

**DRONACHARYA COLLEGE OF ENGINEERING**

KHENTAWAS, FARRUKHNAGAR, GURGAON, HR

Department: Mechanical Engineering

Academic Session: 2021 (May-Aug 2021)

Semester- VI Sem

Subject with code- DESIGN OF MACHINE ELEMENT-I (PCC-ME -304G)

Name of Faculty with designation : Mr. Yudhveer Kumar Verma (ASSISTANT PROFESSOR)

S.No.	Month	Date & Day	Sem-Class	Section/Unit	Topic/Chapter covered	Academic activity	Test / assignment
1			VI-ME	I-A	Design Philosophy: Problem identification- problem statement, specifications, constraints, Feasibility study technical feasibility	.....	Assignment of 02 Ques.
2			VI-ME		economic & financial feasibility, societal & environmental feasibility,	.....	Assignment of 02 Ques.
3			VI-ME		Generation of solution field (solution variants), Brain storming, Preliminary design, Selection of best	.....	Assignment of 02 Ques.
4			VI-ME		possible solution, Detailed design,	.....	Assignment of 02 Ques.
5			VI-ME		Selection of Fits and tolerances and analysis of dimensional chains		Assignment of 02 Ques.
6			VI-ME	I-B	Selection of Materials: Classification of Engg. Materials, Mechanical properties of the commonly used engg	.....	Assignment of 02 Ques.
7			VI-ME		Materials, hardness, strength parameters with reference to stress-strain diagram, Factor of safety.		Assignment of 02 Ques.
8			VI-ME	II-A	Mechanical Joints: ISO Metric Screw Threads, Bolted joints in tension, Eccentrically loaded bolted	.....	Assignment of 02 Ques.
9			VI-ME		joints in shear and under combined stresses	.....	Assignment of 02 Ques.
10			VI-ME		Design of power screws, Design of various types	.....	Assignment of 02 Ques.
11			VI-ME		welding joints under different static load conditions	.....	Assignment of 02 Ques.
12			VI-ME	II-B	Riveted Joints, Cotter & Knuckle Joints	.....	Assignment of 02 Ques.

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13			VI-ME		Design of various types of riveted joints under different	.....	Assignment of 02 Ques.
14			VI-ME		static loading conditions	.....	Assignment of 02 Ques.
15			VI-ME		eccentrically loaded riveted joints, design of cotter	.....	Assignment of 02 Ques.
16			VI-ME		knuckle joints	.....	Assignment of 02 Ques.
17			VI-ME	III-A	Belt rope and chain drives		Assignment of 02 Ques.
18			VI-ME		Design of belt drives, Flat & V-belt drives		Assignment of 02 Ques.
19			VI-ME		Condition for Transmission of max. Power	.....	Assignment of 02 Ques.
20			VI-ME		Selection of belt, design of rope drives	.....	Assignment of 02 Ques.
21			VI-ME		design of chain drives with sprockets	.....	Assignment of 02 Ques.
22			VI-ME	III-B	Keys, Couplings & Flywheel	.....	Assignment of 02 Ques.
23			VI-ME		Design of Keys – Flat, Kennedy Keys, Splines	.....	Assignment of 02 Ques.
24			VI-ME		Couplings design –		Assignment of 02 Ques.
25			VI-ME		Rigid & Flexible coupling	.....	Assignment of 02 Ques.
26			VI-ME		turning Moment diagram, coefficient of fluctuation of energy and speed		Assignment of 02 Ques.
27			VI-ME		design of flywheel – solid disk & rimmed flywheels.		Assignment of 02 Ques.
28			VI-ME	IV-A	Clutches: Various types of clutches in use		Assignment of 02 Ques.

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29			VI-ME		Design of friction clutches – Disc. Multidisc		Assignment of 02 Ques.
30			VI-ME		Cone & Centrifugal, Torque transmitting capacity		Assignment of 02 Ques.
31			VI-ME	IV-B	Brakes: Various types of Brakes, Self energizing condition of brakes		Assignment of 02 Ques.
32			VI-ME		Design of shoe brakes –		Assignment of 02 Ques.
33			VI-ME		Internal & external expanding		Assignment of 02 Ques.
34			VI-ME		band brakes, Thermal Considerations in brake designing		Assignment of 02 Ques.