Code No: RT32036 **R13** SET - 1

III B. Tech II Semester Regular/Supplementary Examinations, April - 2017
INDUSTRIAL ENGINEERING & MANAGEMENT
(Mechanical Engineering)

Time: 3 hours Max. Marks: 70

Note: 1. Question Paper consists of two parts (**Part-A** and **Part-B**)
2. Answering the question in **Part-A** is compulsory
3. Answer any **THREE** Questions from **Part-B**

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PART –A

1	a)	Explain the importance of an industrial engineer.	[3M]
	b)	Differentiate between plant layout and product layout.	[4M]
	c)	With neat sketch briefly explain string diagram.	[4M]
	d)	Explain the concept of Zero defect.	[3M]
	e)	What do you mean by human resource management?	[4M]
	f)	Briefly explain supply chain management.	[4M]

PART -B

2	a)	Describe the nature and importance of management in modern business organization.	[8M]
	b)	Explain the system approach and contingency approach to management.	[8M]
3	a)	Explain the importance of plant locations.	[3M]
	b)	State the disadvantages of concentration of industries in few areas.	[8M]
	c)	State the symptoms of a bad plant layout.	[5M]
4	a)	Name the various recording techniques used in method study. Give the various symbols used in recording techniques with their meaning.	[10M]
	b)	Explain the objectives of time study.	[8M]
5	a)	What do you understand from process control? Explain.	[8M]
	b)	State the benefits and limitations of TQM.	[8M]
6	a)	Define personnel management. Enumerate its importance in business organization. Also state its characteristics.	[8M]
	b)	Enumerate various steps involved in job evaluation procedure.	[8M]
7	a)	Explain the procedure of value analysis.	[6M]
	b)	Define the following: i. Crash time ii. Normal cost iii. Crash cost iv. Normal time v. cost slope	[10M]

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Code No: RT32036 **R13** SET - 2

III B. Tech II Semester Regular/Supplementary Examinations, April - 2017
INDUSTRIAL ENGINEERING & MANAGEMENT
(Mechanical Engineering)

Time: 3 hours Max. Marks: 70

Note: 1. Question Paper consists of two parts (**Part-A** and **Part-B**)
2. Answering the question in **Part-A** is compulsory
3. Answer any **THREE** Questions from **Part-B**

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PART –A

1	a)	Briefly explain the development of industrial engineering.	[3M]
	b)	What are the quantitative techniques for optimal design of layouts?	[4M]
	c)	What is micro motion study? Explain.	[3M]
	d)	Give a brief note on quality circles.	[4M]
	e)	What are the functions of personnel management?	[4M]
	f)	What is the importance of value engineering?	[4M]

PART -B

2	a)	Name and describe the various levels of management with their functions.	[8M]
	b)	Give a brief note on: i. Classical theory of management ii. Scientific management	[8M]
3	a)	Describe the various factors to be considered in selecting the actual site in a particular locality.	[8M]
	b)	Differentiate between process layout and product layout.	[8M]
4	a)	Explain the utility of outline process chart in method study. Differentiate between outline process chary and flow process chart.	[8M]
	b)	Explain the construction of a string diagram with neat sketch.	[8M]
5	a)	Define control chart and state the objectives of X and R charts.	[8M]
	b)	Describe the various elements of TQM in brief.	[8M]
6	a)	State and describe the principles of personnel management briefly.	[8M]
	b)	Briefly explain the job evaluation methods with merits and demerits.	[8M]
7	a)	Explain the objectives of value engineering.	[6M]
	b)	For the table given below, find i. Draw the network diagram ii. calculate EST, LST, EFT, LFT and floats ii. Total project duration	[10M]

Activity No.	0-1	1-2	0-3	2-5	3-4	4-5	5-6
Duration Days	3	5	3	2	3	6	4

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Code No: RT32036 **R13** SET - 3

III B. Tech II Semester Regular/Supplementary Examinations, April - 2017
INDUSTRIAL ENGINEERING & MANAGEMENT
(Mechanical Engineering)

Time: 3 hours Max. Marks: 70

Note: 1. Question Paper consists of two parts (**Part-A** and **Part-B**)
2. Answering the question in **Part-A** is compulsory
3. Answer any **THREE** Questions from **Part-B**

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PART –A

1	a)	Differentiate between production management and industrial engineering.	[3M]
	b)	Give a brief note on plant maintenance.	[4M]
	c)	What do you understand from work sampling? Explain briefly.	[4M]
	d)	Explain Six Sigma concept.	[4M]
	e)	Briefly discuss about wage incentive plans.	[4M]
	f)	Briefly explain enterprise resource planning.	[3M]

PART -B

2	a)	Describe the various stages of evolution of management.	[8M]
	b)	State and describe the Fayol's principles of management.	[8M]
3	a)	State the reasons for the location of: i) Iron and steel Industries in Bihar and Orissa ii) Textile industries at Bombay and Ahmedabad	[8M]
	b)	Define plant layout. State the principles of plant layout.	[8M]
4	a)	What is a flow process chart? Discuss its utility for method study engineer.	[8M]
	b)	Explain the objectives of micro-motion study.	[8M]
5	a)	Describe the method of constructing X and R chart and explain how these charts help in determining lack of control.	[8M]
	b)	Define TQM. State the guiding principles of TQM.	[8M]
6	a)	Describe the important functions of personnel management.	[8M]
	b)	How is job analysis different from job description? What are the uses of it?	[8M]
7	a)	Describe the importance of value engineering industries.	[6M]
	b)	For the table given below, find i. Draw the network diagram ii. calculate EST, LST, EFT, LFT and floats ii. Total project duration	[10M]

Activity No.	0-1	1-2	0-3	2-5	3-4	4-5	5-6
Duration Days	2	4	2	1	2	5	3

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Code No: RT32036 **R13** SET - 4

III B. Tech II Semester Regular/Supplementary Examinations, April - 2017
INDUSTRIAL ENGINEERING & MANAGEMENT
(Mechanical Engineering)

Time: 3 hours Max. Marks: 70

Note: 1. Question Paper consists of two parts (**Part-A** and **Part-B**)
2. Answering the question in **Part-A** is compulsory
3. Answer any **THREE** Questions from **Part-B**

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PART –A

1	a)	What are the quantitative tools of Industrial engineering?	[3M]
	b)	Give a brief note on breakdown maintenance.	[4M]
	c)	What are the applications of operations management?	[4M]
	d)	Explain the importance of quality control.	[4M]
	e)	How a merit rating is given for job evaluation?	[4M]
	f)	Differentiate between CPM and PERT.	[3M]

PART -B

2	a)	State and describe the characteristics of modern management.	[8M]
	b)	Describe the principles of scientific management in brief.	[8M]
3	a)	State the advantages of suburban area as a site for industry.	[8M]
	b)	Describe the product layout with a neat sketch and state its advantages and limitations.	[8M]
4	a)	State and explain in brief the steps involved in method study procedure.	[8M]
	b)	"Critical examination is a motive force to develop a new method". Justify.	[8M]
5	a)	What is meant by process capability? How will you determine the same?	[8M]
	b)	Explain the theory underlying control charts for fraction defective.	[8M]
6	a)	Define personnel management. State its characteristics.	[8M]
	b)	What is job evaluation? What objectives can be served from scientific job evaluation studies?	[8M]
7	a)	Define value? State how it can be increased? Describe the various types of values.	[6M]
	b)	What is PERT? Define optimistic time, pessimistic time and most likely time and explain how you will estimate the expected time to complete the activity in PERT technique.	[10M]

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