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BEL PAPER ON 19th SEPTEMBER 2008

Hello friends, i'm Vikash Kimothi from College of Technology, PANTNAGAR, BEL visited my college on 19th-20th sept'08 for recruitment. Their selection procedure consist of 2 stages ----- written(technical) and interview. They have differnt written paper for electronics, computer & mechanical engg cadidates.I'm from ECE and the wriitten test consists of general questions most of them from communication & digital logic families. The cut-off for the written examination was 30%. After clearing the written i face the interview. Interview panel comprise of 5 members from electronics, computer, mechanical & HRD field. MOst of the question asked in the interview were simple like some electronics principles and their applications.

They ask mainly questions from communication--analog & digital and also ask for the principle/working of some equipment like CFL, electronic fan regulators, DTH service/satellite tv, mobile phone, IP tv etc...

Here i have given some of the questions of the written paper(ECE)... The paper consist of two sections ----40 objective & 10 true false questions. The cut-off as told by them 30% but they may have increase this limit. in my college only 8 out of 21 cleared the paper(for ECE branch)

Part I---Objective questions (40 with 1.5 marks each) with 50% -ve marking

1. Numerical problem based on modulation index f_c , f_m (formula based direct queston).
- 2.Poles & zeroes are at .01,1,20,100..... find phase margin/angle at $f=50\text{Hz}$. ans -90(By drawing bode plot)
- 3.In n-type enhancement mode MOSFET drain current----- options are-increase/decrease with inc/dec in drain/gate voltage. ans(d)
4. Gain of an directional antenna 6db $P=1\text{mw}$ find transmitted power.....(use $P_{tr} = G * P$.)
- 5.Multiplication of two nos 10101010 & 10010011 in 2's complement form..
- 6.A ckt is given supplied with 15v with a series of resistance of 1k and a parallel combination of 12V zener diode and 2k resistance. FInd current through 2k resistance. ans: 6mA
- 7.A MP has 16 line data bus & 12 line addr bus find memory range.....Ans..4K($4*1024\text{bytes}$)
- 8.Divide by 12 counter require minimum no of flip flops Ans. 4
- 9.Storage time in p-n junction.
- 10.Succesive approx. use in Ans ADC(analog to digital)
- 11.Pre-emphasis require in low freq/high freq signal.
- 12.Handshake in MP Ans to communicate with slower peripherals.
13. Binary equivalent of 0.0625 Ans. 0.0001
- 14.Which code is self complement of itself
- 15.Excess three code of an given binary no.

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16. When we add 6 in BCD operations..... Ans. if result exceed valid BCD nos.
17. Shottky diode has better switching capability because it switch between.....
18. Figure of Merit is same as.....
19. Switching in diode happens when....
20. During forward bias majority charge conc. in depletion layers inc/decrease.....
21. Channel capacity depend on..... Ans. Usable frequency or bandwidth
22. A 2kHz signal is passed through an Low pass filter having cut-off freq 800Hz o/p will be
23. Carrier amplitude 1v, peak to peak message signal 3mv find modulation index.
24. A 12V signal is quantized into two V/14 & 6 equal V/7 determine quantization error.

Part II True & false.....(10 1 mark each) with 50% -ve marking

1. Power dissipation in ECL is minimum..... False
2. Fourier Transform of a symmetric conjugate function is always real True
3. Divide by 12 counter requires a minimum of 4 flip flops..... True
4. Boron can be use as impurity to analyse base of a npn transistor..... True

ALL THE BEST.....

BHEL PAPER ON 15th SEPTEMBER AT BANGALORE BHEL Interview for Engineer Trainees- 2008

I have attended BHEL off-campus interview for the post of Engineer Trainee-08 conducted on 15th Sep. in BangaloreI belong to Electronics and communication branch.

Well the written test was conducted on 10th Aug. and the results are disclosed soon on 20th Aug. As far as I know BHEL started calling people for interview from 8th Sep. They have set up 3-4 panels, in Bangalore , New Delhi , Kolkata, rest no idea.

They have called people in morning and afternoon shifts, nearly 15-16 people per shift. We were asked to bring interview call-letter, biodata form, TA form, all original mark-sheets and one Xerox copy of all. When we reached the venue, first they verified all documents. SC/ST people have to show original caste certificate. They have a list of central reserved castes and your caste serial no. will be verified with that. The traveling allowance will paid there itself to all. After that we were made to sit and wait for our turns.

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About biodata form –

They will post it in web site, it has all relevant information about you similar to a resume, (so we do not need any resume there) like your name, address, all semester marks details, 10-12th marks, college, area of interest, main subjects in semesters, your current job profile, have you appeared for any other govt./PSU exams etc.

While preparing for interview, everybody told me to stress on technical and final year project and for HR questions, but that proved wrong. My timing was in the afternoon shift at 2 pm, and I was called nearly at 3.30 pm. There were 3 people in the panel. They seem to be very experienced ones.

They started with the question –

Q. Why I want to join BHEL.

Though I was not prepared for this question, as I was expecting technical questions, but I tried answering that I always wanted to join BHEL, I am very adjustable, and I can perform well in the areas in which they will train me. But the people were not much satisfied; they also asked me to give a solid example for my adjustability.

Q. They asked about my family, father's job, brother-sisters etc..

The people seem to be very lenient while asking, infact some-times I felt that they are not taking any interview. We were simply chatting, laughing in the interview room.

Q. Next they asked what preparations I have done for the interview.

I told I have checked the BHEL's site and collected some information about it. Next I have prepared my area of interest i.e. Digital electronics. My 2nd area of interest was Microprocessors 8085 and they started with that.

Q. What do mean by 8085.

I told it's the serial no. of the device given by the company Intel. But they were not satisfied and told it must have some meaning. I told may its 8 because it's a 8-bit processor and about other digits no idea.

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Q. How many types of microprocessors do we have?

I told 8 bit, 16 bit, 32 bit.

Q. Do we have any 64 bit processor?

I never heard of it so told so.

Q. What is RISC/CISC?

I answered RISC is reduced instruction set computing and CISC is complex instruction set computing.

Q. What's the difference between them?

I told RISC is generally used for high speed switching operations and CISC is for general purpose like 8085.

Q. Do we use microprocessors nowadays?

I told we generally go for microcontrollers these days.

Q. What are microcontrollers?

I said it has memory inbuilt in it apart from microprocessor architecture.

Q. What do you think the CPU we use has microprocessor in it.

I told it has but not only microprocessor. It has other components also.

Q. What do you think the other components are?

The answer of this question doesn't click me there so I told no idea.

Q. What do think Pentium uses RISC or CISC?

I was not sure with this so answered we can use RISC

Q. They told don't tell we can, what we exactly use

I told truly that specifically I don't know.

They stopped with this. I felt that they were not very specified with some

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questions but the best part was I never got nervous and maintained a smile through-out. They have not at all mentioned about final year project or any other curriculum subject. My advice to electronics people is – try having a different area of interest other than microprocessors because in my batch some 7-8 electronics people came for interview all having same microprocessor as area of interest. The people got little bugged up with and asked some people don't you have some different subjects.

The interview will continue till 8 Oct. and results may be out after 15th Oct. Please pray for me, hope I make it, though rare hopes for me..... Let's see.

All the very best to all other aspirants,

Shilpa

BHEL PAPER ON 10th AUGUST AT SECUNDERABAD

Hii friends today I have taken BHEL exam. I would like to give u the details of the written test. It comprises of 2 sections technical (120) and aptitude (120), total 240(Test duration 150 minutes). Here I will post the questions as far as I remember. I am from mechanical stream. Paper is easy and many are direct questions, only factor concerned is the time.

SECTION-I----TECHNICAL

1. Critical load acting axially on a long column

Ans: $(\pi)^2 * E * I / L^2$

2. Relation between moment of area and radius of gyration

Ans: $I = AK^2$

3. Cup shaped components are produced using which operation

Ans: drawing

4. A sheet of Al alloy having 2mm thickness is welded using which process

Ans: TIG

5. Two gears having teeth 18 and 40 and center distance 56...what is the module?

6. In thick cylinders, which of the following is true[*S stands for sigma*] (a) $\sigma_t > \sigma_r$ (b) $\sigma_t = \sigma_r$ (c) $\sigma_t < \sigma_r$

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7. In a plane stress condition, if the centre of Mohr's circle coincides with the origin then which is true... ..the relation between S_x and S_y is asked
8. Lamé's theorem... $F_1/\sin A = F_2/\sin B = F_3/\sin C$
9. Young's modulus value for steel=200Gpa
10. Thermal conductivity of silver=400w/m0K
11. Fouling factor formula..... $F.F = 1/U_{dirty} - 1/U_{clean}$
12. Relation between notch sensitivity factor and theoretical stress concentration factor
13. Effectiveness of heat exchanger definition
14. Reynolds's number formula
15. Clinical thermometer is which order system0,1,2, or 3
16. Piezometric transducer is used to find which signals—static or.... dynamic
17. Peclet number formula= $Re \cdot Pr$
18. Radiation energy emitted, $E_{emitted} = S \cdot A \cdot T^4$
19. Which of the following is not related to CI engine
(a) Fuel pump (b) carburetor (c).. (d) none
20. Two connected in series having stiffness's K_1, K_2
 $K_{equivalent} = K_1 \cdot K_2 / (K_1 + K_2)$
21. Magnification factor at resonance, $MF = 1/2\zeta$
22. Corioli's component value, $= 2v\omega$
23. Hooks law holds good upto
(a)elastic point (b)UYP(c)LYP(d)Failure
24. Meshing of two gears fail if
(a)materials are different(b)
25. A beam whose one end is fixed and other is free is
(a)cantilever (b)ss(c)Udl(d)none
26. Deflection at the free end of cantilever $= PL^3/3EI$

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27. Shear stress, twisting moment given ,find diamaeter....
28. Formula for polar moment of inertia of a hollow shaft
29. Formula for logarithmic decrement
30. A problem based on the above formula
31. Two question on transmissibility(W/W_n ratio)
32. Question from vibration...mass,k given ...cal frequency
33. Two more questions, one each from riveted joints and cotterjoint
34. $1BHN=N/m^2$
35. Temperature limits, given to find Carnot's efficiency
36. Metacentric height is the distance between Metacentre and -----
Ans: Centre of gravity
37. Force and displacement vector given to find out the work done
38. Rota meter is used to find
(a)flow(b)velocity(c)pressure(d)density

In addition, 10-12 were asked from electrical basics.

SECTION-II----- APTITUDE

VERBAL

Antonyms (5)-Facetious, Benign...

Synonyms (5)-very easy

Fill in the blanks (5):-a bit tough

2 Comprehension passages

Correction of sentences-(5)

Reasoning (5)

This section is very easy that u can start of the exam with.

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Hope this is helpful to u all.

ALL THE BEST.

BHEL PAPER ON 10th AUGUST AT NEW DELHI

Hi friends I am Gaurav Singh from inderprashta engg college MECHANICAL engg.i am a 2008 batch pass out. I gave BHEL exam on 10aug 08 in delhi.it was all India level exam.To tell you first BHEL has a certain cut off system for the candidates.

For Mechanical the cut off :

General ----- 72.30 %

OBC----- 70 %

SC----- 60 %

ST----- 60 %

If u r shortlisted then you will called to sit for its first phase which is all India written exam.

WRITTEN EXAM --- Mechanical engg

There are generally two sections:

First : quantative & aptitude 120 ques

Second: Mech engg 120 ques

There are individual cut off for both and total cut off..well don't worry soon I will let you no how to attempt ques

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Try starting the paper from quant section. attempt atleast 85 ques..out of which 70 must be correct.study geometry formulae.average,profit loss.in simple study RS Agarwal.

Now in Mech engg . solve atleast 85 ques.out of which 55 must be correct.on and overall the attempt should be more..solve that ques first which u think u will do it instantly.dont waste time on tough ques..find easy ques in paper.this time there were 15 ques based on electrical engg. Ques were simple like finding power factor..study matrix and vector of class 12.cross and dot product formulae. Ques were mainly from FLUID, THERMAL, two-three welding technology ques, PRODUCTION. Purchase R.K JAIN the best book to get through PSU.

WELL the result of written came on 27 aug. My interview was at INTER CONTINENTAL HOTEL, new delhi on 9 sept 08.was a seven star hotel it was.i still remember the kind of hospitality BHEL has planned for the interview candidates.A staff of a hotel will be booked to look after the interview candidates.they ask me to report at 9 am.they served me coffee, snacks..it was just kept on the table.drink as many tea or coffee.many flavours were there.well not spending more time on this.

I was the first candidate to be interviewed..luckily I have secured good rank in merit. You will meet people from all parts of the nation there in interview.interviewees were conducted from 5 sept to 15 oct.

There is a panel of 6 people. in mine there was one lady also.the chairman , two people from any good institutions like IIT or DCE.,one from BHEL, one psychologist.

Don't worry they will keep u relax throughout. My area of interest was FLUID AND thermal engg

Some ques are:

1. what is your name

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2. Tell me about ur family back ground
3. how is steam generated at wat temp and press.? wat is specific heat.
4. what is back pressure turbine,
5. how do u govern turbine
6. name different turbine.which turbine at bhakra dam.
7. parts and fuel for gas turbine
8. wat do u know about BHEL
9. your vision for INDIA 2020
- 10.how does inflation effects you
11. wat is GDP
12. How is electricity produced
13. wat all can be done from hydrogen.
14. WAT is the effect of temp on viscosity of a lubricant ?
15. wat will happen if petrol is inserted in a diesel car ?

My interview was held for about 35 min..since I was first they spend so much time on me..but rest interview was around 15 min.

I answered each and every ques.prepare for interviews as soon written result come out.

Read these topics

1. power plant
2. thermal engg
3. welding
4. fluid machinery.

Results for this came on 18 oct 2008.i think I am lucky.my joining is in BHOPAL 4 nov at Heavy electrical plant, BHEL I was selected.thanks to GOD , my parents,teachers and my friends who helped me lot.

All the best !!!!

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BHEL PAPER ON 10TH AUGUST AT OSMANIA UNIVERSITY

Hi friends i am Amit from University college of Engineering, Osmania University, I wrote test on aug10th and i get thru written and i had interview on sep 26th...results were out on 12th sep and i got selected.Coming to BHEL company's profile its an Navratna PSU having an profitable track record....so i am very happy to work for it..

Now coming to the written test paper
120-technical(am from electrical branch)
120 aptitude + english
1/5 negative marks

Technical questions were quite tough yaar.....i did it for half an hour and i could do only 15 questions then i jumped for Aptitude section just to have a glance of it i found it very easy...so out of 120 i cracked around 80-95 questions.....then i again jumped to technical sections in this phase i could do around 35-45 qns and time limit of 150 mins was over.

Technical Paper

- 1)Simple questions from inter physics some around 10-15 questions like formula of radius of gyration, sphere , cylindrical formula of K.E
 - 2) Most of the questions were from Control systems very easy (nearly 20 questions)
 - 3)Machinery questions wre quite tough(10 questions nearly)
 - 4)Power systems(20 qns)
 - 5)electrical measurements and instruments
- What i suggest is to do control systems, power systems and machinery gate materials

Interview consists of choosing a chit which contains specific topic i got applications of synchronus machines. so if u answer this u could gain good marks...for interview u should b thorough with each and every topic of electrical bcos v had around 100 chits...after that they asked basic questions.. it lasted for half and hour atlast i got selected for Heavy Power Equipment Plant (HPEP), Hyderabad.

BHEL PAPER ON 7TH AUGUST,2008

Hi friends.... BHEL paper consists of two parts.

A) Technical

B) Aptitude

Both parts consists 120 marks each. There is negative marking which 0.2.

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Technical paper

- 1) How many links in slider crank mechanism?
- 2) Deflection of cantilever beam subjected to end point load?
- 3) Stress concentration factor $K_f = ?$
- 4) What is the unit of BHN?
- 5) What is efficiency of riveted joint?
- 6) Composition of Munz metal?
- 7) One shaft is subjected to torque 1700 N-m having shear strength of 40Mpa. Determine the diameter?
- 8) A reversible engine is working between the 600F and 60F. Carnot efficiency is equal to =
- 9) Coefficient of restitution lies between =
- 10) Pectlet number is equal to = a) $Re \cdot Nu$ b) $Re \cdot Pr$ c) $Re \cdot Gr$
- 11) Formula of effectiveness of heat transfer =
- 12) Emissivity depends on
- 13) Reynolds number formula
- 14) Production process for Al?
- 15) Thick metals welded by following processes.....

16) Logarithmic decrement is given by = $\frac{2\pi\xi}{\sqrt{1-\xi^2}}$

17) Magnification factor at resonance is given by = $\frac{1}{2\xi}$

- 18) Cutting forces decreases by = a) increasing rake angle b) decreasing rake angle c) increasing relief rake angle
- 19) Some problem on Mohr's circle radius...
- 20) Volumetric strain =
- 21) Pendulum problem Time is given length = ?

22) For undamped system Transmission Ratio is R then $\frac{\omega}{\omega_n} =$ a) $\sqrt{\frac{2-R}{R+1}}$ b) $\frac{\sqrt{2+R}}{\sqrt{R+1}}$

- 23) Which is not related to CI engine = ans) spark plug
- 24) Cotter joint generally fail by
- 25) Which coupling is used for intersecting shafts?
- 26) No of teeth on gear and pinion is given, center distance is given, module = ?
- 27) Coefficient of friction and angle is given, what is ration of tension in belt?
- 28) What is lamis thoerm?
- 29) Condition for self locking
- 30) Discontinuous chips can be produced by

31) For critical speed $\frac{\omega}{\omega_n}$ should be a) $> \sqrt{2}$ b) $> \sqrt{3}$

32) Air at 20C blows over a hot plate 50 by 75 cm maintained at 250C. The

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convective heat transfer coefficient is 25W/m^2 . Cal the heat transfer.

- 33) Metacenter always lies
- 34) Rotometer is used to measure....
- 35) Formula for effort of a governor.....
- 36) Stroboscope is used to measure.....
- 37) What is size of A4 paper?
- 38) Some problem on riveted joint.....
- 39) Modulus of rigidity G is given by.....
- 40) Wave properties in solids is depends on elasticity.
- 41) Radiation heat transfer is directly proportional to
- 42) Escape velocity is given by $\sqrt{2gR}$
- 43) Kinetic energy formula....
- 44) Corolis component.....
- 45) Potent ional Energy theory is given by.....
- 46) Perpendicular axis thoerm.....
- 47) Pappus thoerm.....
- 48) Center of gravity of a spherical shell.....
- 49) Angle and linear dimension is given by chamfer.
- 50) For thick cylinders
- 51) $N = 10$ to $N = 10E5$ cycles then it is a) finite life b)infinite life
- 52) Value of steel young's modulus
- 53) Endurance strength of steel equal to
- 54) Three problems on strain gauges
- 55) Three problems on vectors some related to work done....
- 56) Straight line mechanism...
- 57) Some problem springs..
- 58) Design on thermal stresses can be considered for a) concrete b)steel rolls
c)blast furnace
- 59) Velocity problem it is in the vector form to find displacement?
- 60) Hardness is a property

BEL PAPER ON 13th MAY AT BANGALORE 2007

Hai Guys,

1. which of the following game uses bulley
a.football b.cricket c.goalf.. d.hockey

2.coupling capacitors and bypass capacitors affect
Ans:Only affect the lower cut off frequencies

3.1,8,27,64,125,,.....
which among the following will not come in the series
a.1000, b.729 c.259

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Hint: $1^3, 2^3, 3^3, 4^3, 5^3, \dots$ the series is like that

4. I am not able to paste one image.

The question is RC coupled amplifier with a feedback network in between Collector and Base. Which type of feedback is this?

a. Current series b. Voltage shunt c. voltage series d. current shunt

Ans: Voltage shunt

5. Block reduction of control system (simple)

6. Settling time of Control system. Given the transfer function. I am not recollect

Ans = $\frac{4}{\omega_n} \left[1 + \frac{\zeta}{\omega_n} \right]$

7. Dual of a logical expression

8. Particular Integral of homogenous eqn

Sorry I don't remember

Best Of luck

BEL PAPER ON-13th MAY

Hi friends, I had given BEL paper on May-13, 2007

in which 150 ques u've to do... out of which 30 were of apti & 120 technical apti 9 (tough as compared to ISRO)

question from analog electronics, digital electronics, network, F & W, signal, Control etc.....

1) in analog question based on zener diode

2) coupling capacitors and bypass capacitors affect

3) 1, 8, 27, 64, 125,

which among the following will not come in the series

a. 1000, b. 729, c. 259

4) which of the following game uses bulley

a. football b. cricket c. goalf.. d. hockey

5) a zener diode works on the principle of

6) under the high electric field, in a semiconductor with increasing electric field

7) in an 8085, microprocessor system with memory mapped I/O

8) built-in potential in a p-n jn.-

9) the breakdown voltage of a transistor with its base open is $BV_{(CEO)}$ and that with

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emitter open BV(cbo) then

10) ques based on half adder

11) based on flip flop

12) block diagram reduction

13) to find max overshoot (2 ques based on it)

The interview for Probationary Engineer at BEL, Bangalore . 21st August, 2004

Its for CSE stream. Interview lasts for 40 minutes. As I have to face my ever first Job interview, am with little bit anxiety. Here are the details of the interview I would like to share with these magnificent group friends. As I entered in to the room by asking excuse me Sir, They invited me very politely and offered a chair to seat. There were four members in the panel all were in age group of 50, of which two members are from Central Research Laboratory of BEL grilled out me with tech questions. One is HR department person and remained was acts as head of the panel.

First the head of the panel introduced all the members and explained the procedure of the interview. First he starts by describing about the company for almost five minutes, which makes me to relax and comfortable with the panel. After that he asked to tell about myself briefly for a minute.

While I am in a way of describing myself, he also asked to point out the achievements, strong points, hobbies and regarding sports. Also asked for favorite subjects, and I told that C, Database and Networks are my favorites. Now it's the time for technical grilling..The first person from CRL starts by asking

What are the components of LAN?

How do u connects the systems?

What is UTP? (Unshielded Twisted Pair)

How much distance it supports?

Fiber optic supports how much distance?(I don't know exactly?)

What is the throughput of the Ethernet LAN?

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Describe about OSI Layers?

In which layer encryption can be done? And other than presentation layer?

What is the function of Bridge? Router?

Which layer is responsible for end 2 end connection?

What is RAID? (Redundant Array of Inexpensive Disks)

For what it is used for?

How can achieve fault tolerance through RAID?

Where the Static variable stored in C?

And local variables?(I was made a mistake here by telling it is also in heap)

And he shows already written function prototypes asked to describe it.. as

`int *(*p)(int a, float b) // pointer 2 the function p returns integer pointer`

`int (*p)(int *a, float b) //pointer 2 the function p returns integer`

`int *p(int a, float *b) // function p returns integer pointer`

`int p(int a, float *b) // function p returns integer`

now he looks as impressed and asked

how to return 1000 variables from a function in C?

Now seen changes to second person of CRL

He asked to explain about my project? (It lasts for 4 minutes)

What are the functions of the OS?

Which OS you are familiar with?

What is the process?

What r its attributes?

How the process interacts with each others?

What r the mechanisms for inter process communication?

What is semaphore?

What is critical region?

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How can semaphore avoid conflicts?

Again first person starts asking

What is a virtual function?

What is late binding?

What is scope resolution operator?

Differentiate between testing and debugging? (here I take time 2 distinguish)

Distinguish black box testing and white box testing?

What is unit testing?

How can u control the lost acknowledgement issue?

Is there is any difference between switch and hub? Which is good? (here again I wasn't answered properly)

And some more questions I wasn't reminded correctly..

After that head of the panel gestures to HR to ask questions

What do u prefer to be a team leader or team member?

What r the qualities u have for being a leader?

How can u solve the conflicts in a team?

How can u react if some one else competing with u in ur

team for promotion?

Again head asks me

What is your reaction if some one copying in the exam? Can u tell me a instance in your college that insists your leadership attitude?

Have u ever short tempered?

Have u attended any interviews?

Is u don't have campus?

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And he gestures to HR to explain pay and bond details

He told that first 6 months will be the training period after that for three years u will be appointed as probationary engineer, and also told that based on our performance promotion will be carried out early or late.

For this probationary engineer u can draw 2.65 lacs per anum with all allowances, and u have to execute a bond of Rs50000/- for three years effects from date of appointment after training.

And now head asks for any questions from me. I was asked the same qns

What is the career path?

When can I know the results?

Why u were not strong in media advertisements? Blah blah bla

BEL PAPER ON 31ST DECEMBER AT LUCKNOW 2007

Hi...guys.....this is whole test paper of BEL at IET lucknow..... on 31st of December 2007.....They take only technical paperdue to some lack of time.....The whole test paper contains only.....50 question..... There was +4 for right ans and -2 for wrong ans..... Twenty five students appeared in the exam.....Out of the only 7 was selected after written test.....

And finally onely two were selected in the BEL.....and I was one of them selected..... This is COMPUTER SCIENCE PAPER.....

It includes

- 1)C-basic concepts.....and very good question because whole basic knowledge were given.....
- 2)Compiler basic knowledge.....
- 3)Data base management system.....
- 4)Data structure.....
- 5)Operating system.....such as what is kernel.....and options were give.....

HR AND TECHNICAL ROUND.....

There were six member team.....all were talented and very nice looking..... And all were present at the time of interview..... They ask

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..... From where you belong..... What have you prepared today.....i told that data structure and dbms.....

Then there was an intelligent sir and they ask.....what is DDL AND DML.....i told and then they ask for query related to it.....and due to my area of interest I gave all the ans correctly.....so he was impressed.....

And there was no hrquestion.....So be confident while giving any ans.....and be positive.....because it prepare for right judgement.....

Bets of luck guys and be +ve.....

BHEL PAPER ON 8th OCTOBER AT HARIDWAR

Dear Friends, I have given the BHEL recruitment exam for the post of Engineer Trainee in Electrical Branch.

Though I can not cleared this but i have my exam experience, which i will share with you.

The exam contains 240 questions.

120 from Technical Side (60 from Electrical Engg & 60 from General Engg)
120 from Non Technical Side (35 from English, 35 from Aptitude & 50 from Maths)

Technical Paper is purly Numerical Based and contains the questions like below:

Electrical Engg paper has around

- 1) 15 Questions from Electrical Machines out of this 10 numericals.
- 2) 8 Numericals from Control System
- 3) 4 Numericals from Instrumentation
- 4) 15 Questions from Electrical Power out of this 8 numericals
- 5) 8 Questions from Circuit and field theory
- 6) 10 Questions from Electronics (Power & Digital)

General Engg paper has around

- 1) 35 Questions from mechanical engg
- 2) 15 Questions from Physics
- 3) 10 Questions from other general engg

Non Technical paper is very easy.

To solve this paper, speed contains an important factor. We have only 35

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seconds to solve a question.

So be fast and All the Best

RK Goel

BHEL PAPER ON 11th FEBRUARY AT NEW DELHI 2007

The ratio of two specific heats of air is equal to. = 1.41

A perfect gas at 270C is heated at constant pressure till its volume is double. The final temperature is = 3270C

An engine operates between temperature of 9000K and T2 and another engine between T2 and 8000K. For both to do equal work, value of T2 will be. = 6500K

Internal energy of a substance depends on = Temperature

Work done in compressing 1kg of gas adiabatically from p_1, V_1, T_1 to p_2, V_2, T_2 is equal to = $C_v(T_2 - T_1)$

The unit of entropy is = J/kg 0K

Indicated power of a 4-stroke engine is equal to = $pLAN/2$

Which of the following is not an internal combustion engine : a) 2 stroke petrol engine b) 4 stroke petrol engine c) Diesel engine d) steam engine e) Gas turbine.
= (d)

If one cylinder of a diesel engine receives more fuel than the others, then for that cylinder the: a) exhaust will be smoky b) piston rings would stick into piston grooves c) exhaust temperature will be high d) engine starts overheating e) all of the above. = (e)

The spark plug gap is normally maintained at: = 0.45 to 0.6mm

A distributor in spark ignition engines performs the function of : = Providing the correct firing order in engine

Which of the following does not relate to C.I. engine:: a) fuel pump b) fuel injector c) governor d) carburetor e) flywheel = (d)

Air fuel ratio in a jet engine is = 60:1

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What is the value of Prandtl No.?

In domestic refrigerator, the tubes at the back of the refrigerator are: a) evaporator b) condenser c) capillary tubes d).....

Which refrigerants has the highest critical point temperature. = Freon-11

Wet bulb temperature is. = indication of amount of moisture in air

On psychrometric chart, dry bulb temperature lines are. = Vertical

Surface tension has the units. = newtons/m

The line of action of the buoyant force acts through the. =centroid of the displaced volume of fluid

A pressure of 25m of head of water is equal to. =245kN/m²

For a submerged body to be in stable equilibrium, the centre of gravity should be. =Below the centre of buoyancy.

The actual velocity at vena contracta for flow through an orifice from a reservoir of height H=?. = $C_v\sqrt{2gH}$

A body weighing 2kg in air weights 2.5kg when submerged in water. Its specific gravity is. = 6

In a free vortex motion: = each particle moves in a circular path with a speed varying inversely as the distance from the centre.

A centrifugal pump has speed-1000rpm, Flow-1200l.p.m, Head-20m, Power-5H.P. If its speed is increased to 1500rpm, new flow will be.: = 1800l.p.m

Runaway speed of a hydraulic turbine is: = the speed if the turbine runner is allowed to revolve freely without load and with the wicket gates wide open.

10m of water column is equal to = 100kN/m²

M.I. of a circular area about an axis perpendicular to the area is: = $\frac{\pi r^4}{2}$

A projectile is fired at an angle ? to the vertical. Its horizontal range will be maximum when ? is . =45°

An elevator weighing 1000kg attains an upward velocity of 4m/sec in two seconds with uniform acceleration. The tension in the supporting cables will be =

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1200kg.

A 13m ladder is placed against a smooth vertical wall with its lower end 5m from the wall. What should be the co-efficient of friction between ladder and floor so that it remains in equilibrium. = 0.21

A car is moving with a velocity of 60km/hr and possesses energy of 5×10^5 joules. The mass of the car will be. = 3000kg.

If l is the span of a light suspension bridge whose each cable carries total weight (w) and the central dip is y , the horizontal pull at each support is: = wl/y OR

A beam of length l , having uniform load w kg/unit length is supported freely at the ends. The moments at mid span will be: = $wl^2/8$.

A boiler shell 200cm dia and plate thickness 1.5cm is subjected to internal pressure of 1.5 MN/m^2 , then the hoop stress will be. = 100 N/m^2

100KW is to be transmitted by each of two separate shafts. A is turning at 250rpm and B at 300rpm. Which shaft must have greater diameter.: = B

Two identical leaf springs of spring constant k are arranged like cantilevers in parallel and attached at free end by a spring of spring constant k . The equivalent spring constant of combination is; = $1.5k$.

Automobile steering gear is an example of: = lower pair.

The type of coupling used to join two shafts whose axes are neither in same straight line nor parallel, but intersect is. = Universal coupling.

To transmit power from one rotation shaft to another whose axes are neither parallel nor intersecting, use: = Spiral gear.

A gear having 100 teeth is fixed and another gear having 25 teeth revolves around it, the centre lines of both gears being joined by an arm. How many revolutions will be made by gear of 25 teeth for one revolution of arm. = 5 rev.

The secondary critical speed of a shaft occurs at: = twice the speed of primary critical speed.

Brittle coating technique is used for: = experimental stress analysis.

Factor of safety is the ratio of: = yield stress/working stress.

Type of gear used for non-intersection perpendicular shafts: = Hypoid gears.

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Corrosion resistance of steel is increased by adding: = Chromium & Nickel

The product of Cupola is called: = cast iron

Brinell tester uses a hardness steel ball of size: = 10mm

Sintered and tungsten carbides can be machined by: = EDM

What kind of abrasive cut off wheel should be used to cut concrete, stone and masonry? =Diamond grit.

In break-even analysis, total cost consists of: = Fixed cost + Variable cost.

The amount deducted from the salary of workers towards employees provident fund is : =deposited in the account of worker with Provident Fund Commissioner.

PERT is: = event oriented technique

Bar charts are suitable for: = minor works.

? on a PERT/CPM chart represents: = a significant event representing some mile-stone

Electron volt is the unit of : = Energy.

Seamless tubes are made by?

Reheating in gas turbine results in: = increase of work ratio and decrease of thermal efficiency.

Why DC current is not used in transformer?

What is the purpose of draft tube in hydraulic turbines: = to convert the kinetic energy into pressure energy.

A mass of 100kg is falling from a height of 1m and penetrates the sand to 1m. what is the resistance force of the sand?

Two cars travel in the same direction at 40km/hr at a regular distance. A car comes in the opposite direction at 60km/hr. It meets each car in a gap of 8 seconds. What is the distance between the two cars?

By,
Zosua

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BHEL PAPER ON 11th FEBRUARY AT TRICHY 2007

Hello friends,

Yesterday i attended the BHEL Engineer Trainee written test in Mechanical stream. They conducted for four branches in engineering. Comp sci, ECE, EEE and Mech. In Mechanical stream there were a total of 240 questions.

120- Technical questions in Mechanical Engineering

120- General Aptitude questions. (Quantitative Aptitude, Reasoning Ability, Logical thinking, English usage)

The questions were mainly asked in

Thermodynamics

Engineering Mechanics

Theory of machines

Production tech

If you have strong fundas, u can really do well in this session...

Following are the questions asked: (I will try to give you as many questions as i remember)

[One Mark for correct answer, 1/5th for wrong answer. Five choices were given]

1)Unit of Entropy (J/kg K or kJ/kg K)

2)A mass of 100kg is falling from a height of 1 m and penetrates the sand into for 1 m. What is the resistance force given by sand.

3)Ratio of specific heats of air. (1.41)

4)A body weighs 3 kg in air. If it is submerged in a liquid, it weighs 2.5 kg. What is the specific gravity of the liquid.

5)Two cars travel in same direction at 40 km/hr at a regular distance. A car comes in a opposite direction in 60km/hr. It meets each car in a gap of 8 seconds. What is the distance between them?

6)A simple problem involving in hoops stress. For sphere: $M = \frac{3}{2} \cdot p \cdot V \cdot [\text{density of pressure vessel material} / \text{Maximum working stress it can tolerate}]$ For Thin walled pressure walls: Hoops stress or stress in the radial direction $= p \cdot r / 2t$

7)A problem in force calculation in a body moving in a inclined surface.

8)Composition of bronze. (Copper+zinc)

9)Composition of stainless steel.(iron+chromium+nickel+carbon)

10)CI is manufactured in which process. (cupola process)

11)What percentage of carbon is preset in pig iron. (4.5 to 6%)

12)Water is available at 10m height. What is the pressure available?

(pressure=density*g*height; $p = 1000 \cdot 9.81 \cdot 10$; $p = 98100 \text{N/m}^2$)

13)What will happen if the speed of the centrifugal pump doubles.

14)The unit eV is widely used in ? (Nuclear and atomic physics)

15)What will happen to the resistance, when the diameter of the conductor is doubled?

16)The power consumed by a electrical device is 1000W at 250V, What is the

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resistance in the device?

(Power= Voltage*current; Current=Power/Voltage, Current, $I=1000/250=4$ amps. $V=IR$, Therefore $R=250/4=62.5$ ohms)

17)Why DC current is not used in transformer.

18)On what principle the sonar/ radar(I dont remember) works?

19)Bending moment diagram for the UDL is in what shape?

20)Function of the distributor in petrol vehicles? (Spark timing)

21)Which is not present in CI engines? (carburettor)

22)What will happen if one cylinder receives more amount of fuel spray from injectors than other injectors?

23)Purpose of draft tube in hydraulic turbines? (The purpose of a draft tube is to convert some of the kinetic energy of the flow from the runner (the rotating part of the turbine) into pressure energy and thereby increase the efficiency of the hydro power turbine.)

24)What is the effect of reheater in the gas turbine? (The advantage of reheater is significantly increased thrust; the disadvantage is it has very high fuel consumption and inefficiency)

25)Problems in involving with friction coefficient.

26)Factor of safety = Yield stress/Working stress.

27)Which is the example of non parallel power transmission (Universal coupling)

28)For perpendicular shafts worm gear is used.

29)A planet gear with 25 teeth is meshed with a sun gear of 100 teeth. Both are connected using a arm. How many rotations are needed for planet gear to complete one rotation around the sun gear?

30)What is equivalent spring constant for spring in parallel?

31) Some questions were asked related to boundary layer and vortex flow.

32) 5 questions were asked in PERT, Process planning, Product planning, Break even analysis.

33)How are tungsten and sintered composite materials are machined? (Electro Discharge Machining, EDM)

General Aptitude:

All the sections were very easy. Basic knowledge is sufficient to attend all the questions. But Keep time factor in mind and increase your speed. There are 120 questions like this!!

English:

--- Detect the words with wrong spellings (5 questions)

---Fill in the blanks with appropriate words(5 questions)

--- Two reading comprehensions were given(10 questions)

---Find the error in the sentence (8 questions)

Reasoning:

--- Seating arrangement problems

--- Find the relation between them

Quantitative ability:

All the questions were very easy.

---50% of the questions are from basic geometry.

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---Remaining were very general and easy. But as there is a total 120 questions you have to be really quick.

By,

Arun Udayakumar

*****ALL THE BEST*****

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