## SUBJECT: MATHEMATICS

Blocks 15, 17, 18, 19,20

## Choose the correct answer.

1) The sum of $-7 p q$ and $2 p q$ is:
(a) -9 pq
(b) 9 pq
(c) 5 pq
(d) -5 pq
2) $a^{2}-b^{2}=(a+b) \times$ $\qquad$
a) $(a+b)$
b) (a-b)
c) $a b$
d) $a / b$
3)The coefficient of $x$ in $3 x+4 y$ is
a) 4
b) 0
c) 1
d) 3
4. The factors of $15 y^{2}$ are
a) $15, \mathrm{y}, \mathrm{y}$
b) 3,y,y
c) $15, \mathrm{y}$
d) $y$
5) $20 x^{2} y \div 4 x$ is
a) $5 x$
b) $5 x y$
c) $20 x y$
d) $5 y$
6) $\left(5 \mathrm{ge}^{2}-7 \mathrm{~g}^{2} \mathrm{e}+3 \mathrm{ge}+9\right)$ is subtracted from $\left(25 \mathrm{~g}^{2} \mathrm{e}-43 \mathrm{ge}^{2}+7 \mathrm{ge}+43\right)$. The difference is added to thesum of $\left(\mathrm{g}^{2} \mathrm{e}+27\right)$ and 2 times $\left(5 \mathrm{ge}^{2}+6 \mathrm{~g}+7\right)$. Write out the resulting algebraic expression.
7)Answer the following questions.
(a) $(3 \mathrm{~g}+5)(4 \mathrm{~m}-3)+(7 \mathrm{mg}+6)$
(b) $(6 y+3)(7 x-5)+(9 x+5)(7 y-9)$
(c) $8 \mathrm{rm}^{3} \times 6 \mathrm{~m}^{3} \mathrm{r}^{5}$
(d) $p^{5} q^{6} \times q^{5} p^{5}$
(e) $\left(5 \mathrm{c}^{3} \mathrm{~d}\right)^{2}$
7) Factorise using identities: $a) x^{2}-49$.
9)Divide: $8\left(x^{3} y^{2} z^{2}+x^{2} y^{3} z^{2}+x^{2} y^{2} z^{3}\right) \div 4 x^{2} y^{2} z^{2}$
8) An article is marked at ₹ 940 . If it is sold for ₹ 799 , then find the discount percentage.
9) A watch was bought for ₹ 2,700 including $8 \%$ VAT. Find its price before the VAT was added.
10) Vikram offers a discount of $20 \%$ on all the items at his shop and still makes a profit of $12 \%$. What is thecost price of an article marked at ₹ 280 ?
11) The price of oil rises from ₹ 120 per litre to ₹ 150 per litre. Find the percentage rise in the price of oil?
12) The population of a small locality in Gurgaon was 1000 in 2014 and became 1500 in 2015. By what percentdid the population increases?
