



SE-6781

B. E. - III (Sem. V) (Electronics & I.C.) Examination
May/June - 2011
Engineering Eco. & Business Management

Time : 3 Hours]

[Total Marks : 100

Instruction :

(1)

नीचे दृष्टावेक निशानीवाणी विगतो उत्तरवही पर अवश्य कभवी. Fillup strictly the details of signs on your answer book.	Seat No. :
Name of the Examination :	<input type="text"/>
<input type="text" value="B. E. - 3 (SEM. 5) (ELECTRONICS & I.C.)"/>	<input type="text"/>
Name of the Subject :	<input type="text"/>
<input type="text" value="ENGINEERING ECO. & BUSINESS MANAGEMENT"/>	<input type="text"/>
<input type="text" value="Subject Code No. : 6 7 8 1"/> Section No. (1, 2,.....) :	<input type="text" value="1&2"/>
	<input type="text" value="Student's Signature"/>

- (2) Answers to the two sections must be written in separate answer books.
- (3) Figures to the right indicate full marks.
- (4) Assume necessary data if missing.
- (5) Abbreviations have got their usual meaning.

SECTION – I

- 1 Write short notes : (attempt any **three**) 18
- (1) State the assumptions, limitations and uses of linear programming.
- (2) Expected value of perfect Information [EVPI] and expected opportunity loss [EOL].
- (3) Explain Hungarian method to solve the assignment problem.
- (4) Analytical and simulation model.

- (1) An Engineering Company has three godowns and regularly supplies material to four dealer the transportation cost from godown to dealer are given below. Obtain the total transportation cost by Vogel's approximation method. [VAM]. Also obtain the optimal solution.

Godown	Dealers				Supply
	A	B	C	D	
O_1	20	18	22	13	10
O_2	10	20	17	24	9
O_3	19	17	18	12	11
Demand	10	7	8	5	30

- (2) ABC company has been a producer of picture tubes to television sets and certain printed circuit for Radio. The company has just expanded into full scale production and marketing of AM and AM-FM Radio. It has built a new plant that can operate 48 hours per week. Production of an AM Radio in the new plant will require 2 hours and production of an AM-FM radio will require 3 hours. Each AM radio will contribute Rs. 40 to profit while an AM-FM radio will contribute Rs. 80 to profits. The marketing department after extensive research, has determined that a maximum of 15 AM radios and 10 AM-FM radios can be sold each week. Solve the problem to maximize the profit by graphical method.

- (3) Solve the following LPP problem graphically

$$\text{minimize } Z = 3x_1 + 5x_2$$

$$\text{Subject to } -3x_1 + 4x_2 \leq 12$$

$$2x_1 - x_2 \geq -2$$

$$2x_1 + 3x_2 \geq 12$$

$$x_1 \leq 4, x_2 \geq 2$$

$$x_1 \geq 0, x_2 \geq 0$$

- (4) Three buildings are to be added to a university campus. Bids are submitted by 5 contractors. Bid figures are given in lakhs of rupees are given in the following table. Find assignment of buildings that will result in a minimum total cost for building programme.

Contractor	Building		
	A	B	C
1	29	16.2	31.1
2	31	17.4	28.2
3	30.5	18	29.2
4	28.7	15.7	27.8
5	31.1	16.8	29.9

- (5) Explain the Monte-Carlo technique and its limitations. Why simulation is used for solving real life problems ?

SECTION – II

3 Attempt any **two** :

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- (a) Explain the term “collective bargain” and discuss the process with suitable example.
- (b) Explain the meaning of organisation. Also discuss various forms of organisation and compare how they are different.
- (c) List out principles laid by Fredric Taylor and explain with suitable examples.

4 Attempt any **two** :

- (a) List out principles laid by Henry Fayol and explain in brief.
- (b) Explain the meaning of Trade Union also discuss reasons for the formation of trade union and also explain advantages of trade unions to workers and to the society.
- (c) Classify forms of co-operative undertaking according to the nature of services.

5 Write note on any **three** :

- (1) Co-ordination as an essence
 - (2) Joint Stock Company
 - (3) Partnership firm
 - (4) Advantages of public sector.
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