

Mathematics SQP

Max Marks: 50

TIME: 2 hours

General Instruction:

- i) This question paper contains 31 questions. All questions are compulsory.
- ii) This question paper is divided into Three sections - A, B and C
- iii) In section A, Question NO. 1 to 20 are MCQs carrying 1 mark each.
- iv) In section B, question NO. 21 to 25 are short answer type questions carrying 2 mark each.
- v) In section C, question NO. 26 to 31 are long answer type questions carrying 3 mark each.
- vi) Use of calculators is not allowed.

Section - A

- 1) Find height of a triangle if its area is 20 cm^2 and its base is 5 cm .
a) 6 b) 8
c) 11 d) 10
- 2) The value of $a \div 0$ is.
a) 0 b) ∞
c) Undefined d) None of the above
- 3) What is 25% of 450.
a) 120 b) 100
c) 112.5 d) 94.5
- 4) What is the mean of 25, 65, 10 and 44.
a) 36 b) 35
c) 31 d) 39
- 5) Sum of the three angles of a triangle is.
a) 120° b) 160°
c) 140° d) 180°
- 6) If $x = 6$, The value of $3x^2 - 4$ is
a) 98 b) 104
c) 75 d) 234
- 7) A triangle has medians.
a) 2 b) 3
c) 6 d) 5
- 8) The ratio of circumference and diameter of a circle is always equal to?
a) 3 b) 2
c) 3.14 d) π
- 9) $0.67 \times 12 =$
a) 8 b) 9
c) 8.04 d) 9.4
- 10) A shopkeeper earns 5 Rs. per 25 Rs. of sale. What is the profit percentage?
a) 15% b) 20%
c) 5% d) 25%
- 11) "One sixth of a number plus 13 is 19" in form of equation is
a) $7x + 13 = 19$ b) $\frac{6}{x} + 13 = 19$
c) $\frac{x}{13} + 6 = 19$ d) $\frac{x}{6} + 13 = 19$
- 12) A right angle triangle has two side with length 4 cm and 3 cm , then the length of the hypotenuse is
a) 12 cm b) 3 cm
c) 5 cm d) 7 cm

13) Find the angle, which is equal to its complement.

- a) 90° b) 100°
c) 50° d) 45°

14) $0.5 \div 200 =$

- a) 0.0025 b) 25
c) 0.025 d) 2.5

15) The number of illiterate persons in a country decreased from 64 lakhs to 16 lakhs in 10 years. What is the percentage of decrease?

- a) 5% b) 25%
c) 45% d) 75%

16) What is the circumference of a circle of radius 3.5 cm? (use $\pi = \frac{22}{7}$)

- a) 33 cm b) 11 cm
c) 14 cm d) 22 cm

17) if a parallelogram has breadth of 5 cm and height of 10 cm, Then its area is?

- a) 30 cm^2 b) 25 cm^2
c) 45.63 cm^2 d) 50 cm^2

18) if $7m + 2 = 16$, Then m is

- a) 4 b) 6
c) 2 d) 1

19) in $\triangle ABC$ $\angle A = 40^\circ$ and $\angle B = 60^\circ$, Then $\angle C$ is

- a) 80° b) 60°
c) 40° d) 95°

Section - B

20) Evaluate: $[45 + (-12)] \div 3$ and $[(-12) \times (-3)] \div 2$

21) Jimi listens to music for $1\frac{1}{2}$ hours everyday. How many hours does she spends listening to music every week?

22) Jimi sleeps 11 hours, 12 hours and 10 hours respectively on three consecutive days. How many hours does she sleep daily on an average?

23) From the given figure (Fig 1.1) find the values of x and y

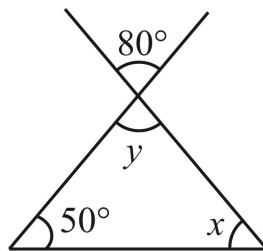


Fig 1.1

24) A rectangular field is 24m wide and 26m long find its area and perimeter.

Section - C

25) Find the values of x, y, z from the given figure. (fig 1.2)

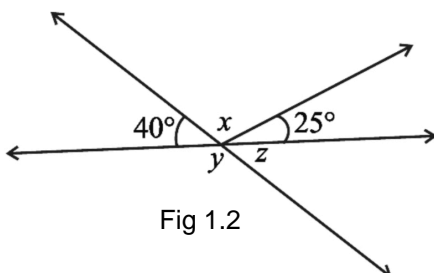


Fig 1.2

26) Solve (a) $4(m + 3) = 18$ (b) $2(x + 3) = 5$

27) Find the value of x in each of the following figures if $l \parallel m$. (fig 1.3 and 1.4)

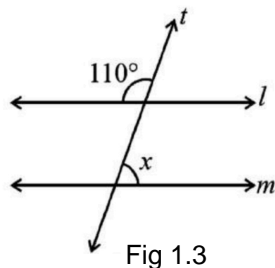


Fig 1.3

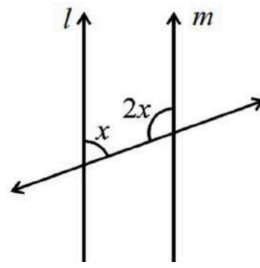


Fig 1.4

28) Simplify: $\frac{3^5 \times 10^5 \times 25}{5^7 \times 6^5}$

29) Express 3125 and 1024 in exponential form

30) The minute hand of clock is 21 cm long. How far does the tip of the minute hand move in 1 hour? (Take $\pi = \frac{22}{7}$)

31) Perimeter of a square and a rectangle is equal. If the square has a area of 64 m then find the area and perimeter of the rectangle.