

# CBCS Scheme

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16MAR421

## Fourth Semester M.Tech. Degree Examination, June/July 2018 Production Planning & Control

Time: 3 hrs.

Max. Marks: 80

Note: Answer any FIVE full questions, choosing one full question from each module.

### Module-1

- 1 a. Explain the types of production system. (08 Marks)  
b. Illustrate the different stages of product development and outline the product life cycle. (08 Marks)

OR

- 2 a. Define standardization. List and explain different levels of standard. (06 Marks)  
b. A publisher sells a text book priced at Rs. 200/-. The production cost for 10,000 books are as follows:  
(i) Labour : Rs. 2,40,000/-  
(ii) Material : Rs. 4,80,000/-  
(iii) Total overhead : Rs. 3,60,000/-  
(iv) Sales and administration : Rs. 2,00,000/-  
(v) Interest on capital : Rs. 3,20,000/-

Use the data to draw break even chart and determine break even point (BEP). (10 Marks)

### Module-2

- 3 a. Explain in brief the recording techniques for method study. (08 Marks)  
b. How to develop a new method? Explain. (08 Marks)

OR

- 4 a. Explain the procedure for work sampling. (06 Marks)  
b. A operation consists of 5 elements observed time for each element is tabulated here. Element 3 is machine element. Fatigue allowance is 15% contingency allowance is 2%. Rating factor is 1.25. Estimate the standard time for each element and entire operation. Also calculate the production rate in 8 hours shift. (10 Marks)

Table  
Given

Element No.	Cycle time (mins)			
	1	2	3	4
1	3.5	3.4	3.5	3.5
2	5.2	5.1	5.0	5.3
3	1.3	1.4	1.3	1.4
4	3.9	3.8	3.7	3.8
5	4.8	4.7	4.9	4.6

### Module-3

- 5 a. Define forecasting. Briefly explain the steps involved in forecasting process. (08 Marks)  
b. Explain the following time series method with an example:  
(i) Weighted moving average.  
(ii) Exponential smoothing (08 Marks)