DISTRICT PUBLIC SCHOOL & COLLEGE, KASUR

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Class	**8th**
Subject	**Mathematics**
Term	**1st**
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Chapter: 1
Operations on Sets
Multiple Choice Questions

1 if U = {1,2,3,4,5,….10} , which is the subset of U?

(a) {2,11} (b) {11,13,15} (c) {2,7} (d) {10,20}

2 which is the improper subset of A = {20,40,60}

(a) {20} (b) {20,40} (c) {20,40,60} (d) {20,60}

3 which is correct for associative law.

(a) AU(B∩C) = (A∪B)∩(AUC) (b) A∩(BUC) = (A∩B)U(A∩C)

(c) AU(BUC) = (AUB)UC (d) AU(B∩C) = (AUB)∩C

4 how many subsets does the set A = {a,b,c,d,e } have?

(a) 25 (b) 16 (c) 32 (d) 18

5 ϕUA-------- ϕ

(a) = (b) ⊂ (c) ≠ (d) ∩

6 if AUB = B and A∩B = B then A-------B

(a) = (b) ≠ (c) ⊆ (d) ⊃

7 every set is a subset of _____.

(a) Itself (b) null (c) unit set (d) singleton set

8 power set of null set contains _____ subsets

(a) one (b) two (c) three (d) four

9 An improper subset is _____ to the original set.

(a) Equal (b) lesser (c) greater (d) not equal

10 AU(B∩C) = _____

(a) (AUB)∩(AUC) (b) (AUB)UC (c) (A∩B)∩C (d) (AUB)∩(BUC)

11 $(A \cap B)^c$ = ---------

(a) $A^c \cap B^c$ (b) $A^c \cup B^c$ (c) A∩B (d) $(AUB)^c$

12 If A = { a,b,c} , AUB = { a, b, c, f, g, h} and A∩B = ϕ , then B = _____

(a) { a, b, c, f } (b) { f, g, h } (c) { a, b, c, g } (d) { c, f, g, h }

13 If U = {1, 2, 3, …. 10}, A = {1, 3, 5, 7, 9 } and B = { 2, 4, 6, 8, 10 } then $(A - B)^c$ = _____

(a) U (b) A (c) B (d) ϕ

14 _____ is the subset of every set.

(a) Super set (b) power set (c) unit set (d) empty set

15 If AUB = A then

(a) A⊆B (b) B ⊇ A (c) A = B (d) A ⊇ B

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Chapter: 5
Exponents
Multiple Choice Questions

1 $a^m \times a^n$ = _____
(a) a^{m+n} (b) a^{m-n} (c) a^{mn} (d) no one

2 a^{m-n} = _____
(a) $a^{m \times n}$ (b) $a^m \div a^n$ (c) a^{m+n} (d) $a^m \div ^n$

3 $(\frac{a}{b})^m$ = _____
(a) $a^m \div a^n$ (b) $(ab)^m$ (c) $(a - b)^m$ (d) $(a + b)^m$

4 Any number other than zero raised to the power of zero is ……..
(a) 0 (b) 1 (c) 10 (d) 2^0

5 $\sqrt[3]{8}$ = ……
(a) 2 (b) $\sqrt[3]{2}$ (c) 8 (d) 8^3

6 $a^{\frac{1}{n}}$ = …….
(a) a^n (b) $\sqrt[n]{a}$ (c) $\sqrt{a^n}$ (d) $a^{n\,x\,\frac{1}{n}}$

7 $3\sqrt{2}$ and $5\sqrt[3]{2}$ are called ---------- surds.
(a) simple (b) similar (c) dissimilar (d) mixed

8 $5\sqrt[3]{2}$ is ---------- surd.
(a) simple (b) similar (c) dissimilar (d) mixed

9 two surds are said to be similar if their ---------- parts are same.
(a) similar (b) irrational (c) rational (d) simple

10 $(\sqrt{2})^6$ = ----------
(a) 16 (b) 32 (c) 64 (d) 8

11 $4(a^3)^0$ = ----------
(a) 1 (b) 0 (c) 4a (d) 4

12 what power of 10 gives the answer 1,000,000,000 ?
(a) 10 (b) 11 (c) 9 (d) 12

13 what is the simplest form of $\frac{4}{\sqrt{3}}$?
(a) $\frac{4\sqrt{3}}{3}$ (b) $\frac{4}{9}$ (c) $\frac{2}{3}$ (d) $\frac{2}{\sqrt{3}}$

14 $(2^{\frac{1}{2}})^8$ = ---------
(a) 16 (b) 32 (c) 64 (d) no one

15 what is the third power of the base 6?
(a) 216 (b) 886 (c) 512 (d) 226

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Chapter: 12
Operations on Polynomials

Multiple Choice Questions

1 multiplication of polynomial is based in ---------- law.
(a) distributive (b) associative (c) symmetrical(d) multiplication

2 when (a + 12) and (b – 12) are multiplied using the foil methods, the term ---------- and---------- are multiplied first
(a) b & 12 (b) a & b (c) b & -12 (d) a, 12

3 the foil method is used to multiply ……..
(a) monomials(b) binomials (c) trinomials (d) all

4 when $48x^4 – 18x$ is divided by 6, the answer is ----------
(a) $48x^4 – 3x$ (b) $8x^4 – 3x$ (c) $x^4 – 3x$ (d) $x^4 – x$

5 (2a + b) is a ---------- expression.
(a) monomial (b) binomial (c) trinomial (d) all

6 when 5x4 – 5x3 + 3x2 is divided by x2, there is ---------- remainder.
(a) x (b) x^2 (c) no (d) 3

7 what is the product of (a+1)(a+2)
(a) $a^2 + 3a + 3$ (b) $a^2 + 2a + 2$ (c) $a^2 + 3a + 2$ (d) $a^2 + 5a$

8 what is the product of (x + 5)(x – 3)
(a) $x^2 + 2x – 15$(b) $x^2 + 10x – 25$ (c) $x^2 + 2x – 20$ (d) $x^2 + 3x – 15$

9 what is the first term of quotient in $2x^2 + 7x + 7 \div x + 2$
(a) 3x (b) 2x (c) x (d) 4x

10 what is the product when (x + 1) is multiplied by $(x^2 + 2x)$?
(a) $x^3 + 3x^2 + 2x$(b) $x^4 + 2x^2$ (c) $x^2 + 2x + 2$ (d) $2x^2 + x$

11 ---------- method is the best suited for multiply binomials
(a) grid (b) long division (c) long multiplication(d) foil

12 for multiplying other than binomials we use ---------
(a)Foil method(b) distributive law (c) Grid method (d) long division method

13 Dividend = Quotient × Divisor + ----------
(a)Remainder (b) Product (c)divisor (d) none

14 When you need to add exponents, their coefficients should also be ----------
(a) Subtracted (b) Divided (c)multiplied (d) added

15 the division resulting non-zero remainder is known as--------- division.
(a)proper (b) improper (c)exact (d)inexact

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Chapter: 13
Algebraic Identities
Multiple Choice Questions

1 $a^3 - b^3 - 3ab(a - b) = ?$

(a) $(a + b)^3$ (b) $a^3 + b^3$ (c) $a^3 - b^3$ (d) $(a - b)^3$

2 $a^3 - 3a^2b + 3ab^2 - b^3 = ?$

(a) $(a + b)^3$ (b) $a^3 + b^3$ (c) $(a - b)^3$ (d) $a^3 - b^3$

3 If $a + b = 1 + ab$ then $a^3 + b^3 = ?$

(a) $1 + a^3b^3$ (b) $1 - 3ab(a + b)$ (c) $1 - a^3b^3$ (d) $1 + 3ab$

4 If $x + \frac{1}{x} = 5$ then $x^3 + \frac{1}{x^3} = ?$

(a) 10 (b) 140 (c) 110 (d) 40

5 If $x + y = 4$ then $x^3 + y^3 + 12xy = ?$

(a) 64 (b) 76 (c) 52 (d) no one

6 simplify $(2x + 3y)^2 + (2x - 3y)^2 = ?$

(a) $x^2 + y^2$ (b) $6xy$ (c) $8x^2 + 18y^2$ (d) $36x^2y^2$

7 If $x + y = 1$ and $x^2 + y^2 = 13$, then what will be the value of XY?

(a) 12 (b) -6 (c) 6 (d) -12

8 If $x + y = 3$, $xy = 4$, then what will be the value of $x^2 + y^2$?

(a) -7 (b) 7 (c) 25 (d) 1

9 Expand by using identity $(\quad + 2x)^2$

(a) $4x^2 + \frac{1}{4x^2}$ (b) $4x^2 + 1$ (c) $4x^2 + \frac{1}{4x^2} + 2x$ (d) $4x^2 + \frac{1}{4x^2} + 2$

10 find the value of $x^3 + y^3$, if $x + y = 3$ and $xy = \frac{5}{3}$

(a) 12 (b) 15 (c) 3 (d) $\frac{9}{15}$

11 find the value of cube with each side $(3x + 5)$cm

(a) $9x^2 + 30x + 25$ (b) $27x^3 + 45x^2 + 75x + 125$ (c) $12x + 20$ (d) $27x^3 + 125$

12 Expand by using identity $(\frac{1}{x} + x)^2$

(a) $x^2 - \frac{1}{x^2}$ (b) $x^2 + \frac{1}{x^2} + 2$ (c) $2x^2 - 1$ (d) $x^2 + \frac{1}{x^2} + 2x$

13 simplify $(4x + 5y)^2 + (4x - 5y)^2 = ?$

(a) $20xy$ (b) $40xy$ (c) $x^2 + y^2$ (d) $32x^2 + 50y^2$

14 find the value of $(x + y)$ if $x^2 + y^2 = 19$ and $xy = 3$

(a) 5 (b) 6 (c) 3.5 (d) 0

15 find the value of xy if $x^3 + y^3 = 12$ and $x + y = 3$

(a) 15 (b) 12 (c) $\frac{5}{3}$ (d) 3

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Chapter: 23
Information Handling
Multiple Choice Questions

1 statistic is a branch of mathematics that involves drawing, conclusion from collected _____ data
(a) raw (b) primary (c) numerical (d) secondary

2 which is the example of primary data?
(a) Surveys (b) book (c) government report (d) article on internet

3 data is divided into a number of classes each of which is called_____
(a) class limits (b) class interval (c) frequency (d) no one

4 the maximum and minimum values with in which a class interval lies are called_____
(a) class limits (b) class magnitude (c) range (d) no one

5 the number of times each item appears in a class interval is called _____
(a) class size (b) class mark (c) frequency (d) a & b

6 the difference between maximum and minimum scores is known as _____
(a) class mark (b) frequency (c) class limits (d) range

7 the range of the data 19, 30, 21, 24, 67, 50 is
(a) 31 (b) 48 (c) 43 (d) 21

8 the mean value of a data set is _____ value of the given data.
(a) data (b) certain (c) middle (d) average

9 what is the mean of the data set; 4, 8, 12, 16, 20
(a) 12 (b) 16 (c) 14 (d) 10

10 the most frequent value in the data set is called _____
(a) mean (b) median (c) mode (d) range

11 what is the median value in the given data set; 2, 55, 12, 8, 19, 4, 7
(a) 8 (b) 12 (c) 4 (d) 7

12 what is the mean of the data; 7, 2, 34, 90, 8, 43, 11
(a) 26.8 (b) 27.8 (c) 27.5 (d) 30

13 what is the mode of the data; 5, 10, 15, 20, 10, 30, 40
(a) 20 (b) 10 (c) 15 (d) 40

14 what is the formula for weighted mean?
(a) $\frac{\Sigma Fx}{\Sigma F}$ (b) $\frac{\Sigma Fx}{n}$ (c) $\frac{\Sigma F}{\Sigma X}$ (d) $\frac{\Sigma XW}{\Sigma W}$

15 which of these is not an example of secondary data?
(a) a government report (b) personal interview
(c) a newspaper report (d) a journal article

Definitions 1st term Class: 8th

Set: A set is a collection of well- defined or distinct objects.

Subset: If each element of a set A is also an element of another set B, then the set A is called the subset of the setB. the symbol $\subseteq$ is used to denote a subset.

Proper subset: If every element of A is also an element of B and at least one element of B is not an element of A, then , A is a proper subset of B.the symbol $\subset$ is used to denote for proper subset.

IMPROPER SUBSET :

A subset that contains every element of the set A is called the improper subset of A. the improper subset and original set are equal as they contain the same elements.

Power set: A powerset is a set that contains all the subsets that can be possibly created froman original set.

Commutative Property on Union: Changing the places of sets in the union operation gives the same union set. This is called the commutative property of union of sets.

De Morgen's Laws.

If A and B are the subsets of the universal set U then the relation

1 $(AUB)^{/} = A^{/} \cap B^{/}$

2 $(A \cap B)^{/} = A^{/} U B^{/}$ is called De Morgen's Law.

Exponent: The exponent of a number represents the number of times a particular number has been multiplied.

Surd: An irrational radical with rational radicand is called surd.

Mean: The mean value of a set of data is the average value of the given data.

Median: The median value of a data set is the value that lies in the central position after the data has been arranged in ascending or descending order.

Mode: The mode is the value that is repeated the most number of times in the data set.