## **END SEMESTER EXAMINATION-2019**

Semester - 4th

Subject Code: FPT-402

## SERVICING AND MAINTENANCE OF FOOD MACHINERIES

Full Marks - 70

Time - Three hours

The figures in the margin indicate full marks for the questions.

## Instructions:

- 1. Illustrate your answers with suitable sketches and examples wherever necessary.
- 2. Make suitable assumption(s) wherever, whenever applicable.
- 3. Preferably write the answers with sequential order.

## PART - A

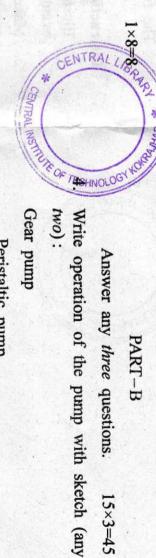
Answer all questions.

- 1. Answer the following questions:  $1 \times 10=10$ 
  - (i) Write Hook's law.
  - (ii) Show tensile strength in adiagram.

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- (iii) Show compressive strength in a diagram.
- (iv) What is Creep?
- (v) What is piping?
- (vi) What is reciprocating pump?
- (vii)Write SI unit of velocity
- (viii) Write SI unit of acceleration.
- (ix) Write SI unit of density.
- (x) Write SI unit of mass flux
- 2 Fill up the blanks:
- (i) Elasticity is
- (ii) Ductility is -
- (iii) Toughness is ----
- (iv) Hardness is -
- (v) Stiffness and rigidity are
- (vi) Fatigue is ----.
- (vii)Safety measure for fire hazard is
- (viii) Safety measure for pressure hazard is



·u Match the columns:

Column-1	Column-2
Process hazard	Iron alloyed with carbon
Power generating device Joule	Joule of the state of
Safety valve	Pascal e Secondario
Steel	Watt of the best
SI unit of work/energy/ heat	High pressure, temperature, explosive handling etc.
SI unit of power	Pressure relief device
SI unit of pressure	Turbine, grenerator.

PART-B

Answer any three questions. 15×3=45

two):

Gear pump

Peristaltic pump

Centrifugal pump

S two): Write operation of the valve with sketch (any

Non-return valve Feed check valve

Non-rising stem gate valve

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6. Discuss with diagram wherever applicable (any two).

Heat exchanger

Nut and bolt
Flanged pipe joint
Hydraulic pipe joint

7. Why lubrication is required in machine operation? What are material hazard and process hazard? Write briefly.

