

Reg No.: _____

Name: _____

APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY
EIGHTH SEMESTER B.TECH DEGREE EXAMINATION, MAY 2019

Course Code: CE404

Course Name: CIVIL ENGINEERING PROJECT MANAGEMENT

Max. Marks: 100

Duration: 3 Hours

PART A

Answer any two full questions, each carries 15 marks.

Marks

- 1 a) Explain the steps involved in realisation of a Construction project. (8)
- b) Write short notes on Resource codes. (7)
- 2 a) What are the advantages of networks over bar charts? (5)
- b) Determine the expected completion time, variance and critical path of the project given below. (10)

Activity	A	B	C	D	E	F	G	H
Predecessors	-	-	A	B	A	C,D	C,D,E	F
T ₀ days	2	2	3	4	3	4	3	4
T _L days	5	6	4	6	5	6	5	8
T _p days	7	9	9	10	12	13	6	13

- 3 a) Following table shows cost and duration of each activity. The indirect cost is Rs.3150/week. Determine the optimum duration of project and minimum cost. (15)

Activity	Predecessor	Normal Duration (weeks)	Normal Cost (Rs)	Crash Duration (weeks)	Crash Cost (Rs)
A	-	7	8,000	4	15500
B	-	9	5,000	6	9500
C	A	5	7,000	2	10,000
D	A	6	9,000	4	16,000
E	B, C	6	6,000	4	12,000

PART B

Answer any two full questions, each carries 15 marks.

- 4 a) During a dispute, what are the claims that a contractor can put forward against a client? (7)

- b) Discuss the advantages and disadvantages of arbitration over other methods of settlement of disputes. (8)
- 5 a) What are the various elements that constitute the direct cost of an item/activity in a construction project? How does the direct cost behave as the output volume increases? (7)
- b) Explain the problems encountered in Project Management Information System. (8)
- 6 a) List some of the ethical issues commonly found in civil engineering works. (5)
- b) Elaborate on the role played by professional bodies in ensuring professional ethics. (5)
- c) Describe the components of Project Management Information System. (5)

PART C

Answer any two full questions, each carries 20 marks.

- 7 a) List out the functions of materials management. (5)
- b) Explain economic order of quantity. (5)
- c) Explain the steps involved in classifying items using ABC analysis (10)
- 8 a) Outline any two important types of contracts. (10)
- b) Differentiate between earnest money deposit and security deposit. (5)
- c) Discuss the use of a measurement book. (5)
- 9 a) Explain total quality management. (10)
- b) Discuss the measures to ensure safety in construction. (10)

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APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY
EIGHTH SEMESTER B.TECH DEGREE EXAMINATION(S), OCTOBER 2019

Course Code: CE404

Course Name: CIVIL ENGINEERING PROJECT MANAGEMENT

Max. Marks: 100

Duration: 3 Hours

PART A

Answer any two full questions, each carries 15 marks.

Marks

- 1 a) What are the advantages and limitations of Bar Charts? Explain. (5)
- b) Following are the durations of activities of a project. (10)

Activity	A	B	C	D	E	F	G
Predecessors	-	-	A	B	B	C, D	E
Duration (weeks)	11	7	9	13	8	8	9

Draw the network and find the critical path and minimum Project duration. Also calculate the floats of activities.

- 2 a) Explain various types of floats. (8)
- b) What is the need of codification in a construction project? Explain cost and finance accounting codes. (7)
- 3 a) Write short notes on construction schedule and equipment schedule. (5)
- b) Crash the given network using the details given in table and find the optimum cost and least project duration. (10)

ACTIVITY	PREDECESSOR	DURATION (DAYS)		COST (RS)	
		NORMAL	CARSH	NORMAL	CARSH
A	-	6	4	5000	6800
B	A	10	7	4000	7750
C	A	12	8	5000	8000
D	B	8	4	7000	8400
E	C	6	3	5000	6950
F	D, E	4	2	7000	7500

PART B

Answer any two full questions, each carries 15 marks.

- 4 a) Discuss the various causes of disputes that can occur during the execution of a project. (7)
- b) Explain different modes of settlement of disputes. (8)
- 5 a) Explain the method of determining the cost of resources in a construction project. (7)

- b) Discuss the common ethical problems encountered in civil engineering works. (8)
- 6 a) Write a note on managing a Project Management Information System (PMIS), explaining the processes involved and the tools and techniques employed. (5)
- b) What are the characteristics desired for the information that contributes to PMIS? (5)
- c) What are the advantages of an efficient PMIS? (5)

PART C

Answer any two full questions, each carries 20 marks.

- 7 a) What is a tender? Indicate the information provided in the tender notice with example. (10)
- b) What constitute tender documents and what general information should be furnished in such documents? (10)
- 8 a) What is inventory control and what are its objectives? (10)
- b) Explain ABC analysis in detail. (10)
- 9 a) State briefly the methods to achieve quality control on concrete. (10)
- b) What are the methods to ensure safety in road construction? (10)

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APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY
Eighth Semester B.Tech. Degree Examinations, September 2020

Course Code: CE404

Course Name: CIVIL ENGINEERING PROJECT MANAGEMENT

Max. Marks: 100

Duration: 3 Hours

PART A

Answer any two full questions, each carries 15 marks.

Marks

- 1 a) Explain the steps in preparing a detailed project report (DPR) of a construction project. (7)
- b) Prepare a Bar chart for the following data of a project and determine the minimum time required to complete the project: (8)
- Project: Construction of a workshop hall of size 10m X 6m . The superstructure consists of brick pillars and metal sheet roofing over steel truss. Assume suitable durations of activities and any other data required.
- 2 a) Distinguish between Total float and Independent float, indicating the application of each. (6)
- b) For the following network data, calculate the minimum time required to complete the project. Also calculate Total float, Free float and Independent float (9)
- | Activity | 1-2 | 1-3 | 2-4 | 2-5 | 3-5 | 3-6 | 4-7 | 5-7 | 6-7 |
|------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Duration (weeks) | 7 | 5 | 6 | 6 | 9 | 8 | 4 | 9 | 10 |
- 3 a) Explain the steps in crashing a network to determine optimum cost and duration of a project. (7)
- b) Distinguish between Resource smoothing and Resource levelling, with the help of an example. (8)

PART B

Answer any two full questions, each carries 15 marks.

- 4 a) What is meant by Arbitration? What are the advantages and limitations? (8)
- b) What are the different methods of estimating construction project costs? (7)
- Comment on the relative accuracy of different methods.

- 5 a) Explain the use of S-curve chart in forecasting contractor's profit in a construction project. (7)
- b) Explain the problems in information system management of a Construction project. (8)
- 6 a) What is meant by Professional code of ethics? Explain the functions of this code. (8)
- b) Distinguish between Direct costs and Indirect costs of a construction project. (7)
- Comment on the variation of these with time.

PART C

Answer any two full questions, each carries 20 marks.

- 7 a) Explain the functions of materials management. (5)
- b) What is Economic Order Quantity (EOQ)? How can the same be determined? (8)
- c) Explain the classification of accidents likely to happen in a construction site, indicating the reasons. (7)
- 8 a) Explain the strategies of planning and implementation of safety programme in a construction project. (8)
- b) Explain ABC analysis. (6)
- c) What is 'Measurement book?' Explain the importance of this document. (6)
- 9 Explain the following in connection with construction projects.
- a) Cost plus contracts (5)
- b) Prequalification of contractors (5)
- c) Security deposit (5)
- d) General conditions of Contract (5)
