

2022
B.A./B.Sc.
Third Semester
SKILL ENHANCEMENT COURSE – 1
CHEMISTRY
Course Code: CHS 3.11
(Fuel Chemistry)

Total Mark: 35
Time: 2 hours

Pass Mark: 14

Answer five questions, taking one from each unit.

UNIT-I

1. (a) What do you understand by renewable and non-renewable sources of energy. Give examples. 3
(b) What are fuels? How are they classified? 4
2. (a) How will you determine the calorific value of a gaseous fuels? Explain. 3
(b) How is coal gas obtained? Give its composition and uses. 4

UNIT-II

3. (a) What are coals? How are they formed in the earth crust? 5
(b) Define: 2
(i) Knocking
(ii) Octane
4. (a) What is carbonization of coal? Explain the low and high temperature of carbonization of coals. 5
(b) Write a note on producer gas. 2

UNIT-III

5. What is fractional distillation? Explain the process of fractional distillation of crude oil. 1+6=7

6. (a) What are basic requisites of a good metallurgical coke? 4
(b) Write a note on oil refining process. 3

UNIT-IV

7. (a) What is crude oil? Explain the important composition of crude petroleum. 1+3=4
(b) What is compressed natural gas? Give its properties, uses, and advantages. 3
8. (a) What do you mean by reforming petroleum? Explain the thermal reforming of petroleum. 4
(b) Briefly explain the different types of cracking. 3

UNIT-V

9. (a) Write short notes on semisolid and liquid lubricants with suitable examples. 4
(b) What is synthetic lubricant? 3
10. (a) Explain mineral oil as a lubricant. Give its advantages and disadvantages. 4
(b) Write a note on the following: 3
(i) Vinyl acetate
(ii) Butadiene
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