Bachelor of Power Engineering Examination, 2018

(4th Year, 2nd Semester)

Industrial Administration & Management Science (Part 1)

Time : Three hours | Full Marks : 100

Different parts of the same question should be answered together

1. Answer any two from (a), (b) and (c) in this block. **2 x 15 = 30**

(a) A marketing manager has five salesmen and five sales districts. Considering the capabilities of the salesmen and nature of the districts, the marketing manager estimates that the sales per month (in hundred rupees) for each salesman in each district would be as follows:

		Districts				
		A	**B**	**C**	**D**	**E**
Salesmen	**1**	32	38	40	28	40
	2	40	24	28	21	36
	3	41	27	33	30	37
	4	22	38	41	36	36
	5	29	33	40	35	39

Solve the assignment of salesmen to districts that will result in maximum sales. Apply Hungarian method only. **15**

(b) Obtain the optimal strategies for both the players and the value of the game for two person zero-sum game whose payoff matrix is given as follows (apply sub-game method only): **15**

Player B

Player A	B1	B2
A1	- 6	7
A2	4	- 5
A3	- 1	-2
A4	- 2	5
A5	7	- 6

(c)

Year	Expenditure (Rs. in Crore)
2011	20
2012	30
2013	35
2014	45
2015	60

Project the business expenditure on new plant equipment for the year 2018 by trend projection method. **15**

PTO

2. **Explain any two from (a), (b) and (c) in this block:** **2 x 5 = 10**

(a) Maintainability; **(b)** Availability; **(c)** Bath tub curve.

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3. **Answer any one from (a) and (b) in this block** **1 x 10 = 1**

(a) What do you understand by motivation? Explain with an illustration Maslow's need hierarchy theorem. **2 +**

(b) What are the features of decision making under certainty? Illustrate communication networks. **3 +**

EX/PE/T/423/2018

B.E. POWER ENGINEERING EXAMINATION,2018

(4th Year, 2nd Semester),

INDUSTRIAL ADMINISTRATION AND MANAGEMENT.

Time: 1 hr. 30 mins. Full marks: 50.

Part-II (50 marks)

Attempt any two from (a), (b) and (c) in Question-1.

1. (a) (i) **Define** "Production Management". Discuss function of production manager of a modern Industry. (5)

(ii) **Describe** the role and responsibilities of a Project Manager. (5)

(b) (i) **Define** optimistic, pessimistic and most likely time and explain how you will estimate the **Expected time** to complete the activity in **PERT technique.** (6)

(ii) **Define** the terms: **CPM** and **PERT.** (4)

(c) For the network as shown in **FIGURE**, the time estimate(in days) each for the activity are ind--cated on the diagram. **Estimate :**

(I) The **expected time** and **variance** for each activity;
(II) The **probability** of completing the project in **35days;**
(III) Total **project duration;**
(IV) Mark the **critical path.** (10)

Attempt any one from (a),(b) and (c) in Question-2.

2. (a) (i) **Describe** the effect of **increases or decreases** in **sales price** on **B.E.P.** with the help of neat sketches. (4)

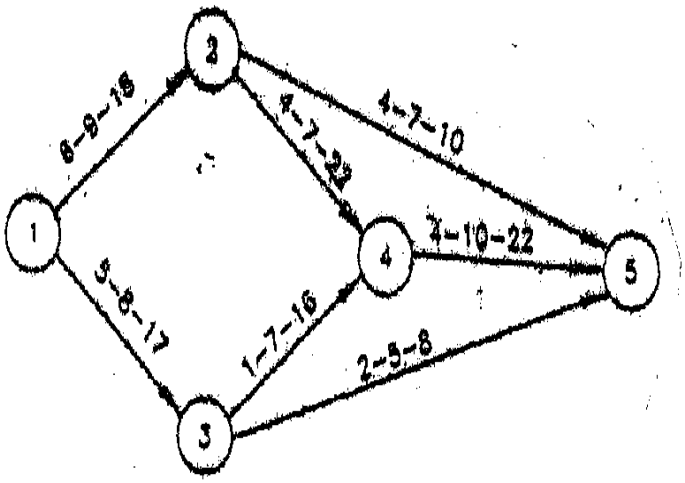
deviation is 0.18. Do these figures equation for any action by any one? (4+6)

Attempt any one from (a), (b) and (c) in Question-4.

I. (a) State the characteristics of individual and group behaviour. (10)

(b) What are the assumptions of McGregor's Theory 'X' and Theory 'Y'; which one is applicable in INDIA? (10)

(c) Write an essay on "Behavioural Science". (10)



FIGURE