

7. A chemist has 4 samples of artificial sweetener A, B, C and D. To identify these samples, he performed certain experiments and noted the following observations:

[Jan. 09, 2020 (I)]

- (I) A and D both form blue-violet colour with ninhydrin.  
(II) Lassaigne extract of C gives positive  $\text{AgNO}_3$  test and negative  $\text{Fe}_4[\text{Fe}(\text{CN})_6]_3$  test.  
(III) Lassaigne extract of B and D gives positive sodium nitroprusside test.

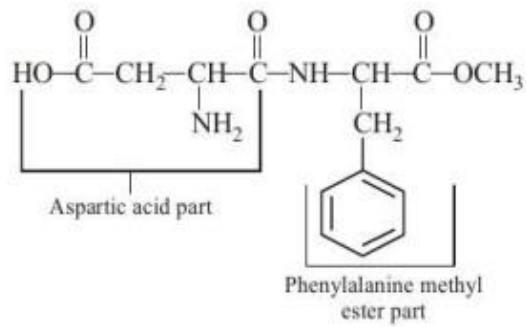
Based on these observations which option is correct?

- (a) A : Aspartame;      B : Saccharin;  
    C : Sucralose;      D : Alitame  
(b) A : Alitame;        B : Saccharin;  
    C : Aspartame;     D : Sucralose  
(c) A : Saccharin;     B : Alitame;  
    C : Sucralose;     D : Aspartame  
(d) A : Aspartame;    B : Alitame;  
    C : Saccharin;     D : Sucralose

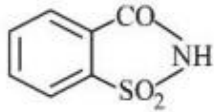
Ans. a)



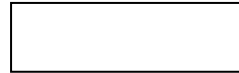
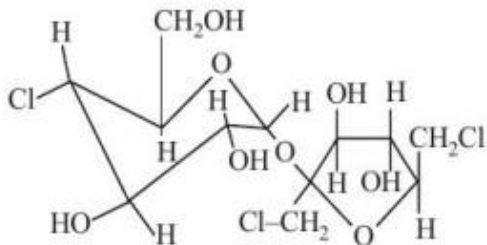
7. (a) A – Aspartame



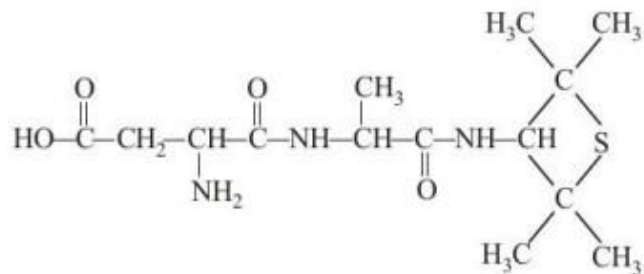
B – Saccharine



C – Sucralose



D – Alitame



- (I) A and D give positive test with ninhydrin because both have free carboxylic and amine groups.
- (II) C form precipitate with  $\text{AgNO}_3$  in the lassaing extract of the sugar because it has chlorine atoms.
- (III) B and D give positive test with sodium nitroprusside because both have sulphur atoms.