life cycle of the product. Define Esteem Value.	6	1,2	
	b.	"Value Engineering is not mere a cost reduction technique", Justify the statement.	14	1,2	
OR					
4	a.	Discuss any six reasons for poor value.	6	1	
	b.	Comment your views on the statement "Tell me, I forget; show me, I remember; Involve me, I understand"	14	1,2	
Unit-III (20 marks)					
5	a.	Differentiate effectiveness and Efficiency with suitable example.	6	1,2	
	b.	What is forecasting and market research? How both parameters are important for enhancing the productivity?	14	2,3	
OR					
6	a.	Define Quality. What is qualitative and Quantitative analysis?	6	2,3	
	b.	Value is "Many things to many people". Write your comments.	14	1,2	
Unit-IV (20 marks)					
7	a.	Write short notes on cost model of the product	6	2,3	
	b.	Discuss the objectives of investigation phase. What are the key questions raised for it?	14	2,3	
OR					
8	a.	What are the various stages of Job Plan.	6	2,3	
	b.	Discuss the objectives of Evaluation phase. What are the techniques used for it?	14	2,3	
UNIT-V (20 marks)					
9	a.	What is Audit and its objective?	6	3	
	b.	Narrate a case study involving Value Engineering.	14	1,2	
OR					
10	a.	Elaborate Unnecessary need of a product and its impact on product development.	6	2,3	
	b.	What is GDP? Discuss the relevance of Value Engineering in Indian scenario.	14	1,2	

Course Code: MEE 4236 (1)

O P JINDAL UNIVERSITY**B. Tech. VIII Mechanical Semester- Backlog Examinations****Industrial Engineering and Production Management****Time: 3 Hrs.****Max. Marks: 100**

Answer any one question from each unit

All questions carry equal marks

M CO KL**Section-A**

1	a.	Define industrial engineering? What is its importance?	2	1	1
	b.	Define plant layout.	2	1	1
	c.	What is productivity and what is its relationship with production?	2	2	2
	d.	Define work study	2	2	1
	e.	What is memo motion study?	2	2	2
	f.	Define time study and explain its objectives.	2	3	1
	g.	What is job evaluation?	2	3	2
	h.	Define ergonomics	2	4	1
	i.	What are the objectives of Production Management.	2	5	1
	j.	What is material requirement planning (MRP)	2	5	1

Section-B:**Unit-I**

2	a.	What are the phase involved in system methodology? Explain it.	8	1	3
	b.	Explain why plant location decisions are important to the Organization.	8	1	2

OR

3	a.	Define plant layout. What are the objectives of good plant layout? Explain it with suitable examples	8	1	3
	b.	Compare product layout and process layout in detail.	8	1	2

Unit-II

4	a.	What are the various types of layout? Explain the application of each.	8	2	2
	b.	Explain the principle techniques of work measurement and their application.	8	2	3

OR

5	a.	Explain the various Industrial Engineering tools and techniques to improve productivity.	8	2	3
	b.	Define work study. What are the components of work study?	8	2	2

Unit-III					
6	a.	Describe various methods of job evaluation giving their advantages and limitations.	8	3	3
	b.	Explain the factors that influence payment of wages to the employees.	8	3	3
OR					
7	a.	Explain the steps involved in point rating method of job evaluation.	8	3	2
	b.	What is merit rating and how it helps the industries?	8	3	3
Unit-IV					
8	a.	What is system? Explain man-machine system. Explain it.	8	4	2
	b.	Compare Job Production, Batch Production, Continuous Production and Cellular Production.	8	4	3
OR					
9	a.	What are the various functions of Production Department? Explain it with suitable examples.	8	4	3
	b.	Discuss in detail various costs associated with inventory.	8	4	2
UNIT-V					
10	a.	What is capacity requirement planning (CRP)? Explain it	8	5	3
	b.	What is long term and short term capacity planning. Explain it with suitable examples	8	5	2
OR					
11	a.	What is PERT and CPM ? Explain it with suitable examples	8	5	3
	b.	What is supply chain management? Explain it with suitable examples	8	5	2

Course Code: MEE4235					
O P JINDAL UNIVERSITY				R 20	
B. Tech. VIII Semester Backlog Examination					
ROBOTICS AND AUTOMATION					
(Offered to Mechanical Engineering / 01UG040)					
Time: 3 Hrs.			Max. Marks: 100		
Questions 1 and 6 are compulsory					
Draw diagrams wherever necessary					
			M	CO	KL
1		Explain the meaning of			
	a	Sensor	2	2	1
	b	Automation	2	1	1
	c	Range	2	1	1
	d	Precision	2	2	1
	e	Accuracy	2	3	1
	f	Sensitivity	2	1	1
	g	Response time	2	7	1
	h	Calibration	2	6	1
	i	Span	2	1	1
	j	Resolution	2	6	1
2	a.	What do you understand by the word End Effectors?	8	1	2
	b.	What is the use of sensors for a robot in general?	8	6	2
OR					
2	c.	What is Seebeck Effect?	8	1	2
	d.	Write a note on types of grippers for a robot.	8	6	2
3	a.	Throw some light on the application of robots in welding?	8	4	2
	b.	In your opinion how the cams can have used in robotic function?	8	7	2
OR					
3	c.	What are the functions of Light Sensors, Heat Sensors, Touch Sensors, Ultra Sonic Rangers and Gyroscopes?	8	4	2
	d.	Explain the function of Piezoelectric Sensors.	8	7	2
4	a.	Write a note on Thermocouple.	8	5	2
	b.	Explain the term vacuum/ suction grippers.	8	5	2
OR					
4	c.	What is the difference between Sensors and Transducers?	8	5	2
	d.	Write a note on Gripping Mechanisms in a robot.	8	4	2
5	a.	Explain the term finger grippers in detail.	8	3	3
	b.	Write a note on Robotic Joints.	8	4	3

OR

5	c.	Explain Mechanical Grippers in detail.	8	3	3
	d.	Elaborate an automated idea that you feel would ease the human life.	8	4	3
6		What is Pitch, Yaw and Roll? Explain with the figure. Write a note on Robot with Seven Degrees of Freedom.	16	3	3