

Enrollment No: _____

Exam Seat No: _____

C. U. SHAH UNIVERSITY

Winter Examination-2019

Subject Name : Plant Engineering and Maintenance

Subject Code : 4TE08PEM1

Branch: B.Tech (Mechanical)

Semester : 8

Date : 13/09/2019

Time : 10:30 To 01:30

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

- a) Define productivity.
- b) List out types of plant layout.
- c) Give the full name of PQRST.
- d) Which are the personal protective equipment used for safety in industry.
- e) What is fire triangle?
- f) Define Mean Time Between Failure.
- g) What do you mean by occupational diseases?
- h) Which are factory act available to smoothen the work inside the industrial premises?
- i) Enlist the reason of breakdown.
- j) hours work done by worker per week in industry.
- k) Define Equipment Life Cycle.
- l) What do you mean by corrective maintenance?
- m) What is the function of TPM?
- n) Define the reliability.

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

Q-2 Attempt all questions (14)

- a) How do you classify fire? What are the measures you suggest to contain fire hazards in buildings? Explain with an example. **07**
- b) Explain the different types of industrial accidents and general steps to be taken for preventing the accidents in any industry. Also explain the procedure for accident reporting **07**

Q-3 Attempt all questions (14)

- a) Explain different types of plant layout used in detail with neat sketch **07**
- b) Discuss General consideration while require to design Natural **07**



Ventilation and explain any one in detail.

- Q-4** **Attempt all questions** **(14)**
- a) Compare in brief : Break-down maintenance, Opportunistic maintenance, Routine maintenance **07**
- b) What is the preventive maintenance? And explain its importance. **07**
- Q-5** **Attempt all questions** **(14)**
- a) Discuss Methodology and implementation of TPM. **07**
- b) Write short notes on (i) Maintenance Categories. **07**
(ii) Maintenance Organizations and economics.
- Q-6** **Attempt all questions** **(14)**
- a) What are basic parameters which form basis of Condition Monitoring Techniques in maintenance of industrial equipments? Write briefly on each Technique. **07**
- b) Discuss occupational diseases caused due to physical condition and respiration in dusty environment. **07**
- Q-7** **Attempt all questions** **(14)**
- a) State various principles influencing for Plant layout planning **07**
- b) Discuss equipment life cycle with bath tub curve **07**
- Q-8** **Attempt all questions** **(14)**
- a) What is Industrial safety? Explain safety and Productivity. **07**
- b) What is the roll of management and Government in industrial safety? Discuss Safety organizations **07**

