#Jenny

Finally I get this ebook, thanks for all these I can get now!

#Rio

Cool! I'am really happy

#Markus Jensen

I did not think that this would work, my best friend showed me this website, and it does! I get my most wanted eBook

#Hun Tsu

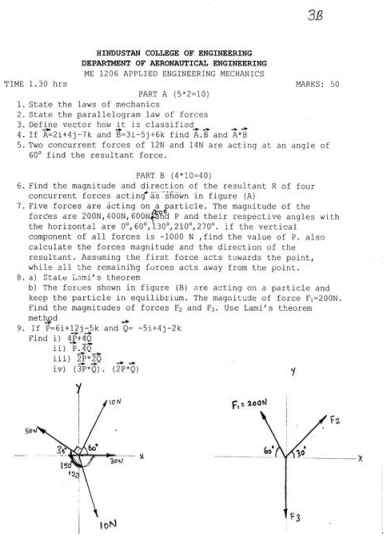
wtf this great ebook for free?!

#Che Salsa

My friends are so mad that they do not know how I have all the high quality ebook which they do not!

#Diego Butler

so many fake sites. this is the first one which worked! Many thanks



3B

HINDUSTAN COLLEGE OF ENGINEERING
DEPARTMENT OF AERONAUTICAL ENGINEERING
ME 1206 APPLIED ENGINEERING MECHANICS

TIME 1.30 hrs MARKS: 50

PART A (5*2=10)

1. State the laws of mechanics
2. State the parallelogram law of forces
3. Define vector how it is classified
4. If $\vec{A}=2i+4j-7k$ and $\vec{B}=3i-5j+6k$ find $\vec{A}.\vec{B}$ and $\vec{A}*\vec{B}$
5. Two concurrent forces of 12N and 14N are acting at an angle of 60° find the resultant force.

PART B (4*10=40)

6. Find the magnitude and direction of the resultant R of four concurrent forces acting as shown in figure (A)
7. Five forces are acting on a particle. The magnitude of the forces are 200N,400N,600N,Same P and their respective angles with the horizontal are 0°,60°,130°,210°,270°. if the vertical component of all forces is -1000 N ,find the value of P. also calculate the forces magnitude and the direction of the resultant. Assuming the first force acts towards the point, while all the remainihg forces acts away from the point.
8. a) State Lami's theorem
   b) The forces shown in figure (B) are acting on a particle and keep the particle in equilibrium. The magnitude of force F_1=200N. Find the magnitudes of forces F_2 and F_3. Use Lami's theorem method
9. If $\vec{P}=6i+12j-5k$ and $\vec{Q}=-5i+4j-2k$
   Find i) $4\vec{P}+6\vec{Q}$
   ii) $\vec{P}.2\vec{Q}$
   iii) $2\vec{P}\times\vec{Q}$
   iv) $(3\vec{P}.\vec{Q}).(2\vec{P}*\vec{Q})$

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