

प्रज्ञानं ब्रह्म

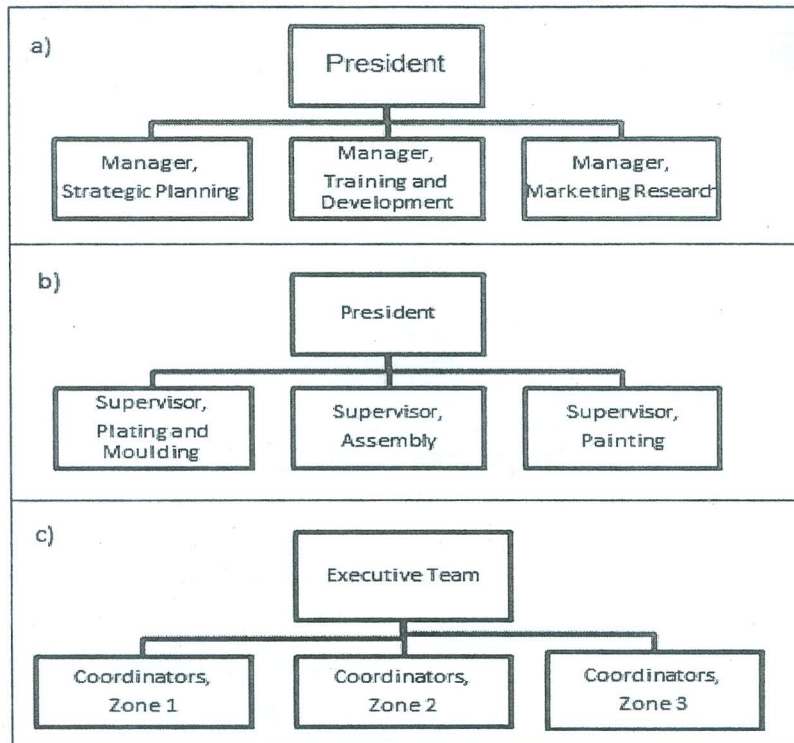


**Manipal**  
INSPIRED BY LIFE

## PART B

6) Identify the type of departmentation illustrated by each organization chart.

(1½)



7) What is span of control? Explain any three factors that affect the span of control.

(2)

8) Explain job description and job specification with a relevant example.

(2)

9) What is an induction programme? Explain briefly the two types of induction.

(1½)

10) A company that makes clutch discs for race cars had the cash flows shown below for one department. Calculate internal rate of return. Also comment on feasibility if MARR=10%.

(3)

Years	0	1	2	3	4	5
Cash flows (In Lakhs) Rs.	-65	30	84	10	-10	-12

11) To decrease the costs of operating a lock in a large river, a new system of operation is proposed. The system will cost Rs. 65,00,000 to design and build. It is estimated that it will have to be reworked every 10 years at a cost of Rs. 10,00,000. In addition, an expenditure of Rs. 5,00,000 will have to be made at the end of the fifth year for a new type of gear that will not be available until then. Annual operating costs are expected to be Rs.3,00,000 for the first 15 years and Rs. 3,50,000 a year thereafter. Compute the capitalized cost of perpetual service at  $i=8\%$ .

(3)

12) The estimated cost of a completely installed and ready-to-operate 40-kilowatt generator is \$30,000. Its annual maintenance costs are estimated at \$500. The energy that can be generated annually at full load is estimated to be 100,000 kilowatt-hours. If the value of the energy generated is \$0.08 per kilowatt-hour, determine the annual worth of this generator at full load capacity? Take the MARR to be 9% and the salvage value of the machine to be \$2,000 at the end of its estimated life of 15 years.

(2)