BK BIRLA CENTRE FOR EDUCATION

SARALA BIRLA GROUP OF SCHOOLS
SENIOR SECONDARY CO-ED DAY CUM BOYS' RESIDENTIAL SCHOOL

ANNUAL EXAMINATION 2024-25

MATHEMATICS (041)

Marking Scheme

Class :V
Date : 19-03-2025
Admission No.:

Duration: 3 Hrs
Max. Marks: 80
Roll No.:

General Instructions:

- This Question Paper has 5 Sections A, B, C, D and E.
- Section A has 20 MCQs carrying 1 mark each.
- Section B has 5 questions carrying 02 marks each.
- Section C has 6 questions carrying 03 marks each.
- Section D has 4 questions carrying 05 marks each.
- Section E has 3 case based integrated units of assessment carrying 04 marks each.
- All Questions are compulsory.

SECTION –A

$(1 \times 20 = 20)$

Choose the correct answer.

1) How many line of symmetry does the letter E has 1
   a) 0 b) 3 c) 1 d) 2

2) $5 + \frac{4}{10} + \frac{6}{1000}$ is equal to 5.406
   a) 0.546 b) 5.46 c) 54.06 d) 5.406

3) 0.09 × 100 is equal to 9
   a) 0.09 b) 0.9 c) 0.0009 d) 9

4) 5, 8, 11, 14, 17, 20
   a) 19 b) 20 c) 2 d) 0

5) The place value of 8 in 17.24**8** is $\frac{8}{1000}$
   a) 800 b) $\frac{8}{100}$ c) $\frac{8}{10}$ d) $\frac{8}{1000}$

6) $\frac{18}{12}$ in the lowest form is $\frac{3}{2}$
   a) $\frac{1}{3}$ b) $\frac{3}{2}$ c) $\frac{4}{3}$ d) $\frac{2}{3}$

7) Volume of cuboid is l × b × h
   a) l × b × h b) l × b c) side × side × side d) None of these

8) What is the unit of area? Sq. cm.

a) Sq. cm. b) Cu. cm. c) cm. d) None of these

9) Ten rupee and seventy five paise = 10.75

a) 10.57 b) 10.75 c) 75.10 d) None

10) Express the percentage $\frac{93}{100}$ = 93%

a) 93% b) 11% c) 7% d) 193%

11) Find the product of 0.412 X 2 = 0.824

a) 0.11 b) 0.13 c) 0.824 d) 412.72

12) In a bar graph the width of the rectangles are Equal

a) Unequal b) Increasing c) Decreasing d) Equal

13) Time 4:10 in the evening is same as 04:10 p.m.

a) 4:10 a.m. b) 4:10 hours c) 04:10 p.m. d) None of these.

14) A shopkeeper brought a chair for ₹ 450 and sold it for ₹ 600. Find his profit/loss Profit = ₹ 150

a) Profit = ₹ 600 b) Loss = ₹ 450 c) Profit = ₹ 150 d) Loss = ₹150

15) If SP > CP we get Profit

a) Profit b) Loss c) Loss% d) None of these.

16) A leap year occurs every **4** years

a) 2 b) 3 c) 4 d) 5

17) 10% of 100 g = **10**

a) 10 g b) 20 g c) 100 g d) 90 g

18) 0.32 in percentage = **32%**

a) 32% b) 23% c) 100% d) 90%

Assertion Reason Questions

19) Assertion: A day has 24 hours.
Reason: There are 60 minutes in an hour.

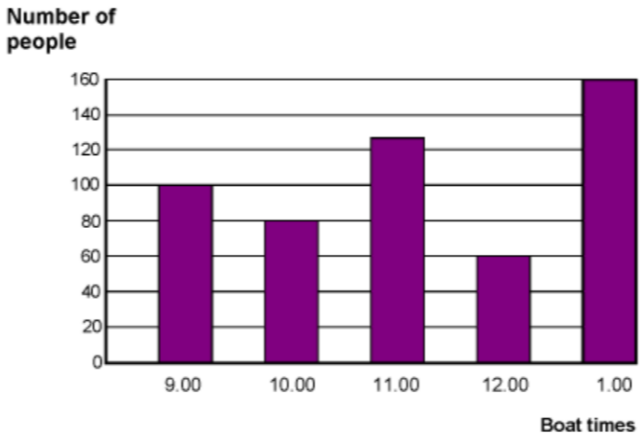
a) Both Assertion and Reasoning are true, and Reasoning is the correct explanation for Assertion.
b) Both Assertion and Reasoning are true, but Reasoning is not the correct explanation for Assertion.
c) Assertion is true, but Reasoning is false.
d) Assertion is false, but Reasoning is true.

20) Assertion: Profit = Selling Price (S.P) – Cost price (C.P)
Reason: Profit =Cost price (C.P) – Selling Price (S.P)

a) Both Assertion and Reason are true and Reason is correct explanation of Assertion.
b) Both Assertion and Reason are true and Reason is not correct explanation of Assertion.
c) Assertion is false but Reason is true.
d) Assertion is true but Reason is false.

SECTION –B $(2 \times 5 = 10)$

21) Following bar graph represents the information about the boat taking visitors out into the sea to watch dolphins swimming. The bar chart shows the number of people that went out on each boat.



a) How many people went on the 9.00 am boat? 100

b) How many people went on the 11.00 am boat? 130

c) How many people travel on the boat all together? 530

22) Find Profit or loss if S.P = ₹ 4500 and C.P = ₹ 3400

S.P > C.P

Profit = S.P – C.P

= 4500 – 3400

= 1100

Profit = ₹ 1100

23) Convert the following

a) 40 days into hours

1 day = 24 hours

40 days = 40 x 24

= 960 hours

b) 24 hours into minutes

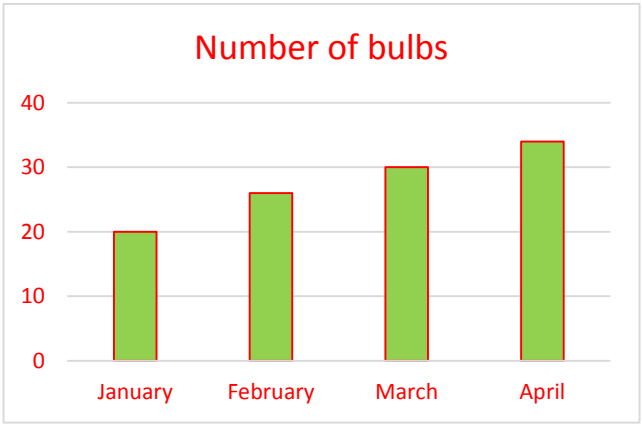
1 hour = 60 minutes

24 hours = 24 x 60

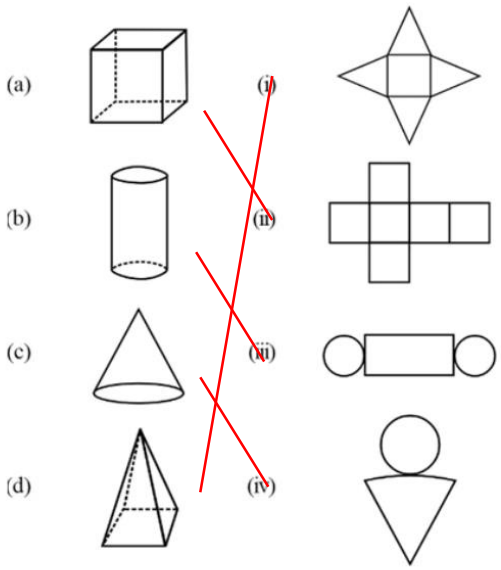
= 1440 minutes

24) The following are the number of electric bulbs purchased for a lodging during the first six months of a year. Draw a bar graph to represent the details.

Months	Number of bulbs
January	20
February	26
March	30
April	34



25) Match the solid shapes to the matching net.



SECTION – C

Solve. $(3 \times 6 = 18)$

26) The cost of 6 chairs ₹ 930. Find the cost of 11 such chairs.

No. of chairs = 6

Cost of 6 chairs = ₹ 930

Cost of 11 chairs = $\frac{930 \times 11}{6}$

= 1705

Cost 0f 11 chairs = ₹ 1705

27) Raju jogs daily around a square park whose side is 75 metre long. One day, he jogged around the park 5 time. How much did he jog on that day?

Since the park is a square, its perimeter is given by:

Perimeter=4×Side

=4×75 =300 meters= 300

Raju jogged 5 times around the park, so the total distance he jogged is:

Total distance=5×Perimeter

=5×300

=1500 meters or 1.5 km

Thus, Raju jogged 1500 meters (or 1.5 km) that day.

OR

The length of the rectangular park is 20m and breadth is 13m. Aman jogs and completes 4 rounds of the park everyday how much distance does Aman jogs daily?

The perimeter of a rectangle is given by:

Perimeter=2×(Length + Breadth)

=2×(20+13)

=2×33

=66 meters

Aman completes 4 rounds daily, so the total distance he jogs is:

Total distance=4×Perimeter

=4×66

=4×66 =264 meters

Thus, Aman jogs 264 meters daily.

28) Aditya has $4\frac{2}{3}$ chocolate bars and Rahul has $8\frac{1}{3}$ chocolate bars. How many chocolate bars do they have altogether?

We need to find the total number of chocolate bars Aditya and Rahul have together.

Step 1: Convert mixed fractions to improper fractions

Aditya has $4\frac{2}{3}$ chocolate bars:

$$4\frac{2}{3} = \frac{4 \times 3 + 2}{3} = \frac{12 + 2}{3} = \frac{14}{3}$$

Rahul has $8\frac{1}{3}$ chocolate bars:

$$8\frac{1}{3} = \frac{8 \times 3 + 1}{3} = \frac{24 + 1}{3} = \frac{25}{3}$$

Step 2: Add the fractions

$$\frac{14}{3} + \frac{25}{3} = \frac{14 + 25}{3} = \frac{39}{3}$$

Step 3: Convert back to a mixed fraction

$$\frac{39}{3} = 13$$

Thus, **Aditya and Rahul have 13 chocolate bars in total.**

29) Solve: -

a) 10.3 + 14.519 + 25.06

10.300
14.519
+25.060
49.879

b) Take away 17.256 from 81.7

81.700
- 17.256
64.444

30) 18% of 650 students in a school choose to attend cricket coaching classes. How many students attend these classes?

To find 18% of 650 students, we use the percentage formula:
Students attending cricket= (18/100)×650
=117
Thus, 117 students attend the cricket coaching classes.

31) A train left Ramgarh at 1452 hours for Sitapur and reached at 1710 hours. How much time did the train take to reach Sitapur?

To find the time taken by the train from Ramgarh (14:52) to Sitapur (17:10), follow these steps:
Departure time: 14:52
Arrival time: 17:10
From 14:52 to 17:10
From 14:52 to 15:52 → 1 hour
From 15:52 to 17:10 → 1 hour 18 minutes
1 hour+1 hour 18 minutes=2 hours 18
=2 hours 18 minutes
Thus, the train took 2 hours 18 minutes to reach Sitapur.

SECTION –D **(**$5\times 4 = 20$)

32) Which has the greater volume; box A that measures 10cm by 6cm by 4cm or box B which measures 6cm by 6cm by 7cm by how much volume?

To compare the volumes of Box A and Box B, we calculate their volumes using the formula for the volume of a rectangular box:
Volume=Length × Width × Height
Box A dimensions: 10 cm × 6 cm × 4 cm
Volume of A=10×6×4=240 cm3
Box B dimensions: 6 cm × 6 cm × 7 cm
Volume of B=6×6×7=252 cm3
252−240=12 cm3
Box B has a greater volume by 12 cm^3.

33) Sunil obtained 750 marks out of 800 and Preeti obtained 540 marks out of 600 whose percentage is better?

Percentage=(Marks obtained / Total Marks)×100
Sunil's Percentage=(750/800)×100 =0.9375×100=93.75%
Preeti's Percentage=(540/600)×100 =0.9×100=90%
Sunil's percentage = 93.75%
Preeti's percentage = 90%
Since 93.75% > 90%, Sunil has a better percentage

34) Write Proper, Improper, Mixed and Like fractions in the corresponding rows.

$$\frac{3}{17}, \frac{5}{12}, 2\frac{3}{8}, 5\frac{1}{3}, \frac{2}{9}, \frac{5}{9}, \frac{1}{6}, \frac{8}{3}, \frac{12}{7}, 15\frac{2}{3}$$

Proper fraction	$\frac{3}{17}, \frac{5}{12}, \frac{2}{9}, \frac{5}{9}, \frac{1}{6}$
Improper fraction	$\frac{8}{3}, \frac{12}{7}$
Mixed fractions	$2\frac{3}{8}, 5\frac{1}{3}, 15\frac{2}{3}$
Like fractions	$\frac{2}{9}\frac{5}{9}$ and $5\frac{1}{3}, \frac{8}{3}, 15\frac{2}{3}$

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35) Do as directed

a) Add 7 hours 20 minutes and 12 hours 25 minutes

Hours: 7+12=19
Minutes: 20+25=45
19 hours 45 minutes
Thus, the total time is 19 hours 45 minutes.

b) Subtract 3 hours 15 minutes and 1 hour 58 minutes

15 minutes - 58 minutes is not possible (since 15 < 58), so we borrow 1 hour from the 3 hours.
Now, 3 hours becomes 2 hours, and we add 60 minutes to 15 minutes, making it 75 minutes.
75−58=17 minutes
2−1=1 hour
Thus, the total time is 1 hour 17 minutes.

c) Garba celebration starts from 17 October and will continue for 10 days. When will be the last day of Garba celebration?

17th October → Day 1
18th October → Day 2
19th October → Day 3
20th October → Day 4
21st October → Day 5
22nd October → Day 6
23rd October → Day 7
24th October → Day 8
25th October → Day 9
26th October → Day 10 (Last Day)

Final Answer:
The last day of Garba celebration will be on 26th October.

SECTION –E

$(4\times 3 = 12)$

Solve.

36) Look at the given calendar of March and April 2024 and answer the following questions.

a) Which day is on the last date of April 2024? Tuesday
b) How many Sundays are there in March 2024? 5
c) On which date is the first Monday of March 2024? 4^{th}
d) On which date is the second Saturday of April 2024? 13^{th}

37) Find the profit/ loss of the following

a) CP = ₹ 181, SP = ₹ 220, Overhead charges = ₹ 17

Cost Price (CP) = ₹181
Selling Price (SP) = ₹220
Overhead Charges = ₹17
Total CP=181+17=198
Profit=SP−Total CP
= 220 – 198
=₹22

Profit = ₹ 22

b) CP = ₹ 306.50, SP = ₹ 206.25

Cost Price (CP) = ₹306.50
Selling Price (SP) = ₹206.25
Loss=CP−SP
=306.50−206.25
=₹100.25
Since CP is greater than SP, it is a loss of ₹100.25.

OR

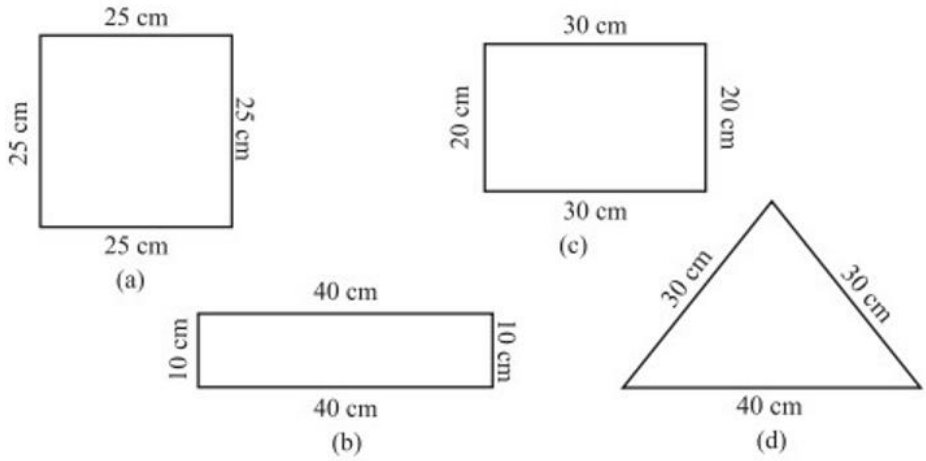
a) A merchant was selling a dozen notebooks for ₹ 360. Find the cost of one notebook.

Cost of one notebook = Total Cost / Total quantity
=360/12
=₹30
The cost of one notebook is ₹30.

c) A bottle of juice cost ₹ 75. How much would the cost of 12 such bottles cost?

The cost of one bottle of juice = ₹75.
To find the cost of 12 bottles, multiply:
Total Cost=75×12
=₹900
The cost of 12 bottles is ₹900.

38) Find the perimeter of the following figures



a) Perimeter of square = 4 x side (side = 25 cm)
= 4 x 25
= 100 cm

b) Perimeter of rectangle = 2 (l + b) (length l = 20 cm and breadth b = 30 cm)
= 2 (20 + 30)
= 2 x 50
= 100 cm

c) Perimeter of rectangle = 2 (l + b) (length l = 10 cm and breadth b = 40 cm)
= 2 (10 + 40)
= 2 x 50
= 100 cm

d) Perimeter of Triangle = Sum of all sides
= 30 cm + 30 cm + 40 cm
= 100 cm

----------End of paper----------