

Total No. of Questions : 8]

SEAT No. :

PB4532

[6261]-117

[Total No. of Pages :2

**S.E. (Robotics And Automation Engineering)
MANUFACTURING TECHNOLOGY
(2019 Pattern) (Semester-III) (211502)**

Time : 2½ Hours]

[Max. Marks : 70

Instructions to the candidates:

- 1) Answer Q.1 or Q.2, Q.3 or Q.4, Q.5 or Q.6, Q.7 or Q.8.
- 2) Neat diagrams must be drawn wherever necessary.
- 3) Figures to the right indicate full marks.
- 4) Assume suitable data, if necessary.

Q1) a) How do you analysis of wire drawing operation. [9]

b) Compare direct extrusion process with indirect extrusion process. [8]

OR

Q2) a) Explain strip drawing operation in detail. [9]

b) Define extrusion ratio and discuss its significance in the process. [8]

Q3) a) List and explain fundamental principles involved in spot welding process. Also state its advantages and limitations. [9]

b) Explain ultrasonic welding process in detail. [8]

OR

Q4) a) Elaborate equipment/accessories needed to carry MIG operation. [9]

b) Write various welding defects. How prevention of welding defects are important? [8]

Q5) a) Explain with a neat sketch process of plasma arc machining. [9]

b) Compare conventional machining process to non - conventional machining process. Also write advantages and limitations of both processes. [9]

OR

P.T.O.

- Q6)** a) Discuss laser beam machining in detail. [9]
b) Explain working principle of ECM. [9]

Q7) Write a short note on:

- a) Robotic arc welding process. [6]
b) Assembly of parts using robot. [6]
c) Application of robot for painting work. [6]

OR

Q8) Write a short note on:

- a) Application of robotics in forging working operation. [6]
b) Utilization of robotics in casting process. [6]
c) Advantages of robotics in manufacturing and chemical industry. [6]

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