

JK Lakshmipat University Jaipur
INSTITUTE OF ENGINEERING AND TECHNOLOGY
B. Tech. in Mechanical Engineering,
4th Year (7th Semester)
End Semester Examination, December, 2022

Course No. : ME1216
Course Title : Non Destructive Testing
Nature of Exam : Class Room Test
Weightage : 30%
Max Marks : 60
Duration : 180 Minutes
Date of Exam : _____ - _____ -2022

No. of Pages = 01

No. of Question = 02

Session: _____

Note:

1. All parts of a question should be answered consecutively.
2. All questions are compulsory.
3. Any hand written notes are allowed

- Q1. Two samples of welding joint of SS304 steel plate were prepared. [Marks: 30] CO: 01
The dimensions of each plate was 200*100*15 mm³. One sample CO: 02
(S1) was welded using TIG welding machine and another sample
(S2) was prepared using friction stir welding. The samples were to
be tested using following non-destructive testing methods:
- a. Chalk and oil test
 - b. Ringing Test
 - c. Zyglo test
 - d. Magnetic Particle Inspection
- With neat diagram discuss each testing methods in details and
write the types of defects it can detect. Also give your
recommendation with justification so that the best testing practice
can be adopted by the industry people.
- Q2. In a forging company valves are manufactured using L6 steel. [Marks: 30] CO: 03
Ingots are purchased from a casting industries kept in an open CO: 04
storage space. It is recommended to test either using radiographic
inspection or ultrasonic test method. With neat diagram discuss
each testing methods in details and write the types of defects it
can detect. Also give your recommendation with justification so
that the best testing practice can be adopted by the industry
people.