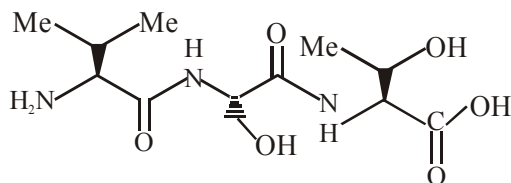
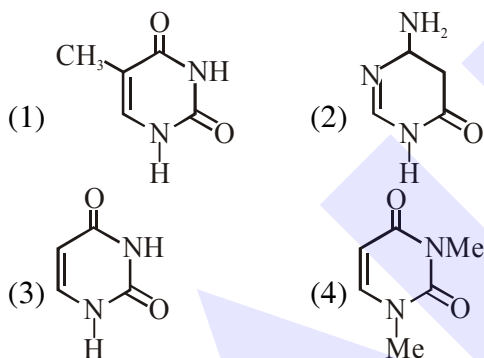


BIOMOLECULE

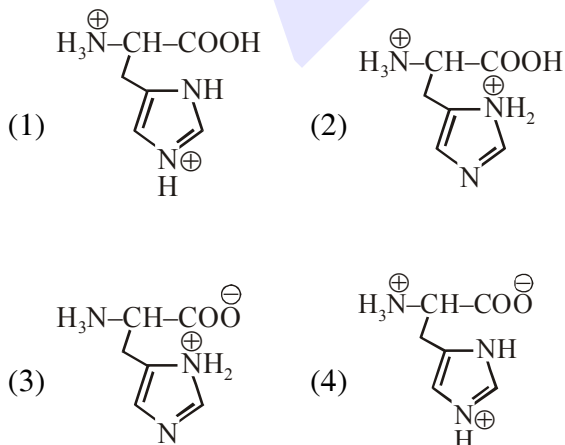
1. The correct sequence of amino acids present in the tripeptide given below is :



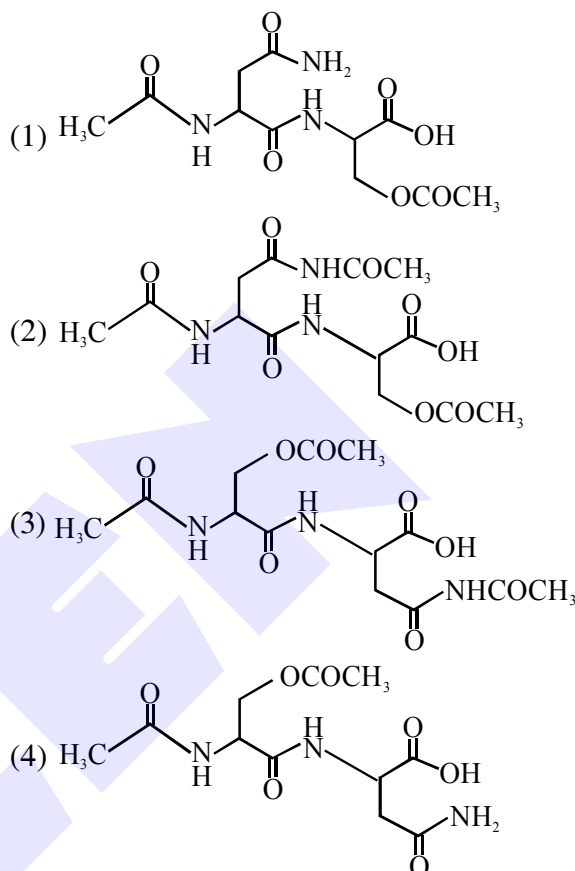
- (1) Leu - Ser - Thr
 (2) Thr - Ser - Leu
 (3) Thr - Ser - Val
 (4) Val - Ser - Thr
2. Which of the following tests cannot be used for identifying amino acids ?
 (1) Biuret test (2) Xanthoproteic test
 (3) Barfoed test (4) Ninhydrin test
3. Among the following compound which one is found in RNA ?



4. The correct structure of histidine in a strongly acidic solution (pH=2) is



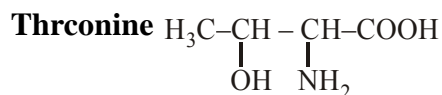
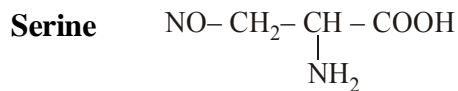
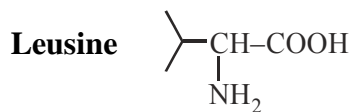
5. The correct structure of product 'P' in the following reaction is :



6. Maltose on treatment with dilute HCl gives :
 (1) D-Galactose
 (2) D-Glucose
 (3) D-Glucose and D-Fructose
 (4) D-Fructose
7. Fructose and glucose can be distinguished by :
 (1) Fehling's test (2) Barfoed's test
 (3) Benedict's test (4) Seliwanoff's test
8. Which of the following statements is not true about sucrose?
 (1) On hydrolysis, it produces glucose and fructose
 (2) The glycosidic linkage is present between C₁ of α-glucose and C₁ of β-fructose
 (3) It is also named as invert sugar
 (4) It is a non reducing sugar
9. The peptide that gives positive ceric ammonium nitrate and carbylamine tests is :
 (1) Lys-Asp (2) Ser-Lys
 (3) Gln-Asp (4) Asp-Gln

SOLUTION

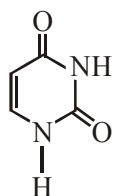
1. **Ans. (4)**



2. **Ans.(3)**

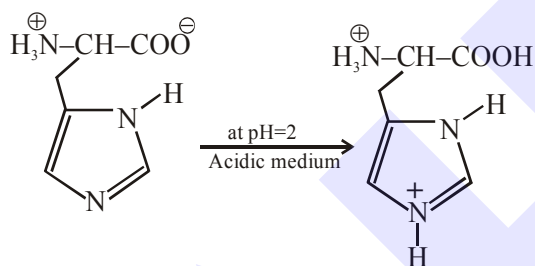
3. **Ans.(3)**

For the given structure 'uracil' is found in RNA



4. **Ans. (1)**

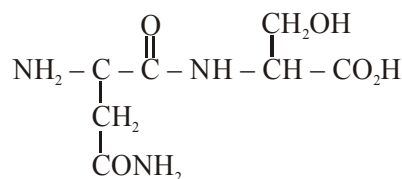
Histidine is



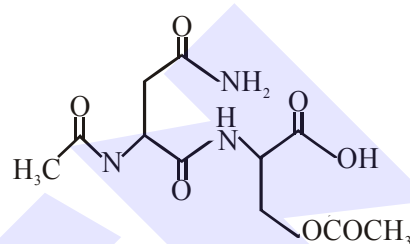
Zwitter ionic form
pIn = 7.59

5. **Ans. (1)**

Asn-Ser is dipeptide having following structure

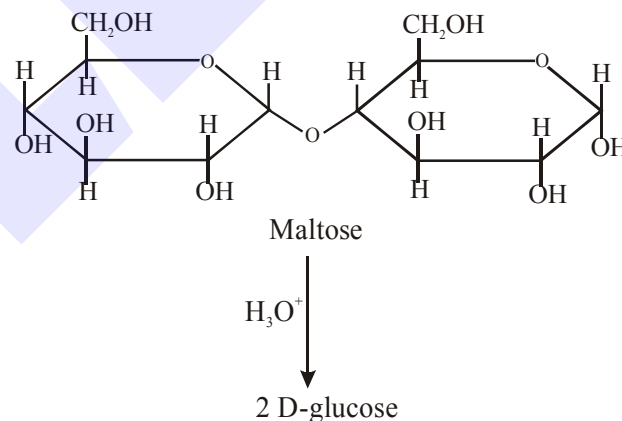


P is



6. **Ans. (2)**

Sol.



7. **Ans. (4)**

Sol. Seliwanoff's test is used to distinguished aldose and ketose group.

8. Ans. (2)

Sol. Sucrose $\xrightarrow{H_2O}$ α -D-glucose + β -D-fructose
also named as invert sugar & it is a example of non-reducing sugar.

The glycosidic linkage is present between C_1 of α -glucose & C_2 of β -fructose.

9. Ans. (2)

Sol. Serine \Rightarrow $HO - \overset{\overset{O}{\parallel}}{C} - \underset{\underset{NH_2}{|}}{CH} - CH_2 - OH$

Lysine \Rightarrow $H_2N - CH_2 - CH_2 - CH_2 - CH_2 - \underset{\underset{NH_2}{|}}{CH} - \overset{\overset{O}{\parallel}}{C} - OH$

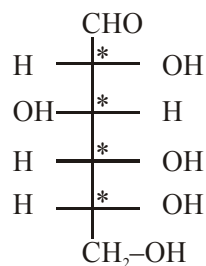
Lysine has $-NH_2$ group hence gives \oplus ve carbyl amine test and serine has $-OH$ group hence gives \oplus ve ferric ammonium nitrate test

10. Ans. (1)

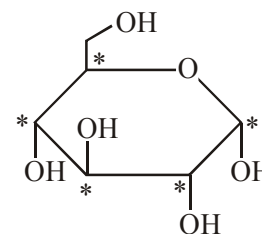
Sol. Amylopectin is a homopolymer of α -D-glucose where C_1-C_4 linkage and C_1-C_6 linkage are present.

11. Ans. (1)

Sol.



D-Glucose
(Linear structure)



α -D-Glucose
(cyclic structure)

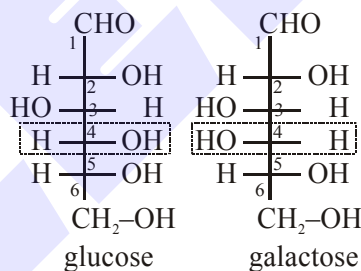
* :- Stereocenter

12. Ans. (1)

Sol. RNA is a single stranded structure.

13. Ans. (3)

Sol. Glucose and galactose are C-4 Epimer's



14. Ans. (1)

Sol. Glycogen is an animal starch.
It consists of α -amylose and amylopectin.
Amylopectin is branched chain polysaccharide
Hence statement (1) is incorrect.