Total No. of Printed Pages:2

SUBJECT CODE NO: H-1648
FACULTY OF ENGINEERING AND TECHNOLOGY
ME (Mechanical)
Engineering Experimental Technique
(REVISED)

[Time: Three Hours]   [Max.Marks:80]

Please check whether you have got the right question paper.

N.B
    A. Solve <u>any three</u> questions <u>from each section</u>.
    B. Figure to the right indicate full marks.
    C. Assume suitable data, if necessary.
    D. Use of non-programmable calculator is allowed.

Section A

Q.1   a) What kind of impedance matching is desired for   07
       i)   Maximum power trans – mission and
       ii)   Minimum influence on the output of the system?

    b) Explain the concept of generalized measurement system.   06

Q.2   a) Explain with an example, what is system response?   06

    b) Define and explain the basic concept of calibration, standard and dimensions and units.   07

Q.3   a) What is meant by level of significance; level of confidence?   07

    b) Explain chi – square test.   06

Q.4   Write short notes on (<u>any two</u>)   14

    i.   Experimental planning
    ii.   Regression analysis
    iii.   Chauvenet's criterion
    iv.   Student's t – distribution

Section B

Q.5   a) How are elastic elements used for force or torque measurements?   07

    b) Describe the basic concept of the seismic instrument.   06

1648

Q.6 a) Explain the concept of mass balance measurement. 06

   b) Explain the general data acquisition system. 07

Q.7 a) Explain the program as a substitute for wired logic. 06

   b) Explain analog to digital & digital to analogs conversion. 07

Q.8 Write short notes on (<u>any two</u>) 14

   i.   Signal conditioning
   ii. Simple vibration instrument
   iii. Data storage and display
   iv. Sound measurement

1648