MATHEMATICS 2013

Time: 30 minutes 10th Class Karachi Board Max. Marks: 20

SECTION 'A' MULTIPLE CHOICE QUESTION

1. Choose the correct answer for each from the given options: (20)

(i) In the relation R = {(2, -3), (2, 6), (2, 3)} the range of R is:
(a) {3, 6} (b) {2} (c) {2, 3) (d) None of them.

(ii) If $A = \begin{bmatrix} 5 & 6 \\ 3 & -1 \end{bmatrix}$, then $A^t =$

(a) $\begin{bmatrix} 3 & -1 \\ 5 & 6 \end{bmatrix}$ (b)√ $\begin{bmatrix} 5 & 3 \\ 6 & -1 \end{bmatrix}$ (c) $\begin{bmatrix} -1 & 3 \\ 6 & 5 \end{bmatrix}$ (d) $\begin{bmatrix} 5 & 6 \\ 3 & -1 \end{bmatrix}$

(iii) The degree of given polynomial $\sqrt[3]{(a^2-b)^3}$ is:
(a) 1 (b) 3 (c) 2 (d) 5

(iv) The logarithmic form of $2^5 = 32$ is:
(a) $\log_{32} 5=2$ (b) $\log_2 32=5$ (c) $\log_5 32=2$ (d) None of these

(v) The characteristics of 6.67×10^{-11} is:
(a) 3 (b) -3 (c) 5 (d) None of them

(vi) Diameter is twice of the:
(a) Radius (b) perpendicular (c) chord (d) tangent

(vii) If 5 : 8 :: 5 : x, then value of x is:
(a) 40 (b) 25 (c) 5 (d) 8

(viii) The solution set of $|y - 3| = 4$ is:
(a) {-1, 2} (b) {-2, 2} (c) {7, -1} (d) {1, 3}

(ix) If x = {2, 3, 5, 7, 11}, then all the numbers in x are:
(a) Prime numbers (b) Natural numbers
(c) Odd numbers (d) Even numbers

(x) $\sqrt{1-\sin^2\theta}$ =.....
(a) Cos θ (b) tanθ (c) Secθ (d) Sinθ

(xi) A circle which touches all the sides of a triangle is called: (a) Inscribed circle (b) Escribed circle
(c) circum circle (d) None of them

(xii) Cot x = (a) $\sqrt{\frac{\cos x}{\sin x}}$ (b) $\frac{\sin x}{\cos x}$ (c) $\frac{1}{\cos x}$ (d) $\frac{1}{\sec x}$

(xiii) If a : b :: b: c then b is called:
(a) 1st proportion (b) Mean proportion
(c) 4th proportion (d) None of them

(xiv) The value appears most often in a set of data is called:
(a) Arithmetic mean (b) Median (c) Mode (d) Average

(xv) The multiplicative inverse of – ½ is:
(a) 2 (b) -2 (c) 6 (d) none of them

(xvi) $\tan^2\theta + 1$ = ...
(a) $\sin^2\theta$ (b) $\sec^2\theta$ (c) $\cot^2\theta$ (d) $-\tan^2\theta$

(xvii) In a series 0, 1, 4, 6, 7, 9, 12 the median is:
(a) 7 (b) 6.5 (c) 6 (d) 9

(xviii) cos 80° = ...
(a) Sin10° (b) cosec10° (c) cot10° (d) None of them

(xix) $(\frac{1}{2})^3$ = ...
(a) 8 (b) 1/8 (c) 6 (d) 1/6

(xx) 3^0 = ...
(a) 3 (b) 0 (c) 1 (d) 2