I.COE/Lib/BE/civil/ Sem-VIII/ EM/ 30/05/2024

Paper / Subject Code: 52692 / Environmental Management

BE / Civil / Sem- VIII / May. 2024

30.05.2024

(Time: 3 Hours) (Total Marks: 80)

Note:
1. Question No.1 is compulsory.
2. Attempt any **three** out of the remaining **Five** questions.
3. Assume suitable data if necessary.

Q. 1. Answer **any FOUR** of the following: (20)

(a) Define Environmental Objective as per ISO 14001

(b) What are the challenges in implementation of ISO 14000 standards?

(c) Unawareness or ignorance of environmental protection will lead to detrimental consequence comment. Justify the statement.

(d) Write short note on Global Warming as a Global Environmental Concern.

(e) Discuss on Applications of Environmental Management System..

(f) Discuss the key success factors for applied to almost all the operation for EMS implementation.

Q. 2. (a) What is Water (P & CP) Act? Give its objectives. (10)

(b) Discuss in short about Environment Protection Act. (10)

Q. 3. (a) Discuss roles of Government as regulatory agency for Environmental Management. Enlist 3 points. (10)

(b) Explain limiting factors and carrying capacity as related to Ecosystems. (10)

Q. 4. (a) What is Total Quality Environment Management Concept? (10)

(b) How is CSR related to Environmental Management? Explain with an example. (10)

Q. 5. (a) Elaborate the ISO 14001 EMS Model for Municipalities. (10)

(b) Discuss in short about EMS certification. (10)

Q. 6. Answer the following (20)

(a) Discuss on Wildlife protection Act.

(b) What are the guidelines to conduct and Environmental audit?

ICOE/Lib/BE/Sem-VIII/Civil/R12RS/28/05/2024

Paper / Subject Code: 52678 / Repairs, Rehabilitation and Retrofitting of Structures (DLOC - VI)

B.E./Sem-VIII/Civil/May-2024

28/05/2024

(3 Hours) [Total Marks: 80]

1. Question No.1 is **Compulsory.**
2. Attempt any **Three Questions** out of remaining questions.
3. Each **Full Question** carries **20 Marks.**

Q1. Attempt any Four (4x5)

a. What is shoring? Write a short note on Raking shoring.
b. Why shear wall is necessary in tall structures? Explain its behavior and importance during earthquake.
c. What is structural auditing? Why Structural auditing is important before repair and retrofitting.
d. What are the physical properties for good repairing materials?
e. What is Rusticide? Explain step by step procedure for Rusticide.

Q2. Attempt any Two (2x10)

a. What is manufactured damping? Explain the working procedure for fluid viscous damper.
b. What are various nondestructive methods for damage assessment? State the procedure for rapid chloride penetration test.
c. What are the various stages of repairing RCC structures? Explain surface preparation procedure in detail.

Q3. Attempt any Two (2x10)

a. Write a detailed note on "'cantilever needle beam method".
b. What is fiber wrap technique? State its advantages and limitations.
c. Explain the causes of structural deterioration in heritage structures.
d. What is chemical cleaning? Explain the detailed procedure.

Q4. Attempt all Four (4x5)

a. Explain step by step procedure for RCC beam jacketing using well detailed figures.
b. State step by step working procedure for rebound hammer and ultrasonic pulse velocity in condition assessment of concrete.
c. Discuss about various causes for steel structure deterioration.
d. State various causes of steel corrosion. Explain any one in detail.

Q5. Attempt all Four (4x5)

a. State various retrofitting techniques and explain any one in detail.
b. Write a detailed note on "Steel plate jacketing in RCC members"
c. State various foundation rehabilitation methods. Explain slab jacking in detail with figure.
d. Explain detailed procedure of using concrete bonding agents.

Q6. Attempt any Two (2x10)

a. State various types of steel corrosion and explain any one in detail.
b. What is routine maintenance? State the importance of routine maintenance in building construction.
c. Write a short note on routing and sealing of cracks.
d. What is fiber reinforced injection grouting? State its advantages.

ICOE/Lib/BE/Civil/Sem VIII/CS/24/05/2024

Paper / Subject Code: 52674 / Construction Safety

B.E/Civil/Sem - VIII/May - 2024 Date :- 24-05-24

3 Hours [Total Marks: 80]

NB:

1. Question No.1 is compulsory
2. Attempt any three questions out of remaining questions

Q1. Attempt any Four (4x5)]

a. What is safety campaign? State the importance of safety campaign.
b. What are the basic safety measures to be taken at any construction site?
c. Write a short note on "Pre-Planning and Safe Work Practices".
d. State and explain various steps involved in "Hazard recognition (or identification)" procedure.
e. What do you mean by work place violence? How it can be prevented?

Q2. (2x10)

a. What is workers compensation insurance? Explain in detail with considering various key points.
b. What are different types of work place violence? Discuss preventive steps.

Q3. (2x10)

a. Write a detailed note on safety precautions in using scaffolding and platforms
b. State various causes of falls. Explain General Strategies for Preventing Slips under OSHA guidelines.

Q4. (2x10)

a. State responsibilities of
i. Safety Manager ii. Safety Action Group iii. Employees
iv. General Worker's Responsibilities v. On-site Supervisors Responsibilities

b. Explain each and every one in detail "Safety Measures and accident Prevention in Bridges"

Q5. (2x10)

a. Write note on safety policies to be adopted on a construction site, methods and equipment.

b. What precautions are to be taken while excavation at a site for foundations?

Q6. (2x10)

a. Explain in details safety tips while using crewel crane and tower crane.
b. Write a short note on "safety in building construction".

ICOG/Lib/BE/civil/sem VII/CM/14/05/2024

Paper / Subject Code: 52671 / Constructsion Management

BE / civil / Sem. VII / May. 2024

Date:- 14.05.2024

Time: 3 Hours

Max. Marks: 80

Note:
Question 1 is Compulsory
Attempt any three of remaining five questions
Figure to Right indicates full Marks
Assume the suitable data and clearly state the same

Q1 **Question 1 is Compulsory**

A. Determine the critical path and Project Duration, Activity times and all the types of floats. 10M

Activity	Succeeding Activity	Duration
P	Q, R	10
Q	S,T	12
R	U	14
S	U	17
T	V	11
U	V, W	16
V	X	8
W	Y	10
X	Y	13
Y	-	9

B. Explain 14 principles given by Mr. Henry Fayol for successfully running the organization 10M

Q.2a. Following is the data of associated with research and development project 12M

Activity	A	B	C	D	E	F	G	H	K
Succeeding Activity	C	D,E,F	E, F	G	H	K	K	-	-
to	2	1	2	6	4	5	7	6	3
tm	4	3	5	7	8	7	10	9	4
tp	6	5	8	8	12	9	13	12	5

i) Determine the Duration, standard deviation, and variance of project.
ii) What is the probability of completing the project in 30 days?
iii) What is the schedule duration with 50% probability?
iv) What is the schedule duration with 98% probability

Z	-3	-2	-1	0	1	2	3
P%	0.13	2.28	15.87	50	84.13	97.72	99.87

Q.2.b. i)Work Breakdown Structure 8M
ii) Differentiate Bar chart and Milestone Chart

Q3a. What is Resource Smoothening and Leveling. *8M*
Explain the process of Resource smoothening and resource leveling.

Q.3b. Prepare EST and LST schedule. Prepare resource histogram Which schedule you will prefer and why? *12M*

Activity	A	B	C	D	E	F	G	H
Preceding Activity	-	A	-	-	-	C	B, E	G, F
Time	2	2	2	4	2	3	3	4
Mason/Day	6	7	3	9	4	8	2	1

Q.4.a What do you mean by time and cost over run? Discuss the causes of time over run and cost over run. What are the control measures to avoid time and cost over run. *8M*

Q.4.b Determine the optimum cost and optimum duration of project. Data for each activity is given. *12M*
Indirect cost = 40,000 Rs/ Day.

Activity	Succeeding Activity	Normal Time	Crash Time	Normal Cost (In Lakhs)	Crash Cost (In Lakhs)
P	Q	48	32	18	22
Q	R	112	72	15	22
R	U	96	56	18	24
S	T	72	48	24	30
T	U	96	92	8	20
U	-	48	48	20	20

Q.5a. What is need of updating the schedule? Discuss the procedure of updating the schedule. *8M*

Q.5b. What are the causes of accidents? Suggest the corrective measures to avoid accidents on construction site *8M*

Q.5c. What is the role of inspection in Quality control *4M*

Q6 Write short notes (Any 5) *20M*

i) Principles of scientific management
ii) Roles of various agencies involved in construction project
iii) ABC Analysis
iv) Human Resource management
v) Role of safety in construction
vi) OSHA
vii) Workmen compensation act