Enrolment ID:	

Navrachana University School of Liberal Studies and Education, B.Sc. End-Semester Examination November 2017 Second Year, Semester III Carbon and its compounds, CH 201

Date: 20/11/2017 Time: 3:30 - 5:30 PM

Marks: 40

Instructions:

- · All Sections are compulsory.
- Write each answer on a new page and clearly indicate question number.
- This question paper contains THREE Pages.

Section A

1. State name of the reaction.

 $[4 \times 1 = 4 \text{ marks}]$

(a)
$$H_2C$$
 $+2Na$ \xrightarrow{ether} H_2C $+2NaX$ CH_2 $+2NaX$ CH_2 $CYClopropane$

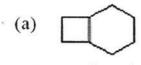
(b)
$$C$$
 R' R R R in presence of $Zn(Hg)$ in $HC1$

(c)
$$R_2CuLi + R'-X \longrightarrow R-R' + RCu + LiX$$

(d)
$$\mathbf{X} - \mathbf{X} + - \mathbf{\dot{c}} - \mathbf{H} \xrightarrow{h\nu} - \mathbf{\dot{c}} - \mathbf{X} + \mathbf{H} - \mathbf{X}$$

2. Write down the structural formula of the followings

 $[4 \times 0.5 = 2 \text{ marks}]$





3. Draw the mechanism of the following.

[2 marks]

$$x-x + -c-H \xrightarrow{hv} -c-x + H-x$$

What is Sabatier and Senderen's method, give one suitable example.

4. What product will be obtained in the following reactions?

 $[2 \times 1=2 \text{ marks}]$

(a)
$$\frac{H_2}{\text{Ni 200°}}$$
?

$$\Delta \xrightarrow{\text{1. H}_2\text{SO}_4} ?$$

1. Write a short note on the following.

[4 marks]

(a) petroleum refining

or

(b) Bayer strain theory

Section B

- 1. Specify reagents & write overall reaction for converting 3-ethyl-2-pentene to each of the following:- $[6 \times 2=12 \text{ marks}]$
 - (a) 2,3-Dibromo-3-ethylpentane
 - (b) 3-Chloro-3-ethylpentane
 - (c) 2-Bromo-3-ethylpentane
 - (d) 3-Ethyl-3-pentanol
 - (e) 3-Ethyl-2-pentanol
 - (f) 3-Ethylpentane
- 2. Answer any THREE questions in brief: -

 $[3 \times 2=6 \text{ marks}]$

(a) "Acetylene is a stronger acid than ammonia, but weaker acid than water". Explain this statement.