8E1907

B.Tech. VIII - Sem. (Main) Examination, April/May - 2024
Civil Engineering
8CE4-01 Project Planning and Construction Management

Time : 3 Hours   Maximum Marks : 70

Instructions to Candidates:

*Attempt **all Ten** questions from **Part A**, **Five** questions out of **Seven** questions from **Part B** and **Three** questions out of **Five** questions from **Part C**.*

Schematic diagrams must be shown wherever necessary. Any data you feel missing suitably be assumed and stated clearly. Units of quantities used/calculated must be stated clearly.

Use of following supporting material is permitted during examination. (Mentioned in form No.205)

PART - A

(Answer should be given up to 25 words only)

All questions are **compulsory.**   (10×2=20)

1. Write down the importance of Project planning.

2. Write short notes on Work breakdown structure of a project.

3. What are the shortcomings of a bar chart? How are these removed?

4. Enumerate various criteria of Financial evaluation of Construction projects.

5. Explain in brief about contract negotiation.

6. Define earnest money deposit and security deposit in a tender.

7. Define an 'event' and an 'activity'. Differentiate clearly between the two.

8. Write down the benefits of computerized information system in brief.

9. Write short notes on 'Time - Cost Trade off' and 'Cost Slope'.

10. Write a brief note on 'Environmental issues in construction'.

PART - B

(Analytical/Problem solving questions)

Attempt any **Five** questions.   (5×4=20)

1. Explain the concept of Work Breakdown structure in the development of a project network.

2. Explain direct and indirect cost associated with project cost with the help of graph showing their variation with time.

3. Differentiate between the following :

   a) Activities On Arrows (AOA) and Activities On Nodes (AON) network diagrams.

   b) CPM and PERT Techniques.

4. Write down the rules for inviting and processing tenders and note down the legal aspects of contract.

5. Discuss steps in Resources allocation. Differentiate between Resources smoothing and Resources levelling.

6. Define the Project Management Information System (PMIS) and discuss its components.

7. Define Earliest start time, earliest Finish time and latest start and latest finish time in a CPM networks. A project consists of nine activities and details about them are given below. Draw the project network the event identify critical path and determine duration of the project.

Activity	A	B	C	D	E	F	G	H	I (Last)
Predecessor (s)	-	A	B	C	D	B	B	G	E,F,H
Duration (D) in weeks	8	6	3	7	5	6	3	10	5

PART - C

(Descriptive/Analytical/Problem Solving/Design questions)

Attempt any **Three** questions.   (3×10=30)

1. A PERT network consists of seven activities as follows. The optimistic time (t_0), most likely (t_m) and pessimistic time (t_p) as estimated for different activities in weeks are given in table below. Draw the network. Determine critical path and standard deviation of project. What is the probability of completing the project 3 weeks earlier than the expected time?

Activity/Time	1-2	1-3	1-4	2-5	3-5	4-6	5-6
t_o	1	1	2	1	2	2	3
t_m	1	4	2	1	5	5	6
t_p	7	7	8	1	14	8	15

2. Write notes on the following :

   a) Legal aspects of contract and contract negotiation.

   b) Detail specification in tender document.

   c) Breach of contract and arbitration.

   d) Determination of contract.

3. Discuss causes and prevention of accidents at construction site. Also discuss the objectives of accident prevention programs.

4. Explain benefits of computerized information system in project management. Explain environmental and social aspects of various types of construction projects with example.

5. Write a brief note on 'Time - Cost trade off'. A project consists of eight activities including one dummy activity. The normal and crash time in days and cost in rupees for different activities are given in the table shown below. Determine the optimum duration and associated cost of the project. Also draw the least - cost time scaled network. Indirect cost is Rs. 80 per day.

Activity	Normal Time (Days)	Crash Time (Days)	Normal Cost (Rs.)	Crash Cost (Rs.)
1-2	2	2	1000	1000
1-3	7	3	500	900
2-3	6	3	300	420
2-4	5	4	200	250
3-4	0	0	0	0
3-5	9	4	600	900
4-6	11	6	600	1000
5-6	6	3	700	910

8E1909

B.Tech. VIII - Sem. (Main) Examination, April/May - 2024
Computer Science and Engineering (AI)
8CAI 4-01 Big Data Analytics
CS, CAI

Time : 3 Hours   Maximum Marks : 70

Instructions to Candidates:

*Attempt all **Ten** questions from **Part A**, **Five** questions out of **Seven** questions from **Part B** and **Three** questions out of **Five** questions from **Part C**.*

Schematic diagrams must be shown wherever necessary. Any data you feel missing suitably be assumed and stated clearly. Units of quantities used/calculated must be stated clearly.

Use of following supporting material is permitted during examination. (Mentioned in form No. 205).

PART - A

(Answer should be given up to 25 words only)

All questions are **compulsory.**   (10×2=20)

1. What is 3 V's Big Data? Why we need to analyze big data.

2. What is the role of Job Tracker.

3. How the limitations of Map Reduce is overcome in future versions of Hadoop?

4. What are the functions of a combiner?

5. Differentiate between object writable and Null - writable?

6. What is the role of Data node and Name node in HDFS?

7. What is ABCs of Pig Latin?

8. Explain scripting with Pig Latin?

9. What is meaning of Hive Clients?

10. Differentiate between Hive and pig?

PART - B

(Analytical/Problem solving questions)

Attempt any **Five** questions.   (5×4=20)

1. What is Big Data? Describe the main features of a big data in detail.

2. Write the difference between Old and new Hadoop API for Map reduce framework.

3. Describe in brief about the implementation of a raw comparator and custom raw comparator with suitable examples.

4. Explain the writable class hierarchy with a neat sketch.

5. Discuss Pig Latin Application flow.

6. Explain the architecture of a pig with a neat sketch.

7. How can you create and manage the data bases in Hive?

PART - C

(Descriptive/Analytical/Problem Solving/Design questions)

Attempt any **Three** questions. (3×10=30)

1. How google file system differs from the hadoop file system and explains the google file system architecture with a neat sketch.

2. Explain the role of combiner, record reader and partitioner within a map reduce program model of Hadoop.

3. What are core methods of a reducer? What happens if you try to run a Hadoop job with an output directory that is already present?

4. Write the Hive commands to create a sample table of a student with roll number, name and address and insert two rows into that table.

5. Write short notes on :

   a) Checking out the pig script interface.

   b) Working through the ABCs of pig Latin.

   c) Writable collections.

8E1960

B.Tech. VIII Sem. (Main) Examination, April / May - 2024
Open Elective - II
8TT6-60.2 Disaster Management

Time : 3 Hours

Maximum Marks : 70

Instructions to Candidates:

Attempt all Ten questions from Part A, Five questions out of Seven questions from Part B and Three questions out of Five questions from Part C.

Schematic diagrams must be shown wherever necessary. Any data you feel missing suitably be assumed and stated clearly. Units of quantities used/calculated must be stated clearly.

Use of following supporting material is permitted during examination. (Mentioned in form No. 205).

PART - A

(Answer should be given up to 25 words only)

All questions are **compulsory**.   (10×2=20)

1. Define disasters and hazards.

2. Differentiate between natural and man-made disasters.

3. What are environmental issues hazards?

4. Why natural disasters frequency increased in present time and which type?

5. What are geological based disasters?

6. What are industries based hazards?

7. Write disaster management cycles.

8. What are impacts of environmental hazards and health issues?

9. What is management role in mitigation of industry based hazards?

10. What is Tsunami and why it occurs?

PART - B

(Analytical/Problem solving questions)

Attempt any **Five** questions . (5×4=20)

1. What are health related hazards, which type of health hazard has society faced recently?

2. What are hydro meteorological based disasters, discuss.

3. What are geological based disaster, why landslides has increased in Himalayan range?

4. What are the caused of fire hazards and how they can be controlled, discuss?

5. Discuss reasons of power breakdowns and its impact on social life, and industries.

6. What is Tsunami and reasons of its eruption with impact on human life?

7. What is the role of management in mitigation of disaster in textile industries with Govt. Policies.

PART - C

(Descriptive/Analytical/Problem Solving/Design questions)

Attempt any **Three** questions . (3×10=30)

1. Explain types of natural disasters their impact on social life with preventive measures.

2. Discuss reasons of flash flood and cloud burst with suggestions for management and control its damages.

3. What is volcanic eruption and in which part of the world its frequently occur and how it creat disasters?

4. Why traffic accidents has increased now - a- days and how big its disasters impact is Suggest its management issues also?

5. Which section of Textile industry is creating environmental disaster and what measures Govt. has taken for its management?

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