Roll No. | | | | | | | | | | | | | Total No. of Pages : 02

Total No. of Questions : 08

M.Tech (CAD/CAM) (E-II) (Sem.–2)

WORK ENGINEERING AND ERGONOMICS

Subject Code : ME-515

Paper ID : [E0872]

Time : 3 Hrs. Max. Marks : 100

INSTRUCTIONS TO CANDIDATES :

1. **Attempt any FIVE questions out of EIGHT questions.**
2. **Each question carries TWENTY marks.**

Q1. Explain the following :

a) Factors affecting productivity.

b) Components of work study.

c) Steps involved in method study.

d) Give an example of flow processing chart (Man Type).

Q2. a) What are the principles of motion economy?

b) What are therbligs? What are the advantages of micro- motion study?

Q3. Explain the following :

a) Define time study and explain its objectives.

b) Explain any one method of performance rating.

c) What is the relationship between observed time, normal time and standard time?

d) Give the significance of predetermined motion time study (PMTS).

Q4. a) Elaborate the Bedaux plan.

b) Explain various noise control techniques.

c) State the various body reactions to heating.

d) Give the details of Rowan plan.

Q5. a) Explain the characteristics and various aspects of man- machine system.

b) Discuss human Anthropometry and its use in workplace layout.

Q6. Explain the following :

a) Hand and foot push buttons.

b) Body heat balance.

c) Effective temperature scales.

d) Instrument displays.

Q7. a) Explain the response of body to high frequency vibration.

b) Discuss in details the different methods of reducing vibrations.

Q8. a) Elaborate various physiological effects of noise.

b) Discuss various methods for reduction of noise in industry.