ABOUT THE COMPANY

Maruti Suzuki India Limited formerly known as Maruti Udyog Limited, is an automobile manufacturer in India. It is a subsidiary of Japanese automobile and motorcycle manufacturer Suzuki. As of November 2012, it had a market share of 37% of the Indian passenger car markets. Maruti Suzuki manufactures and sells a complete range of cars from the entry level Maruti 800 (discontinued), Alto, to the hatchback Ritz, Celerio, A-Star, Swift, Wagon R, Zen and sedans DZire, Ciaz, Kizashi and SX4, in the 'C' segment Eeco, Omni, Multi Purpose vehicle Suzuki Ertiga and Sports Utility vehicle Grand Vitara.

The company's headquarters are in New Delhi.

CEO of the company: Kenichi Ayukawa
CHAIRMAN of the Company: R. C. Bhargava

HISTORY OF THE COMPANY

In 1970, a private limited company named 'Maruti technical services private limited' (MTSPL) was launched on November 16, 1970. The stated purpose of this company was to provide technical know-how for the design, manufacture and assembly of "a wholly indigenous motor car". In June 1971, a company called 'Maruti limited' was incorporated under the Companies Act and Sanjay Gandhi became its first managing director.

Maruti Udyog Limited was established in February 1981, though the actual production commenced only in 1983. It started with Maruti 800, based on the Suzuki Alto kei car which at the time was the only modern car available in India. Its only competitors were Hindustan Ambassador and Premier Padmini.

In 1982, a license & Joint Venture Agreement (JVA) was signed between Maruti Udyog Ltd. and Suzuki of Japan. At first, Maruti Suzuki was mainly an importer of cars.
Finally, in 1983, the Maruti 800 is released. This 796 cc hatchback is based on the SS80 Suzuki Alto and is India’s first affordable car.

**PRESENT SCENARIO**

<table>
<thead>
<tr>
<th>Revenue</th>
<th>₹43272 crore (US$6.7 billion)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net income</td>
<td>₹2469 crore (US$390 million)</td>
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Today, Maruti Suzuki alone makes 1.5 million Maruti Suzuki family cars every year. *That’s one car every 12 seconds.*

**ABOUT THE RECRUITMENT DRIVE**

Maruti Suzuki India Limited Placement Test is a well competitive written test which is conducted to examine the basic knowledge of candidates in the core field.

The test consists of technical questions covering the main fields of Mechanical & Engineering. There will be 60 questions which have to be answered within 30 minutes.

The paper will be purely technical. There will be a screening in this stage. Candidates who will be technically strong and have scored above the cut off marks in the technical test will be able to attend the interview.

However, there may be some aptitude questions too in the written round, as per survey carried out in some of the colleges in India.

Candidates have to well prepare to face the technical questions from the interviewers. Aspirants should answer the questions confidently which have been asked by the interviewers so therefore aspirants have to go through the technical subjects.

**Sample Placement Paper**

**Aptitude Questions**
1. A vessel is filled with liquid, 3 parts of which are water and 5 parts of syrup. How much of the mixture must be drawn off and replaced with water so that the mixture may be half water and half syrup?
A. 1/3  
B. 1/4  
C. 1/5  
D. 1/7  

Ans: C

[Suppose the vessel initially contains 8 litres of liquid. Let x litres of this liquid be replaced with water.

Quantity of water in new mixture = (3 + 3x/8 + x) litres,
Quantity of syrup in new mixture = (5 + 5x/8) litres.
(3 + 3x/8 + x) = (5 + 5x/8) = 5x + 24 = 40 5x
=> 10x = 16 => x = 8/5
So, part of the mixture replaced = (8/5 x 1/8) = 1/5.]

2. The breadth of a rectangular field is 60% of its length. If the perimeter of the field is 800 m. What is the area of the field?
A. 18750 sq.m  
B. 37500 sq.m  
C. 40000 sq.m  
D. 48000 sq.m  

Ans: B

[Ex: So length = 250 m; breadth = 150 m 
Area = (250 x 150)m² 
= 37500 m²]

3. A batsman makes a score of 87 runs in the 17th inning and thus increases his averages by 3. Find his average after 17th inning?
A. 19  
B. 29  
C. 39  
D. 49
4. The banker's discount on Rs. 1800 at 12% per annum is equal to the true
discount on Rs.1872 for the same time at the same rate. Find the time?
A. 3 months
B. 4 months
C. 5 months
D. 6 months

Ans:B

EX:S.I on Rs.1800 = T.D on Rs.1872.
P.W on Rs.1872 is Rs.1800.
Rs.72 is S.I on Rs. 1800 at 12%.
Time =\[\frac{100 \times 72}{12 \times 1800}\]
= 1/3 year
= 4 months.

5. A boat can travel with a speed of 13 km / hr in still water. If the speed of
the stream is 4 km / hr. find the time taken by the boat to go 68 km
downstream?
A. 2 hours
B. 3 hours
C. 4 hours
D. 5 hours

Ans:C

Ex:Speed Downstream= (13 + 4) km/hr
= 17 km/hr.
Time taken to travel 68 km downstream =(68 / 17)hrs
= 4 hrs.

6. An accurate clock shows 8 o'clock in the morning. Through how many
degrees will the hour hand rotate when the clock shows 2 o'clock in the
afternoon?
A. 144°
B. 150°
C. 168°
D. 180°
Ans:D

**Ex:** Angle traced by hour hand in 5 hrs 10 min. = \((360/12 \times 6)° = 180°.\)

7. Simple interest on a certain sum of money for 3 years at 8% per annum is half the compound interest on Rs. 4000 for 2 years at 10% per annum. The sum placed on simple interest is
A. Rs. 1550
B. Rs. 1650
C. Rs. 1750
D. Rs. 2000

Ans:C

**Ex:**
C.I. = Rs.\([4000 \times (1+10/100)^2]4000\]
Rs.\([4000 \times 11/10 \times 11/104000]=Rs. 940.\]
Sum = Rs. \([420 \times 100 /3 \times 8] = Rs. 1750.\]

8. \((7.5 \times 7.5 + 3.75 + 2.5 \times 2.5)\) is equal to
A. 30
B. 60
C. 80
D. 100

Ans:D

**Ex:**
Given expression = \((7.5 \times 7.5 + 2 \times 7.5 \times 2.5 + 2.5 \times 2.5)^2\)
= \((a^2 + 2ab + b^2)\)
= \((a + b)^2\)
= \((7.5 + 2.5)^2\)
= 10^2
= 100.
9. The angle of elevation of the sun, when the length of the shadow of a tree is \(\sqrt{3}\) times the height of the tree
A. 30°
B. 45°
C. 60°
D. 90°

Ans: A

**EX:** Let \(AB\) be the tree and \(AC\) be its shadow.

Then, \(<\ ABC= \theta\).
Then, \(AC/AB= \sqrt{3}\)
\(\cot \theta = \sqrt{3}\)
\(\theta = 30°\)

10. If \(\log 2 = 0.30103\), the number of digits in \(520\) is
A. 14
B. 16
C. 18
D. 25

Ans: A

**Ex:** \(\log 5 = 20 \log 5\)
\(=20 \times [\log(10/2)]\)
\(=20 (\log 10 \log 2)\)
\(=20 (1 \ 0.3010)\)
\(=20\times0.6990\)
\(=13.9800\).

**Characteristics = 13.**
**Hence, the number of digits in \(\log 5\) is 14.**

11. The difference between the place values of 7 and 3 in the prime number 527435 is
A. 4
B. 5
C. 45
D. 6970

Ans:D

Ex: (place value of 7)(place value of 3)
= (7000 30)
= 6970.

12. A started a business with Rs.21,000 and is joined afterwards by B with Rs.36,000. After how many months did B join if the profits at the end of the year are divided equally?
A. 3
B. 4
C. 5
D. 6

Ans:C

Ex: Suppose B joined after x months.
Then, 21000×12=36000×(12-x)
⇒36x=180
⇒ x = 5.

13. A woman introduces a man as the son of the brother of her mother. How is the man, related to the woman?
A. Nephew
B. Son
C. Cousin
D. Grandson

Ans:C

Ex: Brother of mother>uncle;
uncle's son >cousin

14. The year next to 1990 will have the same calendar as that of the year 1990?
A. 1995  
B. 1997  
C. 1996  
D. 1992  

Ans:C

Ex: The year 1990 has 365 days, year 1991 has 365 days, i.e. 1 odd day, year 1992 has 366 days, i.e. 2 odd days. Therefore the sum odd days calculated from year 1990 to 1995 is (1+2+1+1+1) = 7 odd days.

15. If ROSE is coded as 6821, CHAIR is coded as 73456 and PREACH is coded as 961473, what will be the code for SEARCH?
A. 246173  
B. 214673  
C. 214763  
D. 216473  

Ans:B

Ex: So, in SEARCH, S is coded as 2, E as 1, A as 4, R as 6, C as 7, H as 3. Thus, the code for SEARCH is 214673.

16. There are five different houses, A to E in a row. A is to the right of B and E is to the left of C and right of A. B is to the right of D. Which of the houses is in the middle?
A. A  
B. C  
C. D  
D. E  
E. F

Ans:A

Ex: B is to the right of D. A is to the right of B. E is to the right A and left of C. So the order is D, B, A, E, C. Clearly A is in the middle.
17. A man sitting in a train which is travelling at 50 kmph observes that a goods train, travelling in opposite direction, takes 9 seconds to pass him. If the goods train is 280 m long, find its speed.
A. 52 kmph.
B. 62 kmph.
C. 72 kmph.
D. 80 kmph.
Ans:B

Ex: Relative Speed = \( \frac{280}{9} \) m/sec
= \( \frac{280 \times 18}{9 \times 5} \) kmph.
= 112 kmph.
Speed of the train = (112 - 50) kmph
= 62 kmph.

18. Two students appeared at an examination. One of them secured 9 marks more than the other and his marks was 56% of the sum of their marks. The marks obtained by them are
A. 39, 30
B. 41, 32
C. 42, 33
D. 43, 34
Ans:C

Ex: Let their marks be \((x+9)\) and \(x\).
Then, \(x+9 = \frac{56}{100}(x + 9 + x)\)
\(\Rightarrow 25(x+9)\)
\(\Rightarrow 14 (2x + 9)\)
\(\Rightarrow 3x = 99\)
\(\Rightarrow x = 33.\)
So, their marks are 42 and 33.

19. A cistern can be filled by a tap in 4 hours while it can be emptied by another tap in 9 hours. If both the taps are opened simultaneously, then after how much time will the cistern get filled?
A. 4.5 hrs
B. 5 hrs
C. 6.5 hrs
D. 7.2 hrs
Ans:D

**Ex:** Net part filled in 1 hour = \( \frac{1}{4} + \frac{1}{9} \)
= \( \frac{5}{36} \).
Therefore, the cistern will be filled in \( \frac{36}{5} \) hrs i.e, 7.2 hrs.

20. The speed of a car increases by 2 kms after every one hour. If the distance travelling in the first one hour was 35 kms, what was the total distance travelled in 12 hours?
A. 456 kms
B. 482 kms
C. 552 kms
D. 556 kms

Ans:C

**Ex:**
Total distance travelled in 12 hours =\( (35+37+39+\ldots\ldots\text{upto 12 terms}) \)
This is an A.P with first term, \( a=35 \), number of terms, \( n=12 \), \( d=2 \).
Required distance = \( \frac{12}{2}[2 \times 35+(121)\times 2] \)
= \( 6(70+23) \)
= 552 kms.

**TECHNICAL QUESTIONS**

1. The Laplace transform of an impulse function is
   A) 1
   B) \( \frac{1}{s} \)
   C) \( \frac{1}{(s \times s)} \)
   D) 0
   Ans. A

2. The effective area of isotropic radiator is
   A) \( \frac{L}{4P} \)
   B) \( \frac{4P}{L} \)
   C) \( \frac{(L \times L)}{4P} \)
   D) \( \frac{4P}{L \times L} \)
3. The Q factor of a coil is can be given as

A) \( \frac{wL}{R} \)
B) RC
C) \( \frac{\sqrt{C}}{L} \)
D) \( \frac{\sqrt{L}}{C} \)

Ans. A

4. The VSWR of a transmission line is 4, its reflection coefficient is

A) 0.4
B) 0.6
C) 2
D) 4

Ans. B

5. If the load impedance connected to a transmission line of characteristic impedance 50 ohms is 150 ohms, its reflection coefficient is

A) 0.5
B) 2
C) -2
D) -0.5

Ans. A

6. Clipper circuits are used to obtain any one of the following waveforms

A) Sharper
B) Rectified
C) Fast Rising
D) Smaller Amplitude

Ans. D

7. A pulse amplifier is basically an amplifier with
8. Linearity of time base waveforms can be improved by using
A) Larger time constant
B) High gain
C) Larger value components
D) Larger power supply voltages
Ans. A

9. For harmonic generation the amplifier used is
A) Audio Amplifier
B) Class-A Amplifier
C) RC Amplifier
D) Class-C Turned Amplifier
Ans. D

10. Zener diodes semiconductors are
A) Lightly Doped
B) Heavily Doped
C) Medium Doped
D) Not at all doped
Ans. B

11. Tool life of the cutting tool is most affected by
A) Cutting speed
B) Tool geometry
C) Cutting feed and depth
D) Microstructure of material being cut
E) Not using coolant and lubricant

Ans. A

12. A feeler gauge is used to check

A) Radius
B) Screw pitch
C) Surface roughness
D) Unsymmetrical shape
E) Thickness of clearance

Ans. E

13. Forming operation which does not involve rotation of work piece is

A) Spinning
B) Thread rolling
C) Ring rolling
D) Upsetting

Ans. D

14. Greater forging capacity is achieved with

A) Mechanical press
B) Power hammer
C) Hydraulic press
D) None of them

Ans. C

SET 2

1. The purpose of jigs and fixtures are to
a. Increased production rate
b. Increased machining accuracy
c. Facilitate interchangeable manufacturing
d. Enable employ less skilled operators
2. Metal in machining operation is removed by
   a. Tearing chips
   b. Distortion of metal
   c. Shearing the metal across a zone
   d. Cutting the metal across a zone
   e. Pushing the metal with tool

   Ans:c

3. Ductility of material can be defined as
   a. Ability to undergo large permanent deformation in compression
   b. Ability to recover its original form
   c. Ability to undergo large permanent deformation in tension
   d. All of the above
   e. None of the above

   Ans:a

4. Inconel is an alloy of
   a. Nickel, chromium and iron
   b. Nickel and copper
   c. Nickel and chromium
   d. Nickel and zinc
   e. Nickel and lead

   Ans:a

5. Casting defects caused by the molten metal is
   a) Blow holes
   b) Swell
   c) Scab
   d) All of the above

   Ans.: d
6. Forming operation which does not involve rotation of work piece is
a) Spinning
b) Thread rolling
c) Ring rolling
d) Upsetting

Ans.: d

7. Greater forging capacity is achieved with
a) Mechanical press
b) Power hammer
c) Hydraulic press
d) None of them

Ans.: c

8. Which of the following welding process uses consumable electrodes?
a) TIG
b) MIG
c) Thermit
d) Laser

Ans.: b

9. The crystal structure of alpha iron
a) BCC
b) FCC
c) HCP
d) Cubic

Ans.: a

10. Severe quenching can cause
a) Blow holes
b) Warping
c) Inclusions
d) None of them

Ans.: b
11. Glass bead peening on components done to
   a) Improve creep strength
   b) Improve fatigue strength
   c) Improve finish
   d) Impart further coating

   Ans.: b

12. Trajectory of a robot mean :
   a) Path traced by the end effectors
   b) Kinematics of Robot
   c) Robot joints
   d) Robot programming

   Ans: a

13. Rayleigh’s method of computing the fundamental natural frequency is based on
   a) Conservation of energy
   b) Conservation of momentum
   c) Conservation of masses
   d) Laws of statics

   Ans: a

TECHNICAL INTERVIEW QUESTIONS

1. How to calculate VAT?
2. How can calculate the load of transformer?
3. How can we select the rating of Load break switch that is connected to the primary protection of 200 kva 11kv/415v distribution transformer??
4. Name the financial institutions which have introduced the ‘Know Your Customer’ Scheme?
5. What are the safety devices on Cumins Diesel Generators from 500 kva to 1500 kva?
6. Why do we use reduction gear box to reduce turbine high rpm to 1500 rpm in small plant?
7. How to calculate differ tax?
8. What is the use of GMV in turbine?
9. If bill has came for payment for car repair, purpose in bill mentioned as: total parts value is 21000 and labour 13000 with total of 34000 in that on parts VAT is included so we have to deduct TDS of 194c @2% on full amount of 34000 or not (bill is single for whole 34000 purpose?)

10. What is centre height in CNC lathe?

HR INTERVIEW QUESTIONS

1. Tell me about yourself.
2. What are your strengths?
3. What are your weaknesses?
4. Who was your favourite manager and why?
5. What kind of personality do you work best with and why?
6. Why do you want this job?
7. Where would you like to be in your career five years from now?
8. Tell me about your proudest achievement.
9. If you were at a business lunch and you ordered a rare steak and they brought it to you well done, what would you do?
10. If I were to give you this salary you requested but let you write your job description for the next year, what would it say?
11. Why is there fuzz on a tennis ball?
12. How would you go about establishing your credibility quickly with the team?
13. There's no right or wrong answer, but if you could be anywhere in the world right now, where would you be?
14. How would you feel about working for someone who knows less than you?
15. Was there a person in your career who really made a difference?
16. What's your ideal company?
17. What attracted you to this company?
18. What are you most proud of?
19. What are you looking for in terms of career development?
20. What do you look for in terms of culture structured or entrepreneurial?
21. What do you like to do?
22. Give examples of ideas you've had or implemented.
23. What are your lifelong dreams?
24. What do you ultimately want to become?
25. How would you describe your work style?
26. What kind of car do you drive?
27. Tell me about a time where you had to deal with conflict on the job.
28. What's the last book you read?
29. What magazines do you subscribe to?
30. What would be your ideal working situation?
31. Why should we hire you?
32. What did you like least about your last job?
33. What do you think of your previous boss?
34. How do you think I rate as an interviewer?
35. Do you have any questions for me?
36. When were you most satisfied in your job?
37. What can you do for us that other candidates can't?
38. What are three positive things your last boss would say about you?
39. What negative thing would your last boss say about you?
40. If you were an animal, which one would you want to be?
41. What salary are you seeking?
42. What's your salary history?
43. Do you have plans to have children in the near future?
44. What were the responsibilities of your last position?
45. What do you know about this industry?
46. What do you know about our company?
47. How long will it take for you to make a significant contribution?
48. Are you willing to relocate?
49. What was the last project you headed up, and what was its outcome?
50. What kind of goals would you have in mind if you got this job?
51. Give me an example of a time that you felt you went above and beyond the call of duty at work.

That’s All.

All the Best.

Souvik Majumder

Campus Placement Tricks