Bachelor of Production Engineering Examination, 2017

(3rd Year, 2nd Semester)

Production Economics and Financial Management

Time: Three Hours **Full Marks: 100**

1. Fill in the blanks **1 x 16 = 16**

(a) An effective price ceiling is ______ the market price.
(b) At the 2nd stage of the law of variable proportions, Average Production _______ than Marginal Production.
(c) Assets are considered to have ______ balance.
(d) When there is an increase in the amount of 'Sundry Debtors', is it debited or credited to that account?
(e) When elasticity of demand = 1, we say the curve is _____ at that point.
(f) _____ is known as the king of all books of account.
(g) Marginal Rate of Technical Substitution is also known as _____ isoquant.
(h) Medium of exchange is one of the functions of ________.
(i) The maximum number of partners in case of non-banking organization is _______.
(j) The decision rule of benefit-cost ratio is that accept the project, if this ratio is > ______ .
(k) The _______ of Association is the basic constitution of a joint stock company.
(l) _____ refers to that minimum amount of investment in all current assets which is required at all times to carry out minimum level of business activities.
(m) If GDP = Rs. 10,000 million; money supply = Rs. 5,000 million. Then, the income velocity of money = ______.
(n) ______ rate is the rate at which RBI borrows from commercial banks.
(o) Maximum number of members in case of a private limited company is _______.
(p) ________ is the discount rate at which NPV becomes zero.

2. Answer any three questions. **10 x 3 = 30**

(a) Write short notes on any two of the following: **5 + 5**
(i) Isocost, **(ii)** Least-Cost Combination of Inputs, **(iii)** Central Problems of an Economy, **(iv)** Production Function and its uses.

(b) A mechanical device with an economical life of 7 years will cost Rs. 50,000 for purchase. Maintenance will cost Rs. 2,000 per year starting from the 1st year. The device will generate revenues of Rs. 12,000 each year. There will be an up gradation cost of Rs 10,000 for the device at the end of fourth year. Salvage value will be Rs 20,000. If the required rate of return is 10%, should the device be purchased based on NPV? **10**

(c) Briefly discuss roles of RBI. **10**

(d) Define 'money'. What are its functions? List the tools used by RBI and the central government to control money supply. **2 + 2 + 6**

(e) List advantages and disadvantages of partnership and joint-stock companies. **5 + 5**

(f) Prepare a flexible budget for production of 14,000 units from the following information: **10**

The expenses budgeted for production of 10,000 units in a factory are furnished below:

PTO

		Per unit in Rs
Material cost		65
Labour cost		25
Variable factory over head		20
Fixed factory over head	(Rs. 3,00,000)	30
Variable expenses(Direct)		14
Selling expenses (30% fixed)		20
Distribution overhead (10% fixed)		10
CEO's salary (Rs. 60,000)		6
Other administration expenses (Rs,150,000)		15

3. Answer any three questions. **18 x 3 = 54**

(a) (i) State the significance of ratio analysis.
(ii) Explain leverage ratios. :
(iii) What are the limitations of ratio analysis? **4 + 9 + 5**

(b) Shiva Ltd. sells goods on a gross profit of 25%. Depreciation is considered as a part of cost of production. The following are the annual figures given to you :

Sales (2 months credit)	Rs. 18,00,000;
Materials consumed (1 months credit)	Rs. 4,50,000;
Wages paid (1 month lag in payment)	Rs. 3,60,000;
Cash manufacturing expenses (1 month lag in payment)	Rs. 4,80,000;
Administrative expenses (1 month lag in payment)	Rs. 1,20,000;
Sales promotion expenses (paid quarterly in advance)	Rs. 60,000

The company keeps one month's stock each of raw materials and finished goods. It also keeps Rs.1,00,000 in cash. You are required to estimate the working capital requirements of the company on cash cost basis, assuming 15% safety margin. **18**

(c) Define 'Law of Variable Proportions'. What assumptions are related to this law? With the help of a graphical presentation explain various stages of this law. **2 + 4 + 12**

(d) From the following list of transactions prepare appropriate journal entries, ledger entries and relevant month- end trail balance of Indra Ltd.: **3 x 4 + 6**

(i) Indra started a business with Rs.180 trillion in capital on 01/04/2016.
(ii) Purchased building properties (Fixed Assets) for Rs. 300 billion on credit on 10 / 04 / 2016
(ii) Purchased furniture Furniture of Rs.60 billion in cash on 15 / 04 / 2016.
(iii) Purchased inventories on 20 / 04 / 2016 from M/S Vishwakarma for trading of Rs.1.2 trillion in cash.

(e) Prepare a cost sheet in the book of Durga Co. Pvt. Ltd. from the following particulars: (use proper format, and show calculations separately) **18**

	Rs. ('000)		**Rs.('000)**
Opening stock		Power (factory)	2,000
Raw – materials	5,000	Factory heating and lighting	2,000
Finished goods	4,000	Factory insurance	1,000

PTO

Closing stock		Experimental Expenses	500
Raw – materials	4,000	Sales of wastage of materials	200
Finished goods	5,000	Office management salaries	4,000
Raw – materials purchased	50,000	Office printing and stationery	200
Wages paid to labourers	20,000		
		Salaries of salesmen & commission of travelling agent	2,000
Chargeable expenses	2,000		
Factory rent & taxes	5,000	Sales	1,00,000

f) From the following trial balance extracted from the books of Hari as on 31.03.15. Prepare **(i)** Trading A/c, **(ii)** Profit & Loss A/c and **(iii)** Balance Sheet. **6 + 6 + 6**

Trial Balance as on 31.03.15

Debit Balances	**Rs.**	**Credit Balances**	**Rs.**
Cash in hand	2,000	Capital	2,00,000
Machinery	60,000	Sales	2,56,800
Stock (on 01.04.14)	50,000	Sundry Creditors	42,000
Bills receivable	1,600	Bank overdraft	22,000
Sundry debtors	50,000	Return outwards	3,000
Wages	72,000	Discount received	1,800
Land	40,000	Bills payable	1,800
Carriage inwards	2,400		
Purchases	1,80,000		
Salaries	24,000		
Rent	4,000		
Postage	1,000		
Return inwards	3,200		
Drawings	10,000		
Furniture	18,000		
Interest	600		
Cash at bank	8,600		
	5,27,400		5,27,400

Stock as on 31.03.15 to Rs. 1, 00,000