## B. E. Electrical Engineering Fourth Year Second Semester Exam 2018

## Subject : Economics And Industrial Management Time : Three Hours <br> Full Marks : 100

PART-I ( 50 Marks)<br>(Use separate Answer Scripts for each Part)

Answer any three questions
(troo marks reserved for neat and well organised answers)

1. a) What is depreciation? Explain in details the different conditions that lead to depreciation.
b) A company has purchased a machine for ₹ 30 lakhs. It is estimated that the machine has a useful life of five years and an estimated scrap value of ₹ 45,000 at the end of its useful life. Compute the depreciation schedule for the machine by the Sum-of-the-years digits method of calculating depreciation fund.
2. What is inflation? Explain briefly the different types of inflation? What measures can be taken to control inflation?
3. a) What do you mean by economic efficiency of a business system? What are the different ways by which economic efficiency can be improved?
b) What is a Balance Sheet? Define assets and liabilities with respect to a business concern? What are the differences between Fixed Assets and Current Assets?
4. Prepare a Trading and Profit \& Loss Account and a Balance Shoet from the following data of Magnum Traders for the year ended on $31^{\text {st }}$ March, 2018 after considering the necessary adjustments.

| Capital | $₹ 5,00,000$ | Commission Received | $₹ 7,500$ |
| :--- | ---: | :--- | ---: |
| Inventory ( $1^{\text {st }}$ April,2017) | $₹ 72,000$ | Account Receivable | $₹ 50,000$ |
| Purchases | $₹ 2,25,000$ | Advertisement | $₹ 22,000$ |
| Sales | $₹ 3,50,000$ | Maintenance | $₹ 13,000$ |
| Furniture | $₹ 15,000$ | General Expenses | $₹ 16,000$ |
| Motor Car | $₹ 30,000$ | Insurance | $₹ 7,000$ |
| Return Outwards | $₹ 1,800$ | Cash in hand | $₹ 3,500$ |
| Accounts Payable | $₹ 56,000$ | Cash at Bank | $₹ 6,000$ |
| Building | $₹ 4,25,800$ | Salaries | $₹ 30,000$ |

## Adjustments:

1. Stock on $31^{\text {st }}$ March, 2018 was valued at ₹ 80,000 .
2. Interest on Capital at $6 \%$.
3. Prepaid advertisement $₹ 2,000$.
4. Cash of ₹ 1,800 withdrawn for personal use.
5. Outstanding salaries $₹ 3,000$.
6. Depreciation on Buildings at $5 \%$, Furniture at $5 \%$ and Motor car at $10 \%$.

The following Trial Balance of Sunshine Traders has been prepared by an accountant on 31,03.2018. Do you think that it is correct? If not, rewrite in its correct form stating reasons.

Trial Balance of Sunshine Traders for the year ended $31^{\text {st }}$ March, 2018

| Particulars | Debit | Credit |
| :---: | :---: | :---: |
| 1. Capital |  | ₹ 9,000 |
| 2. Furniture | ₹ 2,400 |  |
| 3. Creditors | ₹ 3,600 |  |
| 4. Drawings |  | ₹ 1,500 |
| 5. Bank Overdraft | ₹ 1,200 |  |
| 6. Machinery |  | ₹ 4,500 |
| 7. Debtors |  | ₹ 6,000 |
| 8. Interest Paid |  | $₹ 300$ |
| 9. Discount allowed |  | ₹ 450 |
| 10. Rent and taxes |  | ₹ 150 |
| 11. Discount received | ₹ 210 |  |
| 12. Goodwill | ₹ 1,800 |  |
| 13. Purchase returns | ₹ 300 |  |
| 14. Loans from Finance Co. | ₹ 2,940 |  |
| 15. Sales returns |  | ₹ 375 |
| 16. Purchases |  | ₹ 6,300 |
| 17. Opening stock |  | ₹ 4,995 |
| 18. Sales | $₹ 11,790$ |  |
| 19. Commission paid | ₹ 270 |  |
| 20. Closing stock | ₹ 9,060 |  |
| Total | ₹ 33,570 | ₹ 33,570 |

## Bachelor of Electrical Engineering Examination, 2018

(4th Year, 2nd Semester, Part II)
Economics \& Industrial Management
Different parts of the same question should be answered together

## PART II

## Section 1

Answer any three from 1, 2, 3, 4 and 5 in this section. Only first 3 answered questions shall be examined.
1.
(a) What are the features of a joint stock company?
(b) Enumerate advantages and disadvantages of partnership organizations.
(c) Explain forms of Public-Private Partnership.
(d) What is the difference between acquisitions and takeovers?
2. (a) How PERT differs from CPM?
(b From the information provided in the following table, draw out the network diagram and find the critical path. How long the project will take to be completed?

| Activity | Predecessors | Duration (Days) |
| :--- | :--- | :--- |
| A | - | 6 |
| B | A | 4 |
| C | B | 7 |
| D | A | 2 |
| E | D | 4 |
| F | E | 10 |
| G | -- | 2 |
| H | G | 10 |
| I | J, H | 6 |
| J | --- | 13 |
| K | A | 9 |
| L | C, K | 3 |
| M | I, L | 5 |

3. 

| Year | Expenditure (Rs. in Crore) |
| :--- | :--- |
| 2012 | 25 |
| 2013 | 30 |
| 2014 | 35 |
| 2015 | 45 |
| 2016 | 60 |

4. (a) Who is the father of modern management? Enumerate 14 principles of management as recommended by him. $1+7$
(b) Derive simple EOQ model without back order and without quantity discount. 7
5. (a) Explain aspects of Quality control. 5
(b) A departmental store with a bakery section is faced with the problem of how many cakes to buy in order to meet the day's demand. The departmental store prefers not to sell day-old cakes. Leftover cakes are, therefore, a complete loss. On the other hand, if the day's demand is more than the stock, the additional sales will be lost. The store has now collected information on the past sales based on selected 100 day period, as shown in the following table:

| Sales per day (Quantity) | 15 | 16 | 17 | 18 |
| :--- | :--- | :--- | :--- | :--- |
| Number of days | 25 | 35 | 30 | 10 |

Construct a conditional profit matrix. What is the optimal number of cakes that should be bought each day in order to maximize the store's expected profit? A cake costs Rs. $5 /$ - and is sold at Rs. $6 /$. $\quad \mathbf{6 + 4}$

## Section 2

6. Answer any one from (a), (b), (c) and (d) in this section. Only first answered question shall be examined.
(a) Explain Job Production.
(b) Present universally accepted notations of basic queuing model with the name of each notation..
(c) Explain subsistence theory and surplus value theory of money for wages. 5
(d) Describe Delphi method of forecasting.
