**The paper included: 150 questions.**

**Negative marking: 1/4th**

**Total questions: 150 duration, 2.0 hours**

**Technical: 100**

Aptitude+English+Gen awareness: 50 questions.

Technical was quite easy and the questions mainly came from  R S Khurmi book. They mainly concentrated on material technical, SOM, thermal, stream and boilers, heat transfer, machine design, workshop tech, prod Engg, Industrial management, industrial safty.

Mechanical 100 questions are as follow.

1) The resultant of parrallogram?   
Ans: R=(P^2+Q^2+2PQCOSQ)^.5

2) Centre of gravity of hemi sphere?   
Ans: 3r/8

3) Time of flight of a projectile?

4) Modulus of elasticity for a tapering section?

5) For what angle does maximum shear stress on a body exist when body is subjected to stress in one plain?

6) If a cantilever beam is loaded wid point load at its free end when the load increases at which section it will break first?

7) mx.torsion on a  shaft is in what praportion to the dia of shaft?

8) 3-4 ques on spring stifness(numerical)?

9) What kind of rivet arrangement is called as diamond riveting?

10) Which among dese is not dimensionless?

a) Absolute viscosity b) Specific volume c) Specific gravity

11) Laminar flow characteristic related question?

12) Specific speed of turbine?

13) Unit power of turbine?

14) Discharge through a reciprocating pump for single and double acting

15) Which one is intensive property?   
a) Entropy b) Enthalpy c) Density

16) Which among these has highest efficiency?   
a) otto b) Diesel c)dual

17) Some efficiency related question on rankine cycle and brayton cycle

18) 3 questions from steam nozzle and turbine like nozzle efficency

19) Velocity related questions from impulse turbine

20) One numerical from gas turbine

21) Genral day to day life question based on heat transfer so understand the concept

22) One numerical based on cross and parallel flow

23) One numerical on LMTD

24) What is equivalent length of simple pendulam which gives the same frequency as compare to compound pendulam.

25) One numerical on no teeth and speed of gear

26) Pitch circle is what kind of circle in a gear one gear wid 200 teeths anodr wid 50 teeths meshed 2 gadren how many raotation of smaller gera will make 1 revolution of bigger gear  
Ans: 4

27) 2 concept question on governers

28) 2 questions based on balancing of rotating masses

29) 2 questions related to vibration

30) 1 questions on limit fits and tolerance

31) What is endurance limit ratio

32) What is fatigue or stress concentration factor

33) What is the strength of riveted joint

34) What kind of thread is used if power is to be transmitted in 1 direction only

35) Overhauling case will have frictionb angle greater, equal or less than helix angle

36) what combination of material is used 4 bearing manufacture

37) Magnesium is added for which purpose

38) For achieving hardness which procees should be carried(Annealing, normalising, martempering etc)

39) 1 questions related to submerged welding

40) Which welding is done for joining shank of a drill bit (Flash butt welding)

41) What to be use for measuring angle and for locating the w/p at some angle

42) How many nomenclatures are there to completely define a single poin cutting tool

43) One concept question related to upmilling(climb milling)

44) To find out pessimistic time of any project (pert)

45) 2 very basic ques on (fire management)

46) 3 questions related to (Industrial production) like related to routing, schrduling etc

47) 3 economics question (depreciation value calculation, money related conceptual questions)

48) 2 question on (Product design)

Aptitude was genral and easy.