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8E1807

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8E1807

B.Tech. VIII Sem. (Main/Back) Examination, June - 2022
Civil Engg.
8CE4-01 Project Planning and Construction Management

Time : 3 Hours **Maximum Marks : 120**

Min. Passing Marks : 42

Instructions to Candidates:

*Attempt all **ten** questions from **Part A**, **five** questions out of **Seven** from Part B and Four questions out of **Five** 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 the term Net present value in a project. (2)
2. What do you understand by the term activity? Enumerate its types. (2)
3. Enlist the sequence of a construction activity? (2)
4. What are the various types of contracts in a project? (2)
5. What is cost slope in terms of controlling a project? (2)
6. Compute standard deviation of an activity whose passimistic and optimistic time is 18 hours and 6 hours respectively. (2)
7. What is the significance of dummies? (2)
8. What do you understand by the term Project Management Information System (PMIS)? (2)
9. What does a negative slack indicates? (2)
10. Enlist the various aspects of construction safety programs. (2)

PART - B

(Analytical/Problem solving questions)

Attempt any **five** questions. **(5×8=40)**

1. Write a short note on resources of construction industry. (8)
2. Differentiate between A-O-A and A-O-N Network system. (8)
3. Discuss various types of tenders in detail. (8)
4. What are the objectives of construction project management? (8)
5. Write a short note on EIA of construction project. (8)

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6. A path of a certain network is shown in the fig.(a) with the time estimates for its activities as mentioned along each activity. Determine the expected time for the path. What is the standard deviation for the path. **(8)**

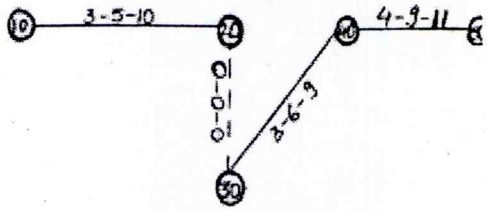

fig (a)

7. Explain the term optimistic time, pessimistic time, event, and scheduling in detail.**(8)**

PART - C

(Descriptive/Analytical/Problem Solving/Design questions)

Attempt any **Four** questions. **(4×15=60)**

1. Illustrate contract document in detail. **(15)**
2. Explain safety measure to be followed in various construction works with neat sketch. **(15)**
3. a) Explain benefit cost Ratio and its analysis in detail. **(7)**
   b) What are the main causes of project failure? **(8)**
4. a) Differentiate between PERT and CPM. **(7)**
   b) Compute Total float, independent float and free float in the below given network diagram along with the critical path fig. (b). **(8)**

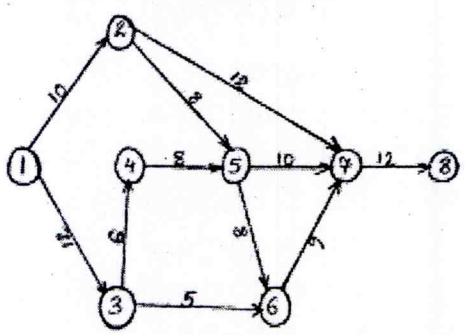

fig (b)

5. a) Write a short note on arbitration and breach of contract. **(7)**
   b) Following is the data about durations and costs. The project overhead costs are Rs. 2000 per week. Find the optimum duration and the cost with it. **(8)**

Activity	Normal duration (weeks)	Normal cost	Crash (weeks) duration	Crash cost
1-2	4	4,000	2	12,000
2-3	5	3,000	2	7,500
3-4	4	5,000	2	10,000
2-4	7	3,600	5	6,000

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B.Tech. VIII Sem. (Main/Back) Examination, June - 2022
Open Elective - II
8TT6-60.2 Disaster Management

Time : 3 Hours **Maximum Marks : 120**
Min. Passing Marks : 42

Instructions to Candidates:

*Attempt **All ten** questions from **Part A**, **five** questions out of **Seven** from **Part B** and **Four** questions out of **Five** 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

(Answers should be given up to 25 words only)

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

1. Define the term Disaster Management?
2. Classify the types of Disaster?
3. What is Human made Disaster?
4. What is the difference between Emergencies and Disaster?
5. List all the phases of Disaster Management Life Cycle?
6. Define Hazard?
7. What is full form of PPE?
8. Which type of Disaster was Bhopal gas tragedy?
9. What do you mean by Disaster Mitigation?
10. What is the difference between Epidemic and Pandemic?

PART - B

(Analytical/Problem solving questions)

Attempt any **five** questions **(5×8=40)**

1. Explain various phases of Disaster Management Cycle.
2. What do you mean by disaster vulnerability?
3. Write a note on the effect of cyclone on structures.
4. What are seismic waves? Explain.
5. Discuss the role of production persons in Disaster Management?
6. Write a note on waste water treatment plant in textile processing industry.
7. Discuss various mitigation measures for flood disaster.

PART - C

(Descriptive/Analytical/Problem Solving/Design questions)

Attempt any **Four** questions **(4×15=60)**

1. Discuss in detail the types of Disaster along with examples for each type.
2. Discuss differents types of Vulnerability with respect to different types of disasters.
3. Depending on the chemical nature, classify the sources of Air pollution and discuss the mitigation measures against Air pollution.
4. Discuss about different types of human induced disasters along with examples of recent incidents.
5. Write note on epicenter and epicentral distance. Further, explain the effects of earthquake on structures.

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B.Tech. VIII Sem. (Main/Back) Examination, June - 2022
Open Elective - II
8CE6-60.1 Composite Materials

Time : 3 Hours **Maximum Marks : 120**
Min. Passing Marks : 42

Instructions to Candidates:

*Attempt **all Ten** questions from **Part A**, **Five** questions out of **Seven** questions from **Part B** and **Four** 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 objectives of composite materials.
2. Write down the applications of composite materials in Engineering.
3. Define Anistropic material.
4. Define Matrix materials.
5. Write down the properties of polymer materials.
6. Define Laminate structures.
7. Define polymer matrix.
8. Define isotropic materials.
9. Define polyster and phenalic.
10. Define Poisson's ratio.

Part - B

(Analytical/Problem solving questions)

Attempt any **Five** questions **(5×8=40)**

1. Write short notes on:
   i) Fibres
   ii) Matrices
2. Describe micromechanics approach in composite materials.
3. Describe epoxy, polyster and phenalic.

4. Derive the relation between shear modulus and Poisson's ratio in composite materials.
5. Describe transverse elastic properties of composite materials.
6. Describe Fracture test of composite materials.
7. Describe Intra-Laminar shear testing.

Part - C

(Descriptive/Analytical/Problem Solving/Design Questions)

Attempt any **four** questions **(4×15=60)**

1. Write down any one Case Study of failure of composites.
2. Describe any two mechanical test of composite materials.
3. Explain volume fraction and weight fraction of composite materials.
4. Derive stress-strain relationship of Thin lamina.
5. Explain types of failures in laminates.

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B.Tech. VIII Sem. (Main/Back) Examination, June - 2022
Open Elective - II
8CE6-60.2 - Fire and Safety Engineering

Time : 3 Hours **Maximum Marks : 120**
Min. Passing Marks : 42

Instructions to Candidates:

*Attempt **all Ten** questions from **Part A**, **Five** questions out of **Seven** questions from **Part B** and **Four** 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 a term "Compartmentation".
2. What are the principles of fire safety design of building?
3. Explain the use of tenders and water relays in fire control technology. (in brief)
4. Write a short note on- "Emergency and Escape lighting".
5. What is Emulsification?
6. Define "Respirators".
7. Explain "Escape route during fire".
8. List the four stages of fire.
9. Define steam drenching system.
10. What are the threshold limits of chemicals?

PART - B

(Analytical/Problem solving questions)

Attempt any **Five** questions **(5×8=40)**

1. Explain in detail the various components of fire Hydrant system.
2. What are the precautions to be taken while storing fire hoses and fittings?
3. Explain foam power system and its function with a sketch.
4. Explain Co_2 flooding system.
5. Define Fire, and give it's classification with symbols.

6. Give a classification of materials for storage with respect to fire.
7. Describe the Alarm system employed in the field of fire fighting.

PART - C

(Descriptive/Analytical/Problem Solving/Design Questions)

Attempt any **Four** questions **(4×15=60)**

1. Explain the various types of portable fire Extinguishers and explain the operation of any one with sketch.
2. What are the factors causes fire in a plant? Discuss about provisions for fire fighting in the plant.
3. Discuss workmen's compensation Act (1923) and Factery Act (1948) for safety.
4. Explain the construction of Automatic sprinkler system in detail.
5. What are the Norms & standards as per National Building code for Fire safety design of Buildings?

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Roll No. _____

B.Tech. VIII-Sem (Back) Exam 2022
Civil Engineering
8CE4.2A Advance Foundation Engineering
8E8095

Time: 3Hours

Maximum Marks: 80
Min Passing Marks: 24

Attempt any five questions, selecting one question from each unit. All Questions carry equal marks. (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)

1. NIL **2. NIL**

UNIT -I

Q. 1 (a)What are the effect of water table on ultimate bearing capacity of soil? **(8)**

b) Explain methods of estimation of bearing capacity of Soil. **(8)**

OR

Q. 1 (a)What is the basic difference between Terzaghi and Meyerhof'sanalysis? **(8)**

b)What do you understand by local shear and general shear failure, explain with the help of neat diagram. **(8)**

UNIT –II

Q. 2 Explain Static cone penetration test with the help of neat diagram, what are the uses of Static cone penetration test? **(16)**

OR

Q.2 a) Discuss plate load test with the help of neat diagram. **(8)**

b) Discuss, how the bearing capacity is calculated from Standard Penetration N-Values ? **(8)**

P.T.O

UNIT –III

Q. 3 (a)Write about different types of pile and their uses. **(8)**

b) Explain Pile load test with the help of neat diagram. **(8)**

OR

Q.3 (a)What are the modes of failure of pile foundation? Explain with the help of neat diagram. **(8)**

b) What is negative skin friction phenomena? Explain with the help of neat diagram. **(8)**

UNIT -IV

Q. 4 (a)What is Sanitary land fill and how can we determine settlement of sanitary landFill? **(8)**

b) Explain the behavior of collapsible soils, how they can be identified? **(8)**

OR

Q.4 (a)Define Expensive soils, write about behaviour of expansive soil. **(8)**

b) Explain under reamed piles with the help of neat diagram. **(8)**

UNIT -V

Q. 5 (a)Discuss about common types of raft foundations. **(8)**

b) Write down step to design a combined footing. **(8)**

OR

Q.5 (a)Explain different elements of a well foundation with the help of neat diagram. **(8)**

b) Write short notes on following-

(i) Settlement and lateral resistance.

(ii) Tilts and shifts,

(iii)Advantages of well foundation

(iv)Sinking of well foundation **(4 x 2= 8)**