C.U.SHAH UNIVERSITY

Summer Examination-2017

Subject Name : Chemistry-VII

Subject Code: 4SC04CHC1 Branch: B.Sc. (Chemistry)

Semester: 4 Date: 15/04/2017 Time: 10:30 To 01:30 Marks: 70

Instructions:

- (1) Use of Programmable calculator & any other electronic instrument is prohibited.
- (2) Instructions written on main answer book are strictly to be obeyed.
- (3) Draw neat diagrams and figures (if necessary) at right places.
- (4) Assume suitable data if needed.

| Q-1 | | Attempt the following questions: | (14) |
|--------|------------|---|------------|
| | a) | Which reagent is used for oxidation of allylic or benzylic C-H fragments to the | (1) |
| | • \ | corresponding allylic or benzylic alcohols? | |
| | b) | Draw the reaction sequence of Stephen synthesis. | (1) |
| | c) | Draw the structure of intermediate formed by oxidation of alkene with ozone. | (1) |
| | d) | Which reagent is used for synthesis of glucaric acid from glucose? | (1) |
| | e) | Give modern definition of terpenoids. | (1) |
| | f) | What is the structure of isoprene? | (1) |
| | g) | Give example of bicyclic monoterpenoid. | (1) |
| | h) | Which chemical reaction is used for lengthening of carbon chain in aldose? | (1) |
| | i) | What are different classes of amino acids based on their nutritional requirement? | (1) |
| | j) | What is zwitterionic nature of amino acids? | (1) |
| | k) | Draw the structure of Pregvanil. | (1) |
| | 1) | What are different classes of dyes based on their method of application? | (1) |
| | m) | What are different classes of terpenoids? | (1) |
| | n) | Draw the structure of methyl orange. | (1) |
| Attemp | t any f | our questions from Q-2 to Q-8 | |
| Q-2 | | Attempt all questions | (14) |
| | a) | Explain MPV reduction and Skraup synthesis with mechanism. | (7) |
| | b) | Explain the applications of LiAlH ₄ in organic synthesis. | (7) |
| Q-3 | | Attempt all questions | (14) |
| | a) | Write a note on | (7) |
| | α, | (i) Ullmann reaction, | (,) |
| | | (ii) Silanes and | |
| | | (iii)KMnO ₄ . | |
| | b) | Explain the chemical reactions for determining constitution of menthol. Write the | (7) |
| | D) | synthesis of menthol from myrcene. | (1) |
| | | syndicals of mendiof from myreche. | |



| Q-4 | | Attempt all questions | (14) |
|-----|------------|---|-------------|
| | a) | Explain the chemical reactions for determining constitution of citral with its | (7) |
| | | method of synthesis. | |
| | b) | Write a note on carotenoids. | (7) |
| Q-5 | | Attempt all questions | (14) |
| | a) | Write a note on β-carotene and geometrical isomerism in Vitamin-A. | (7) |
| | b) | Write a note in isomerism in glucose and fructose. | (7) |
| Q-6 | | Attempt all questions | (14) |
| | a) | Define carbohydrates. Explain classification of carbohydrates with suitable examples. | (7) |
| | b) | Explain chemical reactions of carbohydrates. | (7) |
| Q-7 | | Attempt all questions | (14) |
| | a) | Discuss synthesis of Diamond Black-F and Malachite Green. | (7) |
| | b) | Define Dye. Explain classification of dyes based on their chemical composition. | (7) |
| Q-8 | | Attempt all questions | (14) |
| | a) | Define Drug. Explain classification of drugs with suitable example. | (7) |
| | b) | Draw the reaction sequences for the synthesis of Phenacetin and | (7) |
| | , | Chloramphenicol. | ` ' |

