Total No. of Questions : 4]

SEAT No. :

**PB354**

[Total No. of Pages : 1

**[6270]-155**

# B.E. (Robotics and Automation) (Insem)
# FIELD AND SERVICE ROBOTS
## (2019 Pattern) (Semester - VIII) (411508)

*Time : 1 Hour]* *[Max. Marks : 30*

***Instructions to the candidates:***

1) ***Answer Q1 or Q2 and Q3 or Q4.***
2) ***Neat diagrams must be drawn wherever necessary.***
3) ***Figures to the right indicate full marks.***
4) ***Use of Calculator is allowed.***
5) ***Assume suitable data, jf necessary.***

***Q1)*** a) Briefly expand on the fundamental nature and importance of the new research model? **[8]**

b) Explain the concept of 'From Robotics to RT Systems' in detail. **[7]**

OR

***Q2)*** a) What are Service RT Systems? What are their key aspects? **[8]**

b) Detail the applications of both field and service robots, highlighting the specific tasks undertaken by each category in diverse scenarios. **[7]**

***Q3)*** a) What are the various features commonly associated with drones? **[8]**

b) How do boundary setting and flight mapping contribute to effective drone data collection? **[7]**

OR

***Q4)*** a) What is the process and significance of using drones for aerial and topography mapping? **[8]**

b) What is a Quadcopter? Highlight some of its advantages and disadvantages. **[7]**

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