Sessional Examination B.Sc. 5th SEM Organic chemistry 2024 Time: 90 minutes Marks: 40 1. Choose the correct answer [1x2=2]a. The pyramidine base present in DNA are ii. Cytosine and guanine i. Cytosine and adenine iv Cytosine and uracil iii Cytosine and thymine b. Which position of the purine base is attached to 1-position of pentose sugar in a polynucleotide chain? iii N-7 i. N-1 iv N-9 ii N-3 2. Answer any one a. Write the structure and names of purines and pyramidines that are presents in DNA and RNA. b. Distinguish between RNA and DNA 3. Write short notes on (any one) [3x1=3]Biosynthesis of protein. b. Replication of DNA c. Watson Crick double helix structure of DNA 4. Write synthetic equivalent of the following synthons [2] NO2 5. How would you synthesise the following by retrosynthesis (any two) $[2^{1}/2x2=5]$ CHO 6. Answer any three [2x3=6]a. What is essential and non essential amino acid? Explain with examples b. How will you determine the primary structure of a tripeptide by Edman method? c. How will you synthesise leucine? d. How will you prepare alanylvaline? 7. Short note (any three) [3×3=9] Characteristics of enzyme (b) Mechanism of enzyme action (c) Phenomenon of Inhibition (d) Coenzymes and cofactors 8. Answer any five of the following questions. $[5 \times 2 = 10]$ (a) Define mode of action of antimalarial drug. (b) Write down the synthesis process of paracetamol.

- (c) Prepare sulphanilamide from 1. benzene and 2. Acetanilide.
- (d) What is Ranitidine. Write down four therapeutic uses of ranitidine.
- (e) Write down the medicinal value of vitamin c and azadirachtin.
- (f) Short note on chloramphenicol.
- (g) Define antibacterial, antacid and antibiotic with examples.
- 9. Draw the structure of Vitamin C.