

- 5 a. Explain the functions of the following devices in part feeding mechanism.
i) Hopper ii) Parts feeder iii) Selector iv) Feed track
v) Escapement and placement devices. (10 Marks)
- b. A 12 – station assembly machine has an ideal cycle time of 18 sec. The fraction defect rate each of the stations is 0.01 and the probability that the defect will jam is 0.5. When a breakdown occurs it takes 2 min for the system to put back into operation. Cost to operate the assembly machine is Rs 2000/hour. Other costs are ignored. Determine
i) Average production rate of all assemblies.
ii) Yield of good products.
iii) Average production rate of good products.
iv) Uptime efficiency.
v) Cost per unit. (10 Marks)
- 6 a. Define Process planning and explain the contents of a process plan. (06 Marks)
b. Explain Capacity planning , with a neat block diagram. (06 Marks)
c. List and explain the various inputs and outputs of a material requirement planning system. (08 Marks)
- 7 a. Explain CNC Milling centres. (10 Marks)
b. List and explain atleast five features and capabilities of a modern CNC machine control unit. (10 Marks)
- 8 a. With neat sketches, explain the various types of Robot configurations. (12 Marks)
b. Explain the Typical industrial and Non – industrial applications of robot. (08 Marks)
