**QP CODE: 20101106**

20101106

**Reg No** : .....

**Name** : .....

## B.Sc. DEGREE (CBCS) EXAMINATION, NOVEMBER 2020

### Second Semester

B.Sc Chemistry Model III Petrochemicals

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

2017 ADMISSION ONWARDS

274900C9

Time: 3 Hours Max. Marks : 60

**Part A**

*Answer any **ten** questions.*

*Each question carries **1** mark.*

1. ASTM is----------
2. What are the advantages of high octane petrol?
3. Define Diesel Index.
4. The API gravity has been derived from ----------scale.
5. What is penetration test with respect to bitumen ?
6. To minimise the gum formation, ……. are added in gasoline.
7. Explain smoke point of a fuel.
8. Name the techniques used to determine the antiknock performance of gasoline.
9. Which types of reaction intermediate is formed during the reaction mechanism of thermal cracking process?
10. What you meant by viscosity breaking?
11. Explain catalytic reforming.
12. What is Hysomer process?

(10×1=10)

**Part B**

*Answer any **six** questions.*

*Each question carries **5** marks.*

13. Discuss in detail about gasoline.

14. Explain the effect of blending.
15. Distinguish between pour point and cloud point.
16. Describe elastic recovery and ductility of bitumen.
17. Write a short note on sulphur mercaptains in aviation gasoline .
18. Write a short note on freezing point of aviation fuels.
19. Rationalize the use of cracking in petroleum industry with one of the cracking operation
20. Write an explanatory note on different types of thermal cracking operations
21. Write a note on the catalyst used for hydrocracking process

(6×5=30)

## Part C

*Answer any **two** questions.*

*Each question carries **10** marks.*

22. Discuss the following (a) Naphtha (b)LPG (c) Bitumen
23. Discuss the following (a) Flash point (b) Viscosity (c) Octane number
24. Discuss in detail analysis of Aviation fuel.
25. Describe the Houdry fixed bed process of catalytic cracking with a flow sheet.

(2×10=20)