

M&M aptitudes consisting of three sections:

1) Pure Technical (Strength of Materials, Engineering Drawing (Sectional Views), Production Process ,I.C.Engines)

2) Farm Sector

- This is the most trickiest one as it consist of questions requiring general aptitude about cars, their logos, their origin(country), recent trends in automobiles, questions regarding rpm of a tractor, irrigation setups in India( Yes, they do ask you that)..

3) General Aptitude (Quant,Logic, Data Interpretation and Verbal)

1. Ramu does a piece of work in 8 days. Raju works trice as fast as Ramu while Roham works five times faster than Ramu. How many days would it take all the three to complete the work together?
2. Find the value of  $(0.75 * 0.75 * 0.75 - 0.001) / (0.75 * 0.75 - 0.075 + 0.01)$
3. A train takes 7 hours to travel upwards. On the return journey it manages the distance in 5 hours by increaseing the speed by 12kmph. What is the total distance travelled by the train?
4. An accountant divides the total by 6 instead of multiplying it by 8. What is the percentage of error that creeps into the value?
5. Shastri buys 20 lt of petrol for Rs.40 a litre and mixes it with 10% kerosine (Rs.20 a litre) and sells it for Rs.40 a litre. What is the total gain he makes?
6. Pipe A can fill a tank in 30 mins and Pipe B can fill it in 28 mins.If 3/4th of the tank is filled by Pipe B alone and both are opened, how much time is required by both the pipes to fill the tank completely?
7. A shop keeper earns a profit of 25% on a pair of sports shoes if he gives a discount of 25%. What % would be his profit if he gives a discount of 10%?
8.  $x\%$  of  $y$  is  $y\%$  of?  
A.  $x$   
B.  $2X$   
C.  $y$   
D.  $2y$
9. A certain number of men can finish a piece of work in 10 days. If however there were 10 men less it will take 10 days more for the work to be finished. How many men were there originally?
10. Vijay has deposited a sum with a bank that gives simple interest. He expects that he would get back Rs.1120/- in 4 years or Rs.1200/- in 5 years. What was the sum that Vijay originally deposited?
11. A private banker offers an anually compounded interest scheme that triples an amount in 3 years. In how many years would the amount become 9 times if deposited with this banker?
12. Two ships move in the same direction at 50 kmph and 32 kmph respectively. A man in the slower ship observes the 15 seconds elapse before the faster ship completely passes by him. What is the length of faster ship?
13. How may holes of 5mm x 8mm can be made on a metal sheet of 1 metre square provided that there should be a gap of 1mm between each square?
14. If the price of cooking gas increases by 20%, what % of the consumption of gas be reduced by a hotel owner so that the expenditure on gas remains the same?
15. John spends 1/20th of his salary on schooling of this children, 1/10th on household expenses, 1/40th for his car and deposits the rest in a bank. What is the salary of the man if he deposits Rs. 50000 a month in the bank?
16. The population of an island increases at 4% per anuam. There is an additional annual increase of 1% of the population due to tourists who eventually settle in the island. Find the % increase in population after 2 years?
17. The ratio of the number of boys and girls in a school is 3:2. Out of these 10% of the boys and 25% of girls are scholarship holders. What is the % of students who are not scholarship holders?

## SUMMARY OF EXPERIENCES

The group activities were very rigorous. Having a good knowledge in the core subjects and about automobiles, I didn't find the aptitude and interview difficult at all.

## SUGGESTIONS TO JUNIORS

M & M is aggressively investing in R & D and hence was offering a lot of posts in R&D and even other functions. Hone your communication skills especially in group activities. All the candidates in the interview were asked about their projects/ training/ internship etc. So be prepared for questions on these. Review your second year subjects.

### MAHINDRA Aptitude Test

1. A cricketer played 80 innings and scored an average of 99 runs. His score in the last inning was zero run. To have an average of 100 at the end, his score in the last innings should have been



- 60
- 80
- 10
- 1
- None of these

2. A man spends an average of Rs. 1,694.70 per month for the first 7 months and Rs.1,810.50 per month for the next 5 months. His monthly salary if he saves Rs. 3,084.60 during the whole year is



- 1000
- 2000
- 2400
- 3000
- None of these

3. A and B undertake to do a piece of work for Rs. 2,200. A alone can do it in 8 days, while B can do it in 6 days. With the help of C, they complete it in 3 days. Find C's share.



- 150
- 275
- 245
- 175
- none Of these

4. By selling an article at 80% of its marked price, a trader makes a loss of 10%. What will be the profit percentage if he sells it at 95% of its marked price?



- 5.9
- 12.5
- 6.9
- 5
- None of these

5. By selling an umbrella for Rs. 30, a shopkeeper gains 20%. During a clearance sale, the shopkeeper allows a discount of 10% of the marked price. His gain during the sale season is



- 8
- 9
- 7
- 7.5
- None of these

6. From a vessel containing 100 ltr. of wine, 10 ltr. are drawn out and an equal amount of water is added. From the mixture, 10 ltr. is again drawn out and same quantity of water is added. What is the final ratio of wine and water?



- 91 : 9

- 81 : 19
- 80 : 20
- 90 : 10
- None of these

7. From each of two given numbers, half the smaller number is subtracted. After such subtraction, the larger number is 4 times as large as the smaller number. What is the ratio of the numbers?



- 4 : 1
- 4 : 5
- 5 : 2
- 1 : 4
- None of these

8. Men, women and children are employed to do a work in the proportion of 3 : 2 : 1 and their wages per person are in the proportion of 5 : 3 : 2. When 90 men are employed, total daily wages of all amounts to Rs. 10,350. Find the daily wage of a man.



- 115
- 75
- 45
- 57.90
- None of these

9. The population of a town is 3,11,250. The ratio between women and men is 43 : 40. If there are 24% literate among men and 8% literate among women, the total number of literate persons in the town is



- 56,800
- 99,600
- 41,800
- 48,900

- None of these

10. In an examination, 52% of the candidates failed in English and 43% failed in Mathematics. If 17% failed in both the subjects, then the percentage of candidates, who passed in both the subjects, was



- 25
- 22
- 23
- 21
- None of The abo

### MAHINDRA Technical Questions

1. Which motor cycle has maximum power rating?



- Jawa
- Rajdoot
- Yezdi
- Yamah

2. Which one of the following is not the trade name of tractor in India ?



- HMT
- Escort
- Ford
- Standard

**3. Connecting rods are generally of the following form**



- Forged I section
- Forged round section
- Cast iron triangular section
- Cast iron square section

**4. The starter motor is driven by**



- chain drive
- Gear drive
- Flat belt drive
- P.I.V drive

**5. Which vehicle is generally provided with four wheel drive**



- Ambassador car
- standard wagon
- matador
- Jeep

**6. Commonly used antifreeze solution in automobiles is**



- Glycol

- Carbon disulphide
- ammonium chloride
- Freon 12

<http://cpt.hitbullseye.com/Mahindra-technical-questions.php>

**DIRECTIONS for the question 1 to 3:** Following questions are based on five words given below:

MET                      ARK                      MOB                      SKI                      URN  
(The new words formed after performing the mentioned operations may or may not necessarily be meaningful English words)

**1. If the second alphabet in each of the words is changed to the previous alphabet in the English alphabetical order, how many words having no vowels will be formed?**



- None
- One
- Two
- Three
- Four

**2. If in each of the words, all the alphabets are arranged in English alphabetical order within the word, how many words will begin with a vowel ?**



- None
- One
- Two
- Three
- More than 3

**3. If the given words are arranged in the order as they would appear in a dictionary from left to right, which of the following will be second from the right ?**



- MET
- ARK
- MOB
- SKI
- URN

**DIRECTIONS for the question 4-5:** In each question below are two/three statements followed by two conclusions numbered I and II. You have to take the two/three given statements to be true even if they seem to be at variance from commonly known facts and then decide which of the given conclusions logically follows from the given statements disregarding commonly known facts.  
Give answer (1) if only conclusion I follows.  
Give answer (2) if only conclusion II follows.  
Give answer (3) if either conclusion I or conclusion II follows.  
Give answer (4) if neither conclusion I nor conclusion II follows.  
Give answer (5) if both conclusion I and conclusion II follows.

**4. Statements: All bottles are glasses. No cup is a glass.**  
**Conclusions: I. No bottle is a cup**  
**II. Atleast some glasses are bottles**



- only conclusion I follows.
- only conclusion II follows.
- either conclusion I or conclusion II follows.
- neither conclusion I nor conclusion II follows.
- both conclusion I and conclusion II follows.

**5. Statements: All windows are doors. All entrances are windows. No gate is a door.**  
**Conclusions: I. Atleast some windows are gates**  
**II. No gate is an entrance**





- only conclusion I follows.
- only conclusion II follows.
- either conclusion I or conclusion II follows.
- neither conclusion I nor conclusion II follows.
- both conclusion I and conclusion II follows.

**DIRECTIONS for the question 6-7:** Study the following information to answer the given questions:

Eight people are sitting in two parallel rows containing four people each, in such a way that there is an equal distance between adjacent persons. In row 1- A, B, C and D are seated (but not necessarily in the same order) and all of them are facing south. In row 2 - E, F, G and H are seated (but not necessarily in the same order) and all of them are facing north. Therefore, in the given seating arrangement each member seated in a row faces another member of the other row.

G sits second to right of E. The one who faces E sits to the immediate right of C. A faces the immediate neighbour of E. H sits to immediate left of the person who faces D. H does not sit at an extreme end of the line.

**6. Who amongst the following faces A ?**



- E
- F
- G
- H
- Cannot be determined

**7. Who amongst the following faces the person who sits exactly between G and E ?**



- A
- B
- C
- D

- Cant Determine

**DIRECTIONS for the question 8-9:** Solve the following question and mark the best possible option.

Give answer (1) if only conclusion I follows.

Give answer (2) if only conclusion II follows.

Give answer (3) if either conclusion I or conclusion II follows.

Give answer (4) if neither conclusion I nor conclusion II follows.

Give answer (5) if both conclusion I and conclusion II follows.

**8. Statements:**  $G \leq F = L \leq J; J \leq K = H$

**Conclusions:** I.  $H = G$  II.  $G < H$



- only conclusion I follows.
- only conclusion II follows.
- either conclusion I or conclusion II follows.
- neither conclusion I nor conclusion II follows.
- both conclusion I and conclusion II follows.

**9. Statements:**  $P < R < S < T > U$

**Conclusions:** I.  $U < R$  II.  $T > P$



- only conclusion I follows.
- only conclusion II follows.
- either conclusion I or conclusion II follows.
- neither conclusion I nor conclusion II follows.
- both conclusion I and conclusion II follows.

**10. In a certain code PAUSE is written as OBVTD and SHIFT is written as RUGS. How will THINK be written in the same code?**



- UGHML
- SIJOJ
- SILOJ
- SIJQJ
- SIJOL

## Mechanical Engineering

- Explain bending moment?
- Differentiate between a shaper machine and a planner machine
- Explain the importance of Thermodynamics in the field of Mechanical Engineering?
- What is the nomenclature of a 6203-ZZ bearing?
- Give the full form of SCADA, DCS and HMI.
- How does the failing of Knuckle pin occur?
- What is the heat rate of a power plant?
- Which of these have a higher efficiency: Diesel engines or Petrol engines?
- What are the points in the stress/strain curve for steel?
- What is ductile-brittle transition temperature?
- Differentiate between Relay and Conductor?
- Differentiate between shaper and planner?
- What is the immediate superclass of Menu?
- State the laws of conservation of energy.
- What is a gear box and what are its applications?
- What is Carnot engine?
- Which formula forms a link between thermodynamics and electrochemistry?
- How will you calculate the tonnage of Mechanical Press?
- What is maximum continuous rating?
- What is the difference between Critical speed and Whirling speed?
- What is plant load factor?
- What is hard material cast iron or mild steel?
- How would you find the amount of natural gas required to produce 1 KWhr of energy?
- What is annealing?
- How do you measure temperature in a web bulb thermometer?
- What is the purpose of governor in automobile?
- What is bearing stress?
- What is the difference between SCADA and BMS?

- Explain Otto cycle.
- What is the efficiency of v-type four stroke diesel engines?
- Is the boiler a closed system?
- How many joules are there in one BTU?
- How many laws of Thermodynamics are there?
- What is the consequence of not maintaining hydrogen (or air) pressure in generator casing at a value above atmospheric when seal oil system is in service?
- Explain the effect on the basis of which the cricket ball swings.
- What is the method for testing Light Emitting Diode?
- What is the function of EGR valve?
- In a heat exchanger, if I have given pressure on tube side, can I perform hydro test of shell side simultaneously? Why?
- Which is the hardest compound known?
- What is gear ratio?
- Define torque.
- What is PS?
- What is the mechanical advantage of a double pulley?
- What is Hess law?
- How to control temperature (Electronics method)?
- What is a Newtonian fluid?
- What is the significance of Torque (in N-m) given in the engine specification?
- How to make operations by pressing a single push button (at least for 2 operations)?
- What are the materials used for sliding wear pad?
- Explain the second law of thermodynamics.
- What is the difference between a gas turbine and a steam turbine?
- What is knurling?
- What is OEE?
- Define Reynolds number.
- What is the difference between a blower and a fan?
- What is extruded Aluminum?

**Mahindra & Mahindra** is core company headquartered in Mumbai, India. It is one of the largest automobile manufacturers in India. The company works in Automotive, Farm equipment & IT businesses.  
Selection Process:

The company conducts recruitment process every year to select new candidates. The selection process of the company consists of 3 rounds. These rounds are as follows:

- Written Exam
- Technical Interview
- HR Interview

Academic Criteria:

- Minimum 55 percent aggregate in Class X and XII and 60 percent in Graduation.
- Gap of maximum 1 year permissible in the entire academic career and that too only between any two courses.
- No loss of year(i.e. no year gap) due to failure to pass any exam.
- Branches allowed- Computer Science, Information Technology, Electronics.

Pattern of Written Exam:

The [Mahindra & Mahindra Test Pattern](#) is divided in the following sub-sections:

Testing Areas
Number of Questions
Quantitative Ability & Reasoning
70
Verbal Ability
100
<b>Total</b>
<b>170</b>

The total time allotted to the written exam is different for different sections. There is no negative marking in the paper.

- **Quantitative Ability & Reasoning** section consists of questions from the topics like algebra, time & work, time, speed & distance, arithmetic, percentages, profit & loss, geometry, etc. This section is of moderate level. Also, the section consists of data interpretation and data sufficiency questions. These include pie charts, line graphs, blood relations, coding, etc. The time allotted for this section is 40 minutes.
- **Verbal Ability** section consists of questions from tenses, subject verb agreement, prepositions, sentence correction, confusable etc. The section also consists of reading comprehension passages. The time limit allotted to this section is 40 minutes only.

Overall the level of the paper is moderate. Only those candidates who clear the written exam will qualify for the next round.