Enrollment No: _____ Exam Seat No:_____

C.U.SHAH UNIVERSITY

Summer Examination-2018

Subject Name: Plant Engineering and Maintenance

Subject Code: 4TE08PEM1 **Branch: B.Tech (Mechanical)**

Semester: 8 **Date: 26/04/2018** **Time: 02:30 To 05:30** **Marks: 70**

Instructions:

(1) Use of Programmable calculator & any other electronic instrument is prohibited.
(2) Instructions written on main answer book are strictly to be obeyed.
(3) Draw neat diagrams and figures (if necessary) at right places.
(4) Assume suitable data if needed.

Q-1 **Attempt the following questions:** **(14)**

	What does KAIZEN stand for?	**01**
	Which are three elements in fire triangle?	**01**
	Why do you classify "Class C" Fire?	**01**
	What is Hydronic heating system?	**01**
	Write any one benefit of preventive maintenance?	**01**
	What is the function of dehumidifier?	**01**
	What is corrective work?	**01**
	What is standard composition of a standard air?	**01**
	What is "PASS" system in fire-fighting?	**01**
	What is a Passive solar collector?	**01**
	What is 5s in TPM?	**01**
	A ……. is a device that regulates the set point temperature in a building.	**01**
	Define Autonomous maintenance	**01**
	Military organization is known as…….	**01**

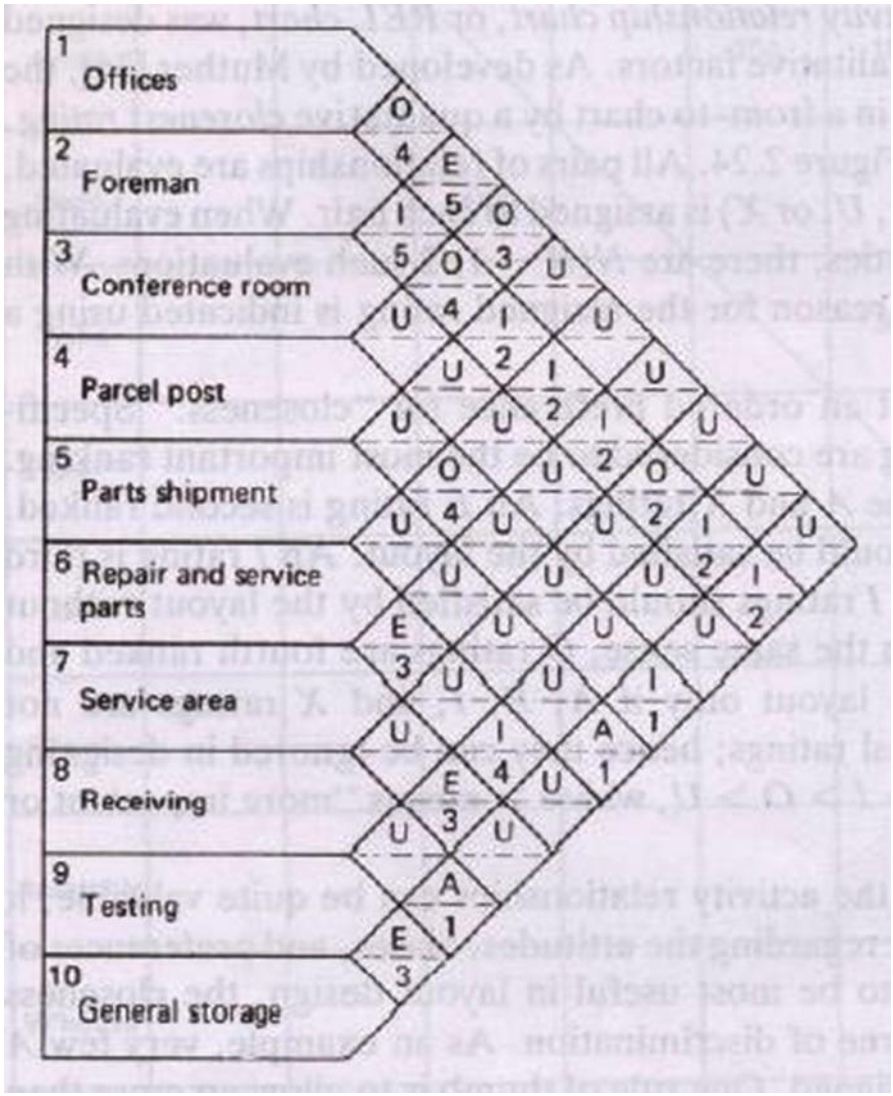
Attempt any four questions from Q-2 to Q-8

Q-2 **Attempt all questions** **(14)**

a)	Write General consideration while designing Natural Ventilation and explain any one in detail.	**07**
b)	Explain in detail the various energy sources for HVAC	**07**

Q-3 **Attempt all questions** **(14)**

a)	Prepare Activity Relationship Chart for below mentioned example	**10**



b) Enlist the various software available for Systematic Layout planning **04**

Q-4 **Attempt all questions** **(14)**

a) Explain in detail Condition Monitoring for maintenance management practice **07**

b) Enlist various methods used for Quantitative Decision making system for maintenance **07**

Q-5 **Attempt all questions** **(14)**

a) State the differences between TQM & TPM **04**

b) Prepare Pareto chart for the below mentioned example **10**

Category	Hours of delay	Total
Align front	𝍸 IIII	9
Door	𝍸	5
Clean & paint wheels	𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 IIII	49
Parts out of stock	𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸	35
Align rear	𝍸 IIII	9
Broke on road	𝍸 IIII	9
Radius rods	𝍸 I	6
A-frame	I	1
Total		123

Q-6 **Attempt all questions** **(14)**

a) Explain in detail various Pillars of Total Productive Maintenance **08**

b) Write the various sources of Mechanical & Chemical Hazards **06**

Q-7 **Attempt all questions** **(14)**

a) What is Man Power Planning? Write the steps to implement man power planning in detail **07**

b) List out the important guidelines for equipment designers to improve safety in maintenance **07**

Q-8 **Attempt all questions** **(14)**

a) State various principles influencing for Plant layout planning **07**

b) Write important seven steps to approach to implement Life cycle costing? **07**