

**Maulana Abul Kalam Azad University of Technology, West Bengal  
(Formerly West Bengal University of Technology)  
Syllabus for B. Tech in Apparel Production Management (APM)  
(Applicable from the academic session 2018-2019)**

**Semester-VIII**

**Industrial Management (HM 801 A)**

<b>Name of the Course:</b>		<b>Industrial Management</b>					
<b>Course Code:</b> HM 801 A		<b>Semester:</b> VIII					
<b>Duration:</b> 6 months		<b>Maximum Marks:</b> 100					
<b>Teaching Scheme</b>		<b>Examination Scheme</b>					
Theory: 2 hrs./week		Mid Semester Exam.: 15 Marks					
Tutorial: Nil		Assignment & Quiz: =10(=8+2) Marks					
		Attendance: 5 Marks					
Practical: hr./week		End Semester Exam.: 70 Marks					
Credit Points:2							
<b>Objective:</b> The course content should be taught and implemented with the aim to develop required skills in the students so that they are able to acquire following competencies.							
1	Acquire basic knowledge n, understanding of basic functions of industry.						
2	Recognize organization structure, human resource issues in industries and major provisions of factory acts.						
3	Plan, use, monitor and control resources optimally and economically.						
Pre-Requisite:							
1	OE TT 501 A/B						
2							
<b>End Semester Examinations Scheme. Maximum Marks – 70. Time allotted – 3 hrs.</b>							
Groups	Units	Objective Questions (MCQ only with one correct answer)		Subjective Questions			
		No. of questions to be set	Total marks	No. of questions to be set	To answer`	Marks per question	Total marks

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<b>A</b>	<b>1 to 7</b>	<b>10</b>	<b>10</b>				
<b>B</b>	<b>1 to 7</b>			<b>6</b>	<b>3</b>	<b>5</b>	<b>15</b>
<b>C</b>	<b>1 to 7</b>			<b>6</b>	<b>3</b>	<b>15</b>	<b>45</b>
			<b>Total Marks</b>				<b>70</b>

- **Only multiple choice type questions (MCQ) with one correct answer are to be set in the objective part.**
- **Specific instruction to the students to maintain the order in answering objective questions should be given on top of the question paper.**

<b>Unit</b>	<b>Content</b>	<b>Hrs/Unit</b>	<b>Marks/Unit</b>
1	<b>Introduction</b>  Development, application and scope of Industrial Management.	1	4
2	<b>Principles of Management</b>  Management, different functions of management: Planning, organizing, coordination and control. Structure of an industrial organization. Functions of different departments., Relationship between individual departments. - Line, Line and staff and Functional relationships- Span of control- Delegation- Management by Objectives.	4	12
3	<b>Personnel management</b>  Objectives and functions of personnel management- Recruitment-Selection and training of workers- Labour Welfare- Industrial Fatigue- Industrial disputes-Trade Unions- Quality circles. Formation of companies:	4	12

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	Proprietary-Partnership-Joint stock companies- Public sector- Joint sector and Co-operative sector.		
4	<b>Productivity</b>  Definition, measurement. Work study and its role in improving productivity of an organization. Types of Production systems. Introduction to production planning and control.	4	12
5	<b>Finance management</b>  Capital budgeting techniques, payback period, ARR, NPV, IRR, PI; Sources of capital; Costs concepts and Break even analysis.	6	20
6	<b>Production planning and Control (PPC).</b>  Types and examples of production. PPC : i. Need and importance. ii. Functions. iii. Forms used and their importance. iv. General approach for each type of production. Scheduling- meaning and need for productivity and utilization. Gantt chart- Format and method to prepare, Critical ratio scheduling-method and numeric examples. Scheduling using Gantt Chart (for at least 5-7 components having 5-6 machining operations, with processes, setting and operation time for each component and process, resources available, quantity and other necessary data), At least two examples. Bottlenecking- meaning, effect and ways to reduce.	6	20
7	<b>Recent Trends in IM.</b>	5	20

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	ERP (Enterprise resource planning) - concept, features and applications, Logistics- concept, need and benefits, Just in Time (JIT)-concept and benefits, Supply chain management- concept and benefits.		
	Total	30	100

**Text and reference books:**

1. Essentials of Management, Koontz a and O'Donne.
2. Finance Sense, Prasanna Chandra
3. Industrial Management, M E Thukaram Rao.
4. Modern Production Management. Buffa.
5. Industrial Engineering & Management. O. P. Khanna

**Course Outcome:**

After successful completion of this course, the students should be able to

1. Interpret given organization structure, culture, climate and major provisions of factory acts and laws.
2. Understand basic functions of industry.
3. Gather knowledge on current development and trends on Industry.
4. Explain production and productivity issue
5. List and explain PPC functions.
6. Plan, use, monitor and control resources optimally and economically.

**Special Remarks (If any): NIL**

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**Production Planning & Control (HM 801B)**

<b>Name of the Course:</b>		<b>Production Planning &amp; Control</b>	
<b>Course Code: HM 801B</b>		<b>Semester: VIII</b>	
<b>Duration: 6 months</b>		<b>Maximum Marks: 100</b>	
<b>Teaching Scheme</b>		<b>Examination Scheme</b>	
Theory: 2 hrs./week		Mid Semester Exam.: 15 Marks	
Tutorial: Nil		Assignment & Quiz: =10(=8+2) Marks	
		Attendance: 5 Marks	
Practical: hr./week		End Semester Exam.: 70 Marks	
Credit Points: 2			
<b>Objective:</b>			
1	To understand the problems and opportunities faced by the operations manager in manufacturing and service organizations.		
2	To develop an ability to apply PPC concepts in a various areas like marketing, accounting, finance, engineering, personnel management, logistics, etc.		
3	To integrate operations concepts with other functional areas of business		
4	To understand the PPC function in both manufacturing and service organizations.		
5	To examine several classic Operations Management planning topics including production planning and inventory control.		
6	To learn several important contemporary topics relevant to business managers of all functional disciplines, including quality management, lean concepts, and sustainability		
<b>Pre-Requisite:</b>			
1	OE TT 501 A/B		
2			
<b>End Semester Examinations Scheme. Maximum Marks – 70. Time allotted – 3 hrs.</b>			
<b>Groups</b>	<b>Units</b>	<b>Objective Questions</b>	<b>Subjective Questions</b>

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		(MCQ only with one correct answer)					
		No. of questions to be set	Total marks	No. of questions to be set	To answer`	Marks per question	Total marks
<b>A</b>	<b>1 to 18</b>	<b>10</b>	<b>10</b>				
<b>B</b>	<b>1 to 18</b>			<b>6</b>	<b>3</b>	<b>5</b>	<b>15</b>
<b>C</b>	<b>1 to 18</b>			<b>6</b>	<b>3</b>	<b>15</b>	<b>45</b>

- Only multiple choice type questions (MCQ) with one correct answer are to be set in the objective part.
- Specific instruction to the students to maintain the order in answering objective questions should be given on top of the question paper.

Unit	Content	Hrs/Unit	Marks/Unit
1	Indian textile industry scenario, production and export, yarn, fabric and apparel sectors.	1	4
2	Textile Policy. Sickness in textile industry, analysis and options.	2	6
3	Production and operations management function.	1	4
4	Operation strategy, facility location and capacity planning	2	6
5	Production planning and control; aggregate planning, scheduling, PERT and CPM, product mix using linear programming concepts.	2	6
6	Inventory model and safety stock; optimal order quantity, economic manufacturing batch size.	2	6
7	Classification of materials, materials requirement planning, material store management and distribution management. Just in time concept.	1	4
8	Supply chain Management in textile industry	1	4
9	Maintenance management in textile industry	1	4
10	Plant modernisation	1	4

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11	Motion and time study	1	4
12	Job evaluation and incentive scheme.	1	4
13	Productivity; partial and total productivity, machine, labour and energy productivity, efficiency and effectiveness, benchmarking, measure to increase productivity.	3	10
14	Forecasting; methods of forecasting, moving average, regression and exponential smoothing techniques, forecasting accuracy.	2	6
15	Total quality management and Six Sigma.	3	10
16	Product marketing and pricing for textile industry	2	6
17	Financial and profit analysis, investment decisions.	2	6
18	Management information system.	2	6
	Total	30	100

**Text and reference books:**

1. Production & Operations management by R. Panneerselvam
2. Operations and supply management by Chase, Ravi Shankar, Jacob & Aquilano
3. Operations management: Theory and Practice by B. Mahadevan
4. Operations management by Krajewski, Ritzman and Malhotra
5. Operations research: An introduction by H. A. Taha

**Course Outcome:**

After successful completion of this course, the students should be able to

1. Recognize the objectives, functions, applications of PPC and forecasting techniques.
2. Explain different inventory control techniques.
3. Solve routing and scheduling problems
4. Summarize various aggregate production planning techniques.
5. Describe way of integrating different departments to execute PPC functions

**Special Remarks (If any): NIL.**

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<b>Course Code: MC 801 B</b>		<b>Semester: VIII</b>				
<b>Duration: 6 months</b>		<b>Maximum Marks: 70</b>				
<b>Teaching Scheme</b>		<b>Examination Scheme</b>				
Theory: 3 hrs./week		Mid Semester Exam.: 15 Marks				
Tutorial: Nil		Assignment & Quiz: =10(=8+2) Marks				
		Attendance: 5 Marks				
Practical: hr./week		End Semester Exam.: 70 Marks				
Credit Points: 0						
<b>Objective:</b>						
1	The course aims at imparting basic principles of thought process, reasoning and inferencing. Sustainability is at the core of Indian Traditional Knowledge Systems connecting society and nature.					
2	Holistic life style of Yogic-science and wisdom capsules in Sanskrit literature are also important in modern society with rapid technological advancements and societal disruptions.					
3	The course focuses on introduction to Indian Knowledge System, Indian perspective of modern scientific world-view and basic principles of Yoga and holistic health care system.					
<b>Pre-Requisite:</b>						
1	No					
2						
3						
<b>End Semester Examinations Scheme. Maximum Marks – 70. Time allotted – 3 hrs.</b>						
Groups	Units	Objective Questions (MCQ only with one correct answer)		Subjective Questions		
		No. of	Total	No. of	To	Marks

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		questions to be set	marks	questions to be set	answer`	per question	marks
<b>A</b>	<b>1 to 4</b>	<b>10</b>	<b>10</b>				
<b>B</b>	<b>1 to 4</b>			<b>6</b>	<b>3</b>	<b>5</b>	<b>15</b>
<b>C</b>	<b>1 to 4</b>			<b>6</b>	<b>3</b>	<b>15</b>	<b>45</b>

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Unit	Content	Hrs/Unit	Marks/Unit
1	Basic Structure of Indian Knowledge System (i) Veda (ii) Upa-Veda (iii) Vedanga (iv) Upanga		
2	Modern Science and Indian Knowledge System		
3	Yoga and Holistic Health care		
4	Case Studies		
	Total		

**Text and reference books:**

1. Sivaramakrishna V. (Ed.), Cultural Heritage of India- Course Material, 5<sup>th</sup> Edition, Bharatiya Vidya Bhavan, Mumbai, 2014.
2. Jitatmanand S., Modern Physics and Vedant, Bharatiya VidyaBhavan.
3. Capra F., Tao ofPhysics.
4. Capra F., The wave ofLife.
5. Jha V.N., Tarkasangraha of Annam Bhatta (Eng. Trans), International Chinmay Foundation, Velliarnad, Amaku.

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6. Yoga Sutra of Patanjali, Ramakrishna Mission, Kolkata.
7. Jha G.N. and Jha R.N. ( Ed.), Yoga-Darshanam with Vyasa Bhashya (Eng. Trans.), Vidyanidhi Prakasham, Delhi, 2016.
8. Jha R.N., Science of Consciousness Psychotherapy and Yoga Practices, Vidyanidhi Prakasham, Delhi, 2016.
9. Sharma P.R., Shodashang Hridayam (English translation).

**Course Outcome:**

After successful completion of this course, the students should be able to

1. To understand, connect up and explain basics of Indian Traditional knowledge modern scientific perspective.

**Special Remarks (If any): NIL.**

**Project II-PW APM 881**

**14hrs/week**