



**ST. LAWRENCE HIGH SCHOOL**  
A JESUIT CHRISTIAN MINORITY INSTITUTION



**WORKSHEET-6**

**SUBJECT - STATISTICS**

Term : 1<sup>st</sup>

**Topic - INTERPOLATION**

**Class: XI**

**Full Marks: 15**

**Date: 22.06.2020**

Q1. Select the correct alternative of the following questions.

- (i)  $f(2) = 9, f(4) = 63, f(6) = 221, f(8) = 506$ , then  $\Delta^3 f(2) =$   
(a) 53 (b) 55 (c) 57 (d) none of these
- (ii)  $u_0 = 5, u_1 = 12, u_2 = 81, u_3 = 200, u_4 = 100, u_5 = 8$ , then  $u_0^5 =$   
(a) 750 (b) 755 (c) 760 (d) none of these
- (iii) Arguments are variables which have differences  
(a) Same (b) different (c) only linear (d) none of these
- (iv) Entries are variables which have differences  
(a) Same (b) different (c) only linear (d) none of these
- (v)  $h$  denotes the difference which is  
(a) monotonic (b) random (c) stationary (d) none of these
- (vi) The arguments are in order  
(a) Random (b) monotonic (c) stable (d) none of these
- (vii) If the second order difference is zero, then  $\Delta f(x)$  are  
(a) increasing (b) decreasing (c) constant (d) none of these

- (viii) If all the entries have same value, then the polynomial is of degree  
 (a) -1 (b) 0 (c) 1 (d) none of these
- (ix) If all the entries have same 2<sup>nd</sup> order differences as same value, then the polynomial is of degree  
 (a) 1 (b) 1 (c) 2 (d) none of these
- (x) If the arguments are first n even natural numbers (starting from 2), then  $x_0 + h =$   
 (a) 4 (b) 6 (c) 8 (d) none of these
- (xi) The values of x and y are mathematically  
 (a) related (b) not related (c) independent (d) none of these
- (xii) In interpolation there can be only one way to find entry  
 (a) true (b) false (c) sometimes (d) none of these
- (xiii) Given n arguments and entries the polynomial is of degree  
 (a) n (b) n+1 (c) n-1 (d) none of these
- (xiv) The entries have differences different in columns of difference table  
 (a) always (b) sometimes (c) both (d) none of these
- (xv) If the entries are linear in nature, then the second order difference is  
 (a) -1 (b) 1 (c) 0 (d) none of these

- **Prepared by**  
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