Model Question Paper-2020

B. Sc., Semester-IV

 Paper- SEC-2 (Fuel Chemistry)

Q-1. Discuss units for calorific value of a fuel. What is fuel calorific intensity

 and flame temperature? Briefly classify about the types of fuels.

Q-2. What are the difficulties arising if coal is stored improperly for a long period?

 What are the factors favorable for spontaneous combustion? What safety

 measures do you suggest for storage of coal?

Q-3. Discuss the composition of crude petroleum and their major resources found

 in India. Illustrate the method of detection of petroleum deposits.

Q-4. Write short notes on gasoline alternatives: LPG, CNG, LNG, Synfuels and

 powered alcohol

Q-5. Write a brief informative note on: **a)** Rocket fuels **b)** Octane and Cetane

 number **c)** Commercial type of coal **d)** Diesohol and Gasohol

Q-6. Explain the following properties of lubricants and discuss their significance:

1. Viscosity and viscosity index
2. Flash point and power point
3. Aniline point
4. Saponification value
5. Cloud and pour point

Q-7. What are conventional (non-renewable) and Non-conventional (renewable)

 sources of energy? Discuss their advantages and disadvantages.

Q-8. What are fossil fuels? How they are formed? Discuss major two options to

 avoid their depletion from the earth crust.

Q-9. What are coals? Discuss the high and low temperature carbonization process

 of coals.

Q-10. Write short notes on: a) Coal gas b) Producer gas c) Water gas