

### I. Product and its uses

Modern & attractive designs of mechanical toys are becoming more & more popular among the children; the sophisticated type of toys are the main attraction. Hence, the development of mechanical toys of attractive designs goes well with the market demand.

Toys could generally be classified into the following groups :

- (1) Wooden toys, (2) Plastic toys, (3) Mechanical toys.

The scheme deals with the group of mechanical toys and they depend upon the design that its purpose. They are sub-divided into :

- (a) Dummy toys, (b) Spring driven or weight driven (fly wheel toy), (c) Battery operated automatic toys.

**Dummy toys :** This group of toys which cannot be made to move of their own with any built in machines. These are basic toys suitable for young child, display and show pieces. These are either made from sheet metal or die-casting of aluminium and zinc alloys and plastic.

**Spring Driven Toys :** This group is universally product in large quantities and of different varieties. The basic gear mechanism which operates different types of toys can be essential the same for different toys. The only thing necessary is to create toy designs outer shape around the prime mechanism.

In this group a fly wheel instead of spring motive power can be provided.

**Automatic Toys :** Others could be provided a dry battery cell with a toy motor as motive power for the manufacture of mechanical toys. This scheme envisages the manufacture of mechanical toys of the above ranges.

### II. Market Potential

Mechanical toys industry in India is of recent origin. During the short span of time this industry has made rapid strided and has grown in its stature in the industrial development of consumer industries and a specially in the world of toys. With the rapid development in science and education, the demand for sophisticated mechanical toys is increasing. With the rising trend in the standard of living of people in urban and rural areas the demand for mechanical toys is growing at an accelerated rate.

### III. Production Target (Per annum)

This scheme envisages the manufacture of mechanical toys such as automatic toys namely

Drummer, Jet Plane, Lambretta Dolls, Trains, Aeroplanes, Joker, Cycles, Space Helicopters, Police Tricycles, Scooter, Ambulance Car, Money Cycle, Vijayanta Tank, Jeep, Chittaranjan Engineer at the rate of 1,20,000 dozens per annum of value Rs. 12,96,000.

### IV. Basis and Presumption

The basis for the calculation of the production capacity is normally on single shift basis on 75% efficiency.

The rate of interest in the scheme has been taken on the basis of 15% at an average, however this figure is likely to vary depending on the financial outlay of the project as well as location of the unit.

### V. Production Detail and Process of Manufacture

This could be divided into three major sections :

- (i) The body or outer shape.
- (ii) The prime Mechanism.
- (iii) Assembly.

Bodies for different toys could be either made from sheet metal e.g. PCRC and tin plates, plastic moulded materials generally injection moulded.

Spring operated Prime mechanism consists of a few gears operated by a spring and the motion is transmitted. Through wire links the other movements are obtained. Laminating round washer plates to form a small fly wheel can also be made by press work for hand operated toys.

Wheels and pinions are either blanked or made from extruded sections and turned on small capstan lathes. Generally the following process is involved.

- (1) Blanking and forming of sheets which are already offset colour printed profiles.
- (2) Wheels are blanked from PCRC sheets.
- (3) Pinions cone brass extruded sections and machine turned.
- (4) Fly wheel plates are blanked and pierced on press.
- (5) The spring mechanism assembly.
- (6) Assembly of the body and mechanism.
- (7) Packing.

### VI. Quality Standards & Specifications

There are no standards specifications. However, the quality of the printing and the construction of the toys and the materials used should ensure the performance. The quality of packing must be attractive and good.

**VII. Land & Building (Rented)**

(300 sq. meters) covered area @ 10/- sq. mtrs. Rs. 3,000/-

**VIII. Fixed Capital****Machinery & Equipment**

	Rs.
1. Treadle operated Grulletine shearing m/c. 4" blade, 16 SWG.	10,000
2. Bench type capstan lathe 28" Bed with collets etc.	10,000
3. Centre lathe ht. of centre 6-1/2" bed length 4"	12,500
4. Power press 30 ton cap	25,000
5. Hand press No. 6 2 Nos.	8,000
6. Jamd/ress No. 5 5 Nos.	15,000
7. Drilling m/c. 1/2" cap. (Bench type)	4,000
8. Double ended bench grinder 8" wheel dia	2,000
9. Shaper-gear 18" stroke	20,000
10. Horizontal milling m/c. bench type table length 24"	20,000
11. Wire straightening m/c.	5,000
12. Sproy painting equipment with compressor	5,000
13. Hand shearing machine	2,000
14. Dies, jigs & fixtures	62,500
15. Work benches, tables and racks etc.	10,000
16. Office equipment and workshop furniture	5,000
17. Installation charges @ 10%	15,000
	2,31,000

**IX. Working Capital (Per month)****Raw Materials and Bought and Components**

1. P.C.R.C. Sheet 500kg. @ 10/- p. kg.	5,000
2. Tin Plate 500 kg. @ 15/- p. kg.	7,500
3. Tin Printing charges	5,000
4. Brass extruded charges for die cast toy body pinion sections 200 kg. @ 50/- p.kg.	10,000
5. Spring strip (steel) hardened to ribbon rolls 200 kg.	3,000
6. M.S. Wire 20 kg.	1,400
7. Rubber moulded wheels	5,000
8. Small screws, rivets	1,000
9. Paints, chemicals	4,000
10. Plastic moulded toy bodies	5,000
11. Lubricants, cutting oil, acids, cutting tools etc.	1,000
	47,900

**X. Staff & Labour (Per month)**

1. Manager . . . . . 1	1,500
2. Foreman . . . . . 1	1,000
3. Ministerial staff . . . . . 3@800/each	2,400
4. Peon . . . . . 1	450
5. Chowkidar . . . . . 1	450

**B. Technical & Others**

1. Skilled operators/fitters . . . 6@900/each	5,400
2. Semi skilled workers . . . 3@500/each	1,500
3. Helpers . . . . . 1	450
4. Packer . . . . . 1	450
	13,600
Perquisites @ 15%	2,042
	15,642

**XI. Utility (Per month)**

	Rs.
1. Power . . . . .	1,000
2. Water . . . . .	100
	1,100

**XII Other Expenses**

1. Maintenance & repair . . . . .	500
2. Printing, postage . . . . .	300
3. Consumable stores . . . . .	500
4. Advertisement and publicity . . . . .	5,000
5. Packing expenses . . . . .	5,000
6. Transportation charges . . . . .	1,500
7. Other expenses . . . . .	1,000
8. Rent . . . . .	3,000
	16,800

**XIII. Working Capital (Per month)**

1. Raw Material . . . . .	47,900
2. Personnel . . . . .	15,642
3. Other expenses . . . . .	16,800
4. Utility . . . . .	1,100
	81,442

**XIV. Capital Investment**

1. Machinery & equipment . . . . .	2,31,000
2. Working capital for 3 months . . . . .	2,44,325
	4,75,325

**XV. Cost of Production (Per annum)**

1. Recurring expenses . . . . .	9,77,304
2. Dep. on machines @ 20% . . . . .	23,000
3. Interest on capital investment @ 15% . . . . .	71,298
	10,71,602

**XVI. Sales Proceeds**

1. By sale of 9,600 dozens mechanical tuous such as toy cars, toy aeroplanes, helicopters, moving cycles etc. @ Rs. 100 (average)	9,60,000
2. By sale of 2,400 dozens automatic toys such as comet train, vijyant tank, police deptt. car and car work dolls, drums, symbol jokers @ Rs. 140 per dozen (average)	3,36,000
	12,96,000

**XVII. Profitability (Per annum)**

Sales—cost of production=profit . . . . .	Rs. 2,24,398
Percentage of profit on sales . . . . .	17.3%
Percentage of profit on return . . . . .	47%

**XVIII. Break Even Point**

	Rs.
1. Rent . . . . .	48,000
2. Personnel . . . . .	75,081
3. Over head . . . . .	85,920
4. D.P. . . . .	23,000
5. Interest . . . . .	71,298
	2,55,299