48. 36 km/hr = _____

(A) 10 m/sec (B) 12 m/sec

(C) 15 m/sec (D) 20 m/sec

49. $(a+b)^2-(a-b)^2$ = ____

(A) a^2-b^2

(B) a^2+b^2

(C) $\left(\frac{a+b}{2}\right)^2-\left(\frac{a-b}{2}\right)^2$

(D) $\left(\frac{a+b}{2}\right)^2+\left(\frac{a-b}{2}\right)^2$

50. If all the sides and all the angles of a quadrilateral are equal, then the quadrilateral is :

(A) rectangle (B) square

(C) rhombus (D)parallelogram

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SPACE FOR ROUGH WORK

25th MVII

(MATHEMATICS)

Time Allowed 1 hour Maximum Marks : 100

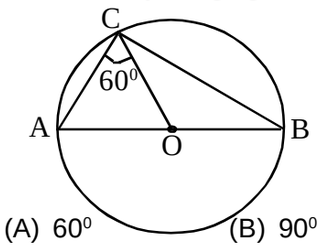
Read the following instructions carefully before you begin to answer the questions.

1. This booklet contains 50 questions in all.
2. All questions are compulsory and each question carries 2 marks.
3. Before you start to answer the questions you must check up this booklet and ensure that it contains all the pages 7 (Seven) and see that no page is missing or repeated. If you find any defect in this Booklet, you must replace it immediately.
4. There will **NOT** be any negative marking for wrong answers.
5. You are required to fill the information on the answer sheet which you will get in the examination hall by **H.B. pencil or BALL point pen.**
6. **Answer Sheet** and **Question Paper** will be supplied in examination hall. After the test is over, you should hand over the answer sheet to the invigilator before leaving the room.
7. You should write your **Name, Roll No.,** carefully on the space provided in the answer sheet. Otherwise you will be awarded **ZERO** mark.
8. If you wish to change your answer, **ERASE** completely the darkened circle by using an **ERASER** and then blacken the new circle. If not erased completely, smudges will be left on the erased circle and the question will be read as having two answer and will be ignored for giving any credit.
9. Answer the questions as quickly and as carefully as you can. Some questions may be difficult and others easy. Do not spend too much time on any question.
10. You are not allowed to leave the examination hall until you are advised to do so by the invigilator.

1. The product of two algebraic expressions has no like terms. The number of terms for the first algebraic expression is 'm' and number of terms for second expression is 'n'. Then the number of terms for the product is :
   (A) m+n (B) mxn
   (C) 2(m+n) (D) 2mn
2. If 8% of x = 4% of y, then 20% of x is :
   (A) 40% of y (B) 80% of y
   (C) 10% of y (D) 16% of y
3. At what time should a sum of `375 amounts to `495 at the rate of 8% ?
   (A) 2 years (B) 3 years
   (C) 4 years (D) 5 years
4. The area of a square is increased by 21%. Find the increase of a side of the square.
   (A) 5% (B) 10%
   (C) 20% (D) 21%
5. Sanathoi and Sanamacha are two brothers. Sanathoi is 6 years older than Sanamacha. After 7 years their ages are in the ratio 8:7. The age of Sanamacha is :
   (A) 35 years (B) 25 years
   (C) 40 years (D) 30 years
6. Two rational numbers $\frac{p}{q}$ and $\frac{r}{s}$ are said to be equal if :
   (A) $p \times s = r \times q$ (B) $p \times r = s \times q$
   (C) $p \times q = s \times r$ (D) All the above
7. If 45 men can complete a work in 30 days working 12 hours a day. In how many days will 60 men complete the work working 10 hours a day :
   (A) 21 (B) 29
   (C) 25 (D) 27
8. A trader makes a profit equal to the selling price of 75 articles when he sold 100 of the articles. What percent of profit did he make in the transection ?
   (A) 33.33% (B) 75%
   (C) 300% (D) 150%
9. The value of $8^2 \div 4^4 \times 2^2$ is :
   (A) 1 (B) 8
   (C) 4 (D) 2
10. The population of Meitei in Manipur in the year 2016 is 2000000. If the population of Meitei is reducing by 20

SPACE FOR ROUGH WORK

41. Which of the following fraction is a terminating decimal ?
   (A) $\frac{1}{3}$ (B) $\frac{1}{8}$
   (C) $\frac{1}{9}$ (D) $\frac{1}{6}$
42. In the operation of subtraction of rational numbers which of the following holds true?
   (A) Closure property
   (B) Commutative property
   (C) Associative property
   (D) There is no property for subtraction process
43. From the adjoining figure $\angle ABC$ = :



   (A) 60^0 (B) 90^0
   (C) 30^0 (D) 180^0
44. There is a triangle and a quadrilateral. All angles of the triangle are equal and all angles of the quadrilateral are also equal. Then the difference of an angle of the quadrilateral and and angle of the triangle is :
   (A) 60^0 (B) 30^0
   (C) 90^0 (D) 180^0
45. If $x = \frac{p}{q}$, then $\left(x^{-1}\right)^{-1}$ is
   (A) $\frac{p}{q}$ (B) $\frac{q}{p}$
   (C) p (D) q
46. $1 \times x = x = x \times 1$ is :
   (A) Closure property
   (B) Commutative property
   (C) Assiciative property
   (D) Multiplication property of one
47. Angles in a semi-circle are :
   (A) 90^0 (B) equal
   (C) right angle (D) All the above

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34. A shopkeeper mixed 3kg of tea powder at `180 per kg with 2kg of tea powder at `130 per kg, if he sells the mixture at `216 per kg. What is his profit percentage ?
(A) 25% (B) 32%
(C) 35% (D) 37%

35. A fully loaded truck of cement is required whose weight is 9 metric tones for the construction of a Multipropose Hall. A bag of cement weigh 75kg. How many cement bags are there in the truck ?
(A) 120 (B) 30
(C) 40 (D) 80

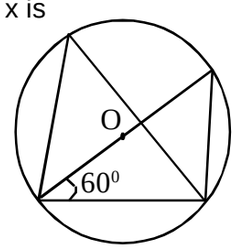
36. The simple interest on a certain sum of money at 8% for 3 years 6months is `25 less than the simple interest on the same sum for 4 years and 10 months at 6%. The sum is :
(A) `4000 (B) `3500
(C) `3000 (D) `2500

37. Two consecutive number whose product exceeds the square of the smaller number by 7. The smaller number is :
(A) 8 (B) 7
(C) 6 (D) 5

38. Which of the following is the greatest?
(A) $\frac{4}{5}$ (B) $\frac{11}{12}$
(C) $\frac{21}{20}$ (D) $\frac{31}{40}$

39. A number is increased by 10% and then it is decreased by 10%. The net increase of decrease percent is
(A) 1% increase (B) 1% decrease
(C) 2% increase (D) 2% decrease

40. In the circle O is the centre. Then the value of x is



(A) 30^0 (B) 60^0
(C) 45^0 (D) 90^0

SPACE FOR ROUGH WORK

per ten thousand per year. What would be the population of Meitei in the year 2018 ?
(A) 1845000 (B) 1890248
(C) 1992008 (D) 1950000

11. A school arranged an excurtion in two buses from Imphal to Tipaimuk which is 200 km away from Imphal. The first bus moved at 50 km/hr on one way and 40 km/hr on return. The second bus moved 45 km/hr on both to and fro ways. Which bus took less time to cover to and fro distance ?
(A) First bus (B) Second bus
(C) Both take same time
(D) None of these

12. The interest on `4800 @ 15% p.a for 9 months is :
(A) `500 (B) `520
(C) `540 (D) `550

13. All the four angles of a quadrilateral are in the ratio 1:2:3:4. Then the largest angle is :
(A) 120^0 (B) 136^0
(C) 144^0 (D) 152^0

14. Two trains are running on parallel tracks at the speed of 45 km/hr and 60km/hr respectively. If the length of the trains be 150m and 200m and they are running in opposite direction, in what time will they pass each other ?
(A) 12 seconds (B) 15 seconds
(C) 12 minutes (D) 15 minutes

15. How many points are there between 0 and 1 on the number line that represent rational numbers ?
(A) 1 (B) 2
(C) 4 (D) Infinite

16. The speed of the motor boat itself is 20km/hr and the rate of flow of the river is 4 km/hr. Moving with the stream the boat went 120 km. What distance will the boat cover during the same time going against the stream?
(A) 80km (B) 180km
(C) 60km (D) 100km

17. Which of the following is the greatest?
(A) $(2+2+2)^2$ (B) $\left[(2+2)^2\right]^2$
(C) $(2\times 2)^2$ (D) $(2+2)^2$

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18. A is twice as faster as B and B is thrice as faster as C. The journey covered by C in $1\frac{1}{2}$ hour will be covered by A in :
(A) 15 min (B) 20 min
(C) 30 min (D) 1 hour

19. If x% of y gives z. Which of the following is true ?
(A) x as the percent of z is y%
(B) y as the percent of z is x%
(C) z as the percent of y is x%
(D) All the above

20. One man or two women or three boys can do a piece of work in 88 days. One man, one woman and one boy will do it in :
(A) 48 days (B) 20 days
(C) 44days (D) 24 days

21. On selling a dozens of pen a shopkeeper gets a profit equal to the selling price of 3 pens. Then his profit percent is :
(A) 3% (B) 12%
(C) 15% (D) $33\frac{1}{3}\%$

22. Sanathoi draws a circle and make three different angles in a same segment. If the measureof one angleis x^0. The sum of all the angles is :
(A) 180^0 (B) 360^0
(C) $(3600 - x)^0$ (D) $(3x)^0$

23. By selling a towel for `126.90, a man losses 6% for how much should he sell the towel to gain 4% ?
(A) `144.40 (B) `140.40
(C) `144.60 (D) `140.60

24. A truck needs 9 litres of deisel for going Churchanpur from Imphal which is 72 km from Imphal. The amount for deisel require for going Lamsang which is 16 km from Imphal is :
(A) 5 litres (B) 4 litres
(C) 3 litres (D) 2 litres

25. After 12 years , I shall be 3 times as old as I was 4 years ag. My present age is :
(A) 12 (B) 26
(C) 10 (D) 32

26. If $\frac{3}{5}$ of a work is done by 12 men in 10 days, how many men will complete the whole work in 20 days ?

SPACE FOR ROUGH WORK

(A) 9 (B) 8
(C) 10 (D) 7

27. A father divides `1380 among three sons Shrinivash, Deepak and James. Shrinivash receives is 5 times as much as James's share and is 3 times as much as Deepak shares. The share of Deepak is :
(A) `180 (B) `900
(C) `300 (D) `500

28. Which of the following algebraic expression has only two terms ?
(A) $(x+a)(x+b)$ (B) $(a+b)(a+b)$
(C) $(a-b)(a-b)$ (D) $(a+b)(a-b)$

29. Two pipes A and B can separately fill a tank in 2 hours and 3 hours respectively. If both the pipes are opened simultaneously in the empty tank, then the tank will be fill in :
(A) 1 hour 15 min (B) 1 hour 20 min
(C) 1 hour 12 min (D) 2 hour 30 min

30. In a right triangle, the length of the hypotenus is 25cm and one of the remaining sides is 24cm. The other side is :
(A) 7cm (B) 6cm
(C) 5cm (D) 4cm

31. A student bought a second-hand handset for ` 2200 and spent `400 on repairing. At what price should he sell the handset in order to gain 15%?
(A) `2850 (B) `2540
(C) `2860 (D) `2990

32. The sum of the prices of 1st, 2nd and 3rd for the 25th State Level Competition is `6750. The value of second prize is five-sixth the value of the first prize and the value of the third prize is four-fifth that of the second prize. The value of second prize is
(A) `2700 (B) `2250
(C) `1800 (D) `1850

33. The ratio between boys and girls in a school is 4:6 respectively. If the number of boys is increased by 200 the ratio becomes 5:6 respectively. How many girls are there in the school?
(A) 1200
(B) 800
(C) 1000
(D) can not determined

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