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INSTITUTE OF AERONAUTICAL ENGINEERING

(Autonomous)

Dundigal, Hyderabad - 500 043

MODEL QUESTION PAPER - I

B. Tech VIII Semester End Examinations

Regulations: R16

PRODUCTION PLANNING AND CONTROL

(MECHANICAL ENGINEERING)

Time: 3hours

Max. Marks:70

Answer ONE Question from each Unit

All Questions Carry Equal Marks

All parts of the question must be answered in one place only

UNIT – I

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|----|----|--|------|
| 1. | a) | Distinguish between job shop, batch type and continuous production systems. | [7M] |
| | b) | Classify the production systems. Mention characteristics of each of those systems. | [7M] |
| 2. | a) | Mention the nature of PPC function in those respective production system | [7M] |
| | b) | Classify the production systems. Mention characteristics of each of those systems | [7M] |

UNIT – II

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|----|----|--|------|
| 3. | a) | Show that in exponential smoothing method, Weightage to the past data declines exponentially. | [7M] |
| | b) | Narrate the following terms | [7M] |
| | | a. Qualitative methods | |
| | | b. Quantitative methods. | |
| 4. | a) | Intercept exponential smoothing method of forecasting. Also highlight forecasting and its uses. | [7M] |
| | b) | XYZ television supplier found a demand of 200 sets in July, 225 sets in August & 245 sets in September. Find the demand forecast for the month of october using simple average method. The average demand for the month of October | [7M] |

UNIT – III

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|----|----|---|------|
| 5. | a) | Elucidate in detail ABC analysis. State its advantages, limitations and applications. | [7M] |
| | b) | Clarify the various re ordering systems with their advantages and limitations. | [7M] |
| 6. | a) | List out various steps involved in Material Requirement Planning system. | [7M] |
| | b) | Narrate the importance if Just-In-TimeKanban working principle | [7M] |

UNIT – IV

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|----|----|---|------|
| 7. | a) | Summarize in detail the following functions of routings Interpretation of detailed drawings | [7M] |
| | b) | Classify in detail the following functions of routings Methods analysis | [7M] |

8. a) State the important factors that affecting routing procedure [7M]
b) Evaluate the importance of bills of material in production control. How does it help in assembly production. [7M]

UNIT – V

9. a) Justify in detail about various Dispatching procedure. [7M]
b) List out various Applications of computer used in Production Planning Control. [7M]
10. a) Simplify the various activities of dispatcher [7M]
b) Enumerate the following terms [7M]
a) Issue of move orders.
b) Issue of tool orders.



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COURSE OBJECTIVES:

The course should enable the students to:	
I	Understand the PPC function in industrial manufacturing scenario.
II	Apply forecasting techniques for different types of products.
III	Knowledge in optimal inventory control and capacity planning.

COURSE OUTCOMES (COs):

CO 1	Understanding and appreciation of the principles and applications relevant to the planning, design, and operations of manufacturing/service firms.
CO 2	Develop skills necessary to effectively analyze and synthesize the many inter-relationships inherent in complex socio-economic productive systems.
CO 3	Reinforce analytical skills already learned, and build on these skills to further increase your "portfolio" of useful analytical tools for operations tasks.
CO 4	Understand Enterprise Resource Planning and MRPII systems are used in managing operations
CO 5	Increase the knowledge, and broaden the perspective of the world in which you will contribute your talents and leadership in business operations.

COURSE LEARNING OUTCOMES (CLOs):

AMEB518.01	Understand the core features of the operations
AMEB518.02	Understand production management function at the operational and strategic levels
AMEB518.03	specifically the relationships between people
AMEB518.04	Evaluate operational and strategic levels
AMEB518.05	Solve problems on operational and strategic management
AMEB518.06	Production management basics and its history
AMEB05.07	Key issues on market-driven systems and global competition
AMEB518.08	Classification of production systems, and their definitions
AMEB518.09	Classification of planning and control problems, and their definitions
AMEB518.10	Problem solving procedure
AMEB518.11	Demand forecasting and market analysis
AMEB518.12	Qualitative approaches to forecasting
AMEB518.13	A variety of quantitative forecasting techniques including the use of computer tools
AMEB518.14	Decomposition of data into its components
AMEB518.15	The systems perspective to production planning problems and to integrate different production planning activities
AMEB518.16	Formulation of aggregate planning problems; their objectives, constraints and applicable solution techniques
AMEB518.17	Surveying, gathering and analysis of data for planning purposes
AMEB518.18	Solving basic production planning problems
AMEB518.19	Solving basic inventory management problems, Importance of accuracy in estimating market share, demand, relevant costs and all requirements and the sensitivity of results to these values

MAPPING OF SEMESTER END EXAMINATION - COURSE OUTCOMES

SEE Question No		Course Learning Outcomes		Course Outcomes	Blooms Taxonomy Level
1	a	AMEB518.01	Understand the core features of the operations	CO 1	Understand
	b	AMEB518.02	Understand production management function at the operational and strategic levels	CO 1	Remember
2	a	AMEB518.03	specifically the relationships between people	CO 1	Understand
	b	AMEB518.04	Evaluate operational and strategic levels	CO 1	Remember
3	a	AMEB518.05	Solve problems on operational and strategic management	CO 2	Understand
	b	AMEB518.06	Production management basics and its history	CO 2	Remember
4	a	AMEB518.07	Key issues on market-driven systems and global competition	CO 2	Understand
	b	AMEB518.08	Classification of production systems, and their definitions	CO 2	Remember
5	a	AMEB518.09	Classification of planning and control problems, and their definitions	CO 3	Understand
	b	AMEB518.10	Problem solving procedure	CO 3	Remember
6	a	AMEB518.11	Demand forecasting and market analysis	CO 3	Understand
	b	AMEB518.12	Qualitative approaches to forecasting	CO 3	Remember
7	a	AMEB518.13	A variety of quantitative forecasting techniques including the use of computer tools	CO 4	Understand
	b	AMEB518.14	Decomposition of data into its components	CO 4	Remember
8	a	AMEB518.15	The systems perspective to production planning problems and to integrate different production planning activities	CO 4	Understand
	b	AMEB518.16	Formulation of aggregate planning problems; their objectives, constraints and applicable solution techniques	CO 4	Remember
9	a	AMEB518.17	Surveying, gathering and analysis of data for planning purposes	CO 5	Understand
	b	AMEB518.18	Solving basic production planning problems	CO 5	Remember
10	a	AMEB518.19	Solving basic inventory management problems, Importance of accuracy in estimating market share,	CO 5	Understand
	b	AMEB518.19	Solve demand, relevant costs and all requirements and the sensitivity of results to these values	CO 5	Remember

Signature of Course Coordinator

HOD, ME