M. Tech.-III (Mechanical CAD/CAM) (CBCS – 2015 Course) :
WINTER - 2018

SUBJECT : SELF-STUDY PAPER – I : MACHINE CONDITION MONITORING & DIAGNOSTICS

Day : Saturday
Date : 08/12/2018

W-2018-3261

Time 11.00 AM TO 02.00 PM
Max. Marks : 60

N.B.

1) All questions are **COMPULSORY.**
2) Figures to the right indicate **FULL** marks.
3) Answers to both the sections should be written in **SEPARATE** answer book.
4) Assume suitable data if necessary.

SECTION – I

Q.1 What are the principles of predictive maintenance? Explain predictive maintenance techniques. **(10)**

OR

Explain critical, essential and general purpose equipment for maintenance.

Q2 Explain in detail limits and standards of vibration. **(10)**

OR

What is vibration? Explain different nature of vibration.

Q.3 Describe the handheld vibration meters and analyzers. **(10)**

OR

With suitable practical example of vibration analysis explain data base management software and online data acquisition.

SECTION - II

Q.4 What is waveform analysis? Also explain special signal processes. **(10)**

OR

What is fast Fourier transform (FFT) analysis? Also explain display/ storage, overlap and averaging.

Q.5 What are the consequences of misalignment? Which factors influenced on alignment procedure. **(10)**

OR

Explain single plane balancing and two plane balancing vector method.

Q6 Write short note on oil analysis – contaminants in lubricants. **(10)**

OR

Explain in detail XRF (X ray fluorescence) spectroscopy with neat sketches.

* * *