#Jenny

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

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Cool! I'am really happy

#Markus Jensen

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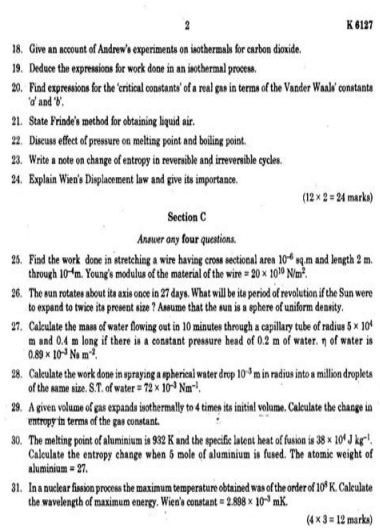
#Che Salsa

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



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18. Give an account of Andrew's experiments on isothermals for carbon dioxide.
19. Deduce the expressions for work done in an isothermal process.
20. Find expressions for the 'critical constants' of a real gas in terms of the Vander Waals' constants 'a' and 'b'.
21. State Frinde's method for obtaining liquid air.
22. Discuss effect of pressure on melting point and boiling point.
23. Write a note on change of entropy in reversible and irreversible cycles.
24. Explain Wien's Displacement law and give its importance.

(12 × 2 = 24 marks)

Section C

Answer any four questions.

25. Find the work done in stretching a wire having cross sectional area 10^{-6} sq.m and length 2 m. through 10^{-4}m. Young's modulus of the material of the wire = 20×10^{10} Nm^{2}.
26. The sun rotates about its axis once in 27 days. What will be its period of revolution if the Sun were to expand to twice its present size ? Assume that the sun is a sphere of uniform density.
27. Calculate the mass of water flowing out in 10 minutes through a capillary tube of radius 5×10^{4} m and 0.4 m long if there is a constant pressure head of 0.2 m of water. η of water is 0.89×10^{-3} Ns m^{-2}.
28. Calculate the work done in spraying a spherical water drop 10^{-3} m in radius into a million droplets of the same size. S.T. of water = 72×10^{-3} Nm^{-1}.
29. A given volume of gas expands isothermally to 4 times its initial volume. Calculate the change in entropy in terms of the gas constant.
30. The melting point of aluminium is 932 K and the specific latent heat of fusion is 38×10^{4} J kg^{-1}. Calculate the entropy change when 5 mole of aluminium is fused. The atomic weight of aluminium = 27.
31. In a nuclear fission process the maximum temperature obtained was of the order of 10^{8} K. Calculate the wavelength of maximum energy. Wien's constant = 2.898×10^{-3} mK.

(4 × 3 = 12 marks)