

GENERAL MATHEMATICS — 9th

NOTE: Attempt all questions of Section-A by filling the corresponding bubble on the MCQ ANSWER SHEET and return it to the Superintendent within given time, even if you have not attempted any question.

SECTION-A

Time: 20 Minutes

Marks: 15

1. Ratio between 9 kilograms and 18 grams in simplest form is A) 1 : 2, B) 50 : 1, C) 500 : 1, D) 2 : 50
2. Nisab for silver for payment of Zakat is grams. A) 7.5, B) 52, C) 87, D) 609
3. Cost price is Rs.550, selling price is Rs.594, profit % is A) 2, B) 8, C) 24, D) 44
4. Pakistani currency was heavier than A) Dollar, B) Pound, C) Euro, D) Yen
5. Characteristic of $\log 23.557$ is A) 0, B) 1, C) 2, D) 3
6. $\log_4 x = -3$, then x is equal to A) $\frac{1}{12}$, B) 12, C) 64, D) $\frac{1}{64}$
7. An arithmetic mean between $2\sqrt{3}$ and $6\sqrt{3}$ is A) 24, B) $12\sqrt{3}$, C) $8\sqrt{3}$, D) $4\sqrt{3}$
8. $\{0, 1, 2, 3, \dots\}$ is a set of numbers. A) odd, B) even, C) prime, D) whole
9. If $A \cup B = \phi$ then A and B are sets. A) empty, B) equal, C) overlapping, D) disjoint
10. The point $(3, -4)$ is located in quadrant A) I, B) II, C) III, D) IV
11. The most frequent value in the data is A) mean, B) media, C) mode, D) G.M
12. $\frac{\sum f(x-\bar{x})^2}{\sum f}$ is called A) range, B) median, C) S.D, D) variance
13. $\frac{3}{8}$ in percentage is A) 3.75, B) 37.5, C) 375, D) 0.375
14. $A \cap A' = \dots$ A) A, B) A' , C) U, D) ϕ
15. Zakat payable on Rs.100,000/- is Rs. A) 2500, B) 25000, C) 4000, D) 40000

Time: 2 Hours 40 Minutes

SECTION-B

Marks: 36

1. Attempt any nine of the following. All carry equal marks.

- i. Find x in $\frac{8}{3} : x :: x : \frac{2}{7}$
- ii. 30 soldiers in a bunker have enough food for 45 days. 5 soldiers were shifted to another bunker. How long would the food last for the remaining soldiers.
- iii. Naureen paid Rs.4890/- as Zakat. She had Rs.50000 cash and some jewellery. Find value of her jewellery.
- iv. Find the cost price when selling price Rs.12100 and profit is 10%.
- v. Akram deposits Rs.50,000/- in a PLS account. If the profit is 10%, then how much profit he would get after 2 months?
- vi. A person bought a car on Rs.300000/- If sales tax is 7%, what is the total amount that person must pay?
- vii. Simplify $\frac{(2a^3b^4)^3}{(ab)^2}$
- viii. Find the value of x in $\log_8 x = \frac{4}{3}$
- ix. Simplify $\log \frac{3.56}{41.2}$
- x. Find the 10th term of an A.P in 18,15,12,9,.....
- xi. Insert four geometric means between $\frac{1}{5}$ and 625.
- xii. Convert 0.029 into percentage.

SECTION-C

Marks: 24

NOTE: Attempt any three of the following questions. All questions carry equal marks.

2. If $U = \{1, 2, 3, \dots, 20\}$, $A = \{2, 4, 6, \dots, 20\}$, $B = \{1, 3, 5, \dots, 19\}$ then find $A' \cap B$, $A' \cup B'$
3. If $A = \{1, 2\}$ and $B = \{3, 4, 5\}$ then write 3 binary relations in A.

4. Calculate variance from the following:

x:	5	10	11	13	15
f:	2	3	4	1	2

5. Calculate arithmetic mean by direct method:

Classes:	0-10	10-20	20-30	30-40	40-50
Frequency:	1	4	2	3	5