ST. LAWRENCE HIGH SCHOOL

A JESUIT CHRISTIAN MINORITY INSTITUTION

WORKSHEET-7

SUBJECT – STATISTICS

Term : 1st

Topic – INTERPOLATION **Class: XI**

Full Marks: 15 **Date:23.06.2020**

Q1. Select the correct alternative of the following questions.

(i) $\Delta^3 f(3x^2 + 2x + 7) =$

(a)0 (b) 3 (c) 1 (d) none of these

(ii) $\Delta f(x) =$

(a)$f(x) - f(x-h)$ (b) $f(x) - f(x+h)$

(c) $f(x+h) - f(x)$ (d) none of these

(iii) $\Delta (5e^{4x}) =$

(a) $20\Delta e^{4x}$ (b) $4\Delta e^{5x}$ (c) $5\Delta e^{4x}$ (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 successive difference of

(a)argument (b) entries (c) both (d) none of these

(vi) The entries are in order

(a) Random (b) monotonic (c) stable (d) none of these

(vii) If the fifth order difference is zero, then $\Delta f(x) are$

(a) increasing (b) decreasing (c) may be both (d) none of these

(viii) If all the entries have value 7, then the polynomial is of degree
(a) -1 (b) 0 (c) 1 (d) none of these

(ix) If all the entries have same 3rd order differences as same value, then the polynomial is of degree
(a) 0 (b) 1 (c) 2 (d) none of these

(x) If the arguments are first n natural numbers (starting from 1), then $h =$
(a) 1 (b) 2 (c) 0 (d) none of these

(xi) Given the arguments are 1,2,3,4,5, to find the entry for 1.5, twe use Newton's
(a) forward formula (b) backward formula
(c) intermediate formula (d) none of these

(xii) Given the arguments are 1,2,3,4,5, to find the entry for 3.5, twe use Newton's
(a) forward formula (b) backward formula
(c) intermediate formula (d) none of these

(xiii) Given 3n-1 arguments and entries the polynomial is of degree
(a) 3n (b) 3n+1 (c) 3n-3 (d) none ofthese

(xiv) If all the arguments have value 7, then the polynomial is of degree
(a) -1 (b) 0 (c) 1 (d) none of these

(xv) If all the arguments have same 3rd order differences as same value, then the polynomial is of degree
(a) 0 (b) 1 (c) 2 (d) none of these

- **Prepared by**
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