

JK Lakshmipat University Jaipur
INSTITUTE OF ENGINEERING AND TECHNOLOGY
 B. Tech. in Mechanical Engineering,
 3rd Year (6th Semester)

End Term Examination, May, 2022

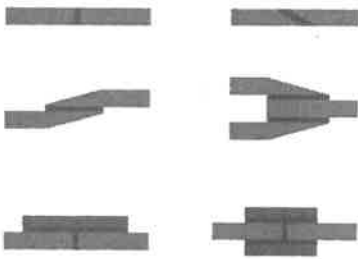
Course No. : ME1214
 Course Title : Contemporary Production Technology
 Nature of Exam : Only laptop with internet facility is allowed
 Weightage : 30%
 Max Marks : 30
 Duration : 120 Minutes
 Date of Exam :

No. of Pages = 02
 No. of Questions = 04

Session: _____

Note:

1. Please read through and follow all the instructions.
2. All parts of a question should be answered consecutively.
3. Draw neat diagrams using pencil.
4. All questions are compulsory.

Ques No	Questions	LOs	Marks
1	Identify the different types of adhesively bonded joints. Discuss about the testing methods used to know the joint strength and also list the area of application for each of the following joints.	LO1	7
			
2	A material is machined using a milling machine and surface roughness, waviness and lays are as shown in the figure A. Identify the various types of lay as shown in figure B, write its symbol and explain.	LO2	8

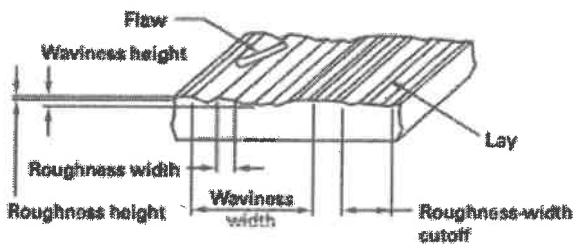


Fig. A

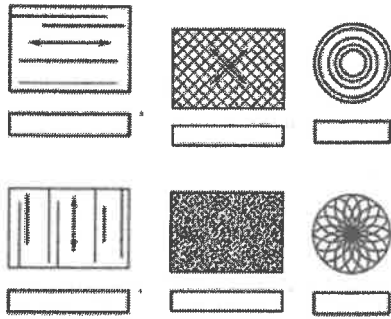


Fig. B

- 3 Hot Dipping, Electroplating, and Cladding are the few of the most common surface coating techniques. Identify their suitable application and explain the three processes. LO3 7
- 4 Find the optimized parameters for minimum surface roughness obtained through turning operation using Taguchi technique. LO4 8

Sr. No	Speed (RPM)	Feed (mm/rev.)	Doc (mm)	Ra (Trail 1)	Ra (Trail 2)	Ra (Trail 3)	Ra (mean)
1	2000	80	0.5	0.73	0.74	0.8	0.76
2	2000	80	0.25	0.46	0.44	0.48	0.46
3	2000	80	0.75	0.57	0.53	0.56	0.55
4	2000	70	0.5	2.41	2.2	2.44	2.35
5	2000	70	0.25	0.41	0.4	0.43	0.41
6	2000	70	0.75	0.63	0.6	0.64	0.62
7	2000	90	0.5	0.41	0.4	0.42	0.41
8	2000	90	0.25	0.4	0.42	0.38	0.40
9	2000	90	0.75	0.54	0.52	0.49	0.52
10	1500	80	0.5	0.7	0.69	0.72	0.70
11	1500	80	0.25	0.53	0.55	0.54	0.54
12	1500	80	0.75	0.46	0.45	0.44	0.45
13	1500	70	0.5	0.74	0.73	0.72	0.73
14	1500	70	0.25	0.39	0.4	0.41	0.40
15	1500	70	0.75	0.37	0.38	0.39	0.38
16	1500	90	0.5	0.5	0.51	0.52	0.51
17	1500	90	0.25	0.45	0.46	0.46	0.46
18	1500	90	0.75	0.58	0.59	0.59	0.59
19	2500	80	0.5	1.58	1.56	1.5	1.55
20	2500	80	0.25	1.25	1.26	1.28	1.26
21	2500	80	0.75	1.77	1.79	1.7	1.75
22	2500	70	0.5	1.85	1.79	1.82	1.82
23	2500	70	0.25	0.94	0.92	0.96	0.94
24	2500	70	0.75	2.26	2.24	2.25	2.25
25	2500	90	0.5	1.44	1.42	1.46	1.44
26	2500	90	0.25	1.69	1.68	1.7	1.69
27	2500	90	0.75	0.42	0.43	0.44	0.43

	Speed (rpm)	Feed(mm/min)	Depth of cut (mm)
1	1500	70	0.25
2	2000	80	0.5
3	2500	90	0.75