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Ex : 18 (B)

i) Separate the constants and the variables from each of the following:

$6, 4y, -3x, \frac{5}{4}, \frac{4}{5}xy, az, 7p, 0, \frac{9x}{4y}, -\frac{xz}{3y}$

Ans) 6, $\frac{5}{4}$ and 0 are constants,
$4y, -3x, \frac{4}{5}xy, az, 7p, \frac{9x}{4y}$ and $-\frac{xz}{3y}$

2) Group the like terms together:

i) $4x, -3y, -x, \frac{2}{3}x, \frac{4}{5}y$ and y.

Ans) $4x, -x, \frac{2}{3}x$ and $-3y, \frac{4}{5}y, y$.

ii) $\frac{2}{3}xy, -4yx, 2yz, \frac{-2}{3}yz, \frac{2y}{3}$ and yx.

Ans) $\frac{2}{3}xy, -4yx, yx$ and $2yz, -\frac{2}{3}yz$, and $\frac{2y}{3}$.

iii) $-ab^2, b^2a, 7b^2a, -3a^2b^2$, and $2ab^2$

Ans) $-ab^2, 7b^2a, 2ab^2$, and $b^2a, -3a^2b^2$.

iv) $5ax, -5by, by, 7xa$, and $\frac{2ay}{3}$

Ans) $5ax, 7xa, \frac{2ay}{3}$ and $-5by, by$

3) State whether True or False:

i) 16 is constant and y is a variable, but $16y$ is variable: True

ii) $5x$ has two terms 5 and x. True False

iii) The expression $5+x$ has two terms 5 and x. True

iv) The expression $2x^2 + x$ is a trinomial. False

v) $ax^2 + bx + c$ is a trinomial. True

vi) $8x$ ab is a binomial. True False

vii) $8 + ab$ is a binomial. True

viii) $x^3 - 5xy + 6x + 7$ is a polynomial. True

ix) The $x^3 - 5xy + 6x + 7$ is a multinomial. True

x) The coefficient of x in $5x$ is $5x$. False

xi) The coefficient of ab in $-ab$ is -1. True
xii) The coefficient of y in $-3xy$ is -3. False

(i) State the number of terms in each of the following expressions.

i) $2a-b$ — 2, ii) $3xy+\frac{a}{2}-2$ — 3, iii) $3x-\frac{x}{y}-2$ — 3
iv) $a \div x \times b + c$ — 2, v) $3x \div 2 + y + b$ — 3
vi) $xy \div 2$ — 1, vii) $x+y \div a$ — 2
viii) $2x+y+8 \div y$ — 3, ix) $2a+3a \div b+4-3$ — 4

(ii) State whether true or false:

i) ~~b is a constant and y is a variable by b~~
ii) xy and yx are like terms. True
iii) x^2y and $-yx$ are like terms. False
iv) ~~aa~~ a and $-a$ are like terms. True
v) $-ba$ and $2ab$ are unlike terms. False
vi) 5 and $5x$ are like terms. False
vii) $3xy$ and $4xyz$ are unlike terms. True.

(iii) For each expression given below, state whether it is monomial, or a binomial, or a trinomial

i) xy - Monomial, ii) $xy+x$ Binomial, iii) $2x \div y$ Monomial
iv) $-a$ - Monomial, v) ax^2-x+5 - Trinomial, vi) ~~$3bcd$~~ Binomial
vii) $-3bc+d$ - Binomial, viii) $1+x+y$ - Trinomial.
ix) $1+x \div y$ - Binomial, x) $x+xy-y2$ - Trinomial.

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Degree of the polynomial:

Expressions	Power/Exponent		degree
① x	1		1
② x^2	2		2
③ x^2+2x	x^2	$2x$	2
	2	1	