

**M. TECH.-III (MECHANICAL CAD/CAM) (CBCS – 2015
COURSE) : SUMMER - 2018
SUBJECT: ELECTIVE 1: ADVANCED STRESS ANALYSIS**

Day: **Tuesday**
Date: **29/05/2018**

S-2018-3114

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) Both sections should be written in **SEPARATE** answer sheets.

SECTION – I

- Q.1** Explain evaluation of stresses in flat rectangular plates with different clamp and load conditions. **(10)**

OR

Explain evaluation of the stresses in the flat and circular hole using stress function.

- Q.2** Explain stress in the L shaped bracket under cantilever load **(10)**

OR

Explain different criterions for three dimensional stress analysis using plasticity.

- Q.3** Write short note on i) wear and tear of plastics **(10)**
ii) Impact properties of plastics.

OR

Discuss the stress analysis of composite circular tubes (Internal and external pressure)

SECTION – II

- Q.4** Explain bending of circular plates of variable thickness. **(10)**

OR

Discuss pure bending in two perpendicular directions.

- Q.5** Discuss the method of computing contact stresses and deflection of bodies in point contact. **(10)**

OR

Explain stress for two bodies in line contact with load normal to contact area.

- Q.6** What are the different types of strain gauges and what is instrumentation? **(10)**

OR

Explain isoclinic and isochromatic fringe patterns.

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