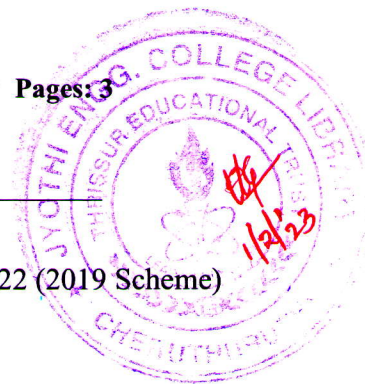Reg No.:_____   Name:_____

APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY

Fifth Semester B.Tech Degree Regular and Supplementary Examination December 2022 (2019 Scheme)

Course Code: HUT 310

Course Name: MANAGEMENT FOR ENGINEERS

Max. Marks: 100   Duration: 3 Hours

PART A

(Answer all questions; each question carries 3 marks)   Marks

1	Define management.	(3)
2	Illustrate the art and science nature of management.	(3)
3	Describe the process of communication.	(3)
4	Differentiate between the vision and mission of an organisation.	(3)
5	"Increase in production may or may not contribute to increase in productivity". Comment.	(3)
6	Describe the economic man model.	(3)
7	Write notes on time-cost trade off in project management.	(3)
8	List out the steps involved in developing a project network.	(3)
9	What is corporate social responsibility?	(3)
10	Differentiate between recruitment and selection.	(3)

PART B

(Answer one full question from each module, each question carries 14 marks)

Module -1

11		Explain the 14 principles of administrative management?	(14)
12	a)	Explain the essential managerial skills.	(8)
	b)	Managerial skills are related to organizational hierarchy. Explain.	(6)

Module -2

13	a)	Elucidate any three motivational theories.	(8)
	b)	Explain the managerial functions of directing, motivating and controlling.	(6)
14	a)	Explain the concept of span of control in an organisation. What are the factors governing the selection of span of management?	(8)
	b)	What are the different types of planning? Explain three of them.	(6)

Module -3

15 a) A bank employs three loan officers, each working eight hours per day. Each officer (9) processes an average of five loans per day. The bank's payroll cost for the three officers is ₹820 per day, and there is a daily overhead expense of ₹500. The bank is considering the purchase of new computer software for the loan operation. The software will enable each loan officer to process eight loans per day, although the overhead expense will increase to ₹550.

    i. Compute the labour productivity before and after using software (in loans/labour-hr).

    ii. Compute the multifactor productivity before and after using software (in loans per unit cost).

    iii. Should the bank proceed with the purchase of the new software? Explain.

  b) Explain about partial productivity measures. (5)

16 a) There is 40% probability that a patient admitted to the hospital is suffering from (7) cancer. If the patient has cancer, and an operation is performed the probability that he will recover is 70%, otherwise it is 35%. If the patient is not having cancer, and an operation is performed the probability that he will recover is 20%, otherwise it is 100%. Assume recover and die are only possible results, construct a decision tree. Find the probability that patient recovers with and without operation.

  b) Describe some methods which are useful for decision making under uncertainty. (7)

Module -4

17 a) The following table lists the jobs of a network along with their time estimates. (a) (10) Draw the project network and calculate the length of the critical path (b) What is the probability that the jobs on the critical path will be completed in 41 days?

Job		Duration (days)		
Node 'i'	Node 'j'	Optimistic	Most likely	Pessimistic
1	2	3	6	15
1	6	2	5	14
2	3	6	12	30
2	4	2	5	8
3	5	5	11	17
4	5	3	6	15
6	7	3	9	27
5	8	1	4	7
7	8	4	19	28

  b) What is activity on arc representation in a project network? (4)

18   The following table shows the various activities for construction of a house. Find   (14)
     the critical path and optimal project duration. Also calculate total float for each
     activity.

Activity	Description	Immediate predecessor	Duration (weeks)
A	Site preparation	____	2
B	Laying foundation	A	6
C	Carpentry work for frames	____	4
D	Super-structure	B, C	12
E	Roofing	D	6
F	Electrification	E	4
G	Plumbing	E	3
H	Flooring and plastering	F, G	10
I	Remaining carpentry works	H	5
J	Painting	I	8

Module -5

19 a) What is a budget? Explain how sales budget and production budgets are   (8)
        prepared?

    b) Explain the steps involved in preparing business plans.   (6)

20 a) Compare product concept, production concept, selling concept and marketing   (8)
        concept orientation in organisations.

    b) Briefly explain the theories of entrepreneurial motivation.   (6)

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