

**JEE MAIN ANSWER KEY & SOLUTIONS**

**SUBJECT :- CHEMISTRY**

**CLASS :- 12<sup>th</sup>**

**PAPER CODE :- CWT-11**

**CHAPTER :- BIOMOLECULES**

**ANSWER KEY**

1. (C)	2. (A)	3. (C)	4. (D)	5. (C)	6. (B)	7. (B)
8. (B)	9. (C)	10. (C)	11. (D)	12. (D)	13. (A)	14. (D)
15. (B)	16. (D)	17. (B)	18. (B)	19. (D)	20. (D)	21. 32
22. 2	23. 10	24. 5	25. 5	26. 6	27. 3	28. 16
29. 2	30. 6					

**SOLUTIONS**

1. (C)

Sol. Ribose

2. (A)

Sol. C<sub>1</sub> and C<sub>5</sub>

3. (C)

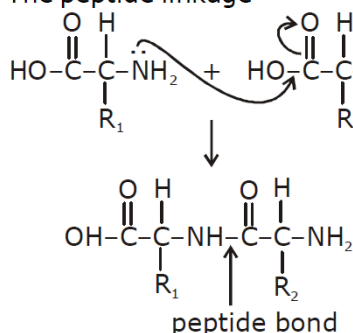
Sol. Inversion

4. (D)

Sol. Haemoglobin

5. (C)

Sol. The peptide linkage  
The peptide linkage



6. (B)

Sol. Secondary structure of protein

7. (B)

Sol. Glycine

8. (B)

Sol. Myoglobin or Haemoglobin

9. (C)

Sol. Fats > Carbohydrates > Protein

10. (C)

Sol. Vitamin necessary for blood clotting is K

11. (D)

Sol. phosphoric group

12. (D)

Sol.  $\frac{A+G}{C+T} = 1$

13. (A)

Sol. Sucrose

14. (D)

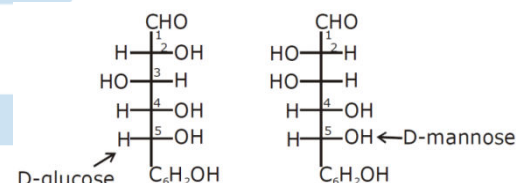
Sol. Proteins

15. (B)

Sol. Phosphate

16. (D)

Sol.

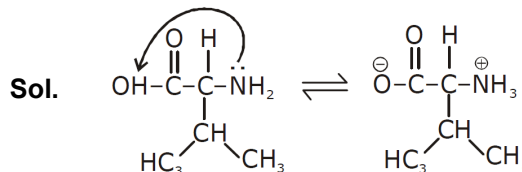


So C<sub>2</sub> epimer of D-glucose is D-mannose

17. (B)

Sol. C<sub>3</sub> Epimer of D glucose is D-Allose

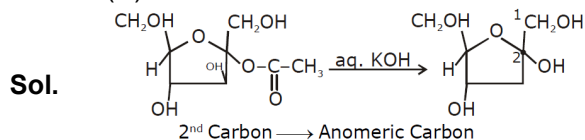
18. (B)



19. (D)

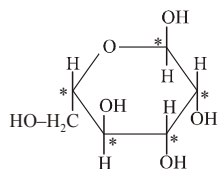
Sol. In amylose 1,4-glycosidic linkage is present.

20. (D)



21. 32

Sol.



Cyclic structure of

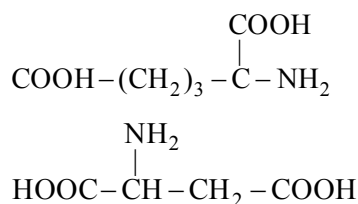
glucose

Chiral carbon = 5

Total stereoisomer =  $2^5 \Rightarrow 32$

22. 2

Sol.

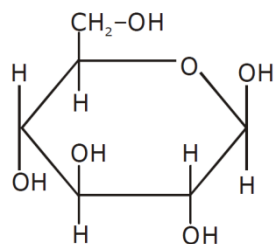


23. 10

Sol. Oligosaccharides  $\Rightarrow$  2-10  
monosaccharide units are present.

24. 5

Sol.



5 chiral atom are present.

25. 5

Sol. Astereogenic center is also known as a chiral center so the number of stereogenic center in  $\alpha$ -D- Glucose are 5.

26. 6

Sol.  $pK_a = 2.34$

$pK_{a2} = 9.60$

$$pI = \frac{pK_a + pK_{a2}}{2} = \frac{2.34 + 9.60}{2} = \frac{11.94}{2} = 5.92$$

27. 3

Sol. Cellulose, Starch, Sucrose

28. 16

29. 2

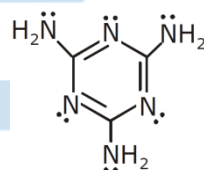
Sol.  $-\overset{\overset{\text{O}}{\parallel}}{\text{C}}-\bar{\text{O}}$  is Conjugate base,  $-\text{NH}_2$  is basic,  $\text{NH}_3^+$  is

acidic

Total no. is 2

30. 6

Sol.



Melamine

Lone pairs of electrons in melamine is 6.