B.Sc. DEGREE (CBCS) EXAMINATION, MAY 2019

Second Semester

B.Sc Chemistry Model III Petrochemicals

Core Course - **CH2PCT02 - TEST METHODS AND PETROLEUM PROCESSES**

2017 ADMISSION ONWARDS

DBDC71F0

Maximum Marks: 60   **Time: 3 Hours**

Part A

Answer any **ten** questions.

Each question carries **1** mark.

1. What is meant by auto ignition temperature

2. What is the use of distillation?

3. Write one example for pour point depressants.

4. What is the use of doctor method?

5. What is bitumen? Give its use.

6. Identify the relationship between conductivity and static electricity of a fuel.

7. Define calorific value

8. Explain road octane number

9. What are the different types of thermal cracking process?

10. What you meant by hydrocracking

11. What is reforming?

12. What is Penex process?

(10×1=10)

Part B

Answer any **six** questions.

Each question carries **5** marks.

13. Explain the characteristics of high aromatic naphtha and low aromatic naphtha

14. Illustrate the following

    (i) Pour point (ii)Octane number (iii) Flash point

15. Distinguish between existent gum and potential gum test.

16. Can you compare aviation gasoline and aviation turbine fuel

17. Differentiate between smoke point and freezing point

18. What is meant by antiknock performance of gasoline? Explain the factors used to determine the antiknock performance of gasoline.

19. Write a note on the different types of petroleum products after thermal cracking process

20. Discuss

(a) Mixed phase cracking (b) vapour phase cracking and (c) selective cracking

21. Write a short note on

(a) feed stock of catalytic cracking (b) process variables of catalytic cracking

(6×5=30)

Part C

Answer any **two** questions.

Each question carries **10** marks.

22. Explain the following

(a) Kerosene (b) Diesel (c) Gasoline

23. Write note on

(a) aniline point (b) distillation (c) Reid vapour pressure

24. Explain the following

a) Static electricity reducers of aviation fuels   (b) Ductility test of bitumen

25. Briefly explain different types of hydrogenation processes

(2×10=20)