Type: DES

Q1. Describe the various problems associated with heavy crude processing in the Refinery (3)

Q2. Calculate the viscosity of pure Benzene at 30 °C and its specific gravity is 0.95. (3)

Q3. Crude quality is the base parameter to estimate the profits in the refinery. List the properties required to evaluate the crude (minimum of 12 properties)? (4)

Q4. Draw the TBP apparatus and explain the principle of estimating the boiling point of crude? (5)

Q5. Classify the types LPG based on butane and propane composition? (2)

Q6. Calculate the average boiling point of crude and its TBP slope using the below data? (3)

Vol %	0	10	20	30	40	50	60	70	80
٥F	160	270	335	400	480	560	610	680	820

Q7. Explain the procedure to remove this sulphur from kerosene with the help of flow sheet. (5)

Q8. List the major properties usually measured for aviation turbine fuel and explain two properties (3)

Q9. Define the smoke point (2)

Q10. Fluidized bed catalytic cracker (FCC) plays a major role in make the various straight run fractions to be suitable as fuel. Explain the steps involved in FCC and procedure (draw the flow sheet also) (5)

Q11. Explain the penetration index and softening point of Bitumen in highway construction? (2)

Q12. Sweating is the process to remove oil from waxy materials. Explain the principle of sweating (3)

Q13. Draw the atmospheric distillation column (ADU) and explain the various fractions obtained from the ADU? (5)

Q14. List the types of greases and explain. (2)

Q15. Briefly explain additives used in lubricating base oil to be suitable in industrial lubricants (atleast 3). (3)