# Mathematics – Set B

General Instructions:
1. *Read the question paper carefully and answer legibly.*
2. *All questions are compulsory.*
3. *The question paper consist of 31 questions divided into four sections A,B,C and D*
4. *Section A comprises of 4 questions of 1 mark each, section B comprises of 6 questions of 2 marks each, Section C comprises of 10 questions of 3 marks each and Section D comprises of 11 questions of 4 marks each*
5. *Use of calculators is not permitted.*

Section – A

Q1. Express $\frac{21}{4}$ as mixed fraction.   1

Q2.   1
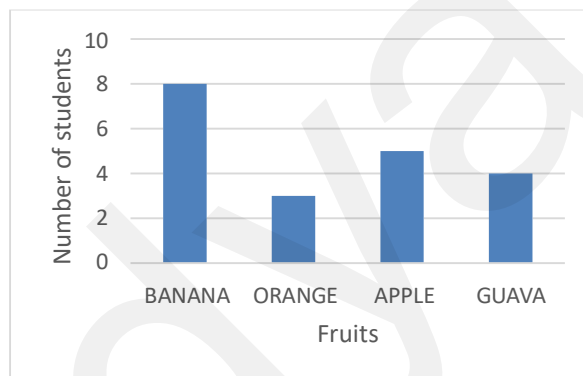
What does this bar graph represent?

Q3. What is the perimeter of a regular hexagon of side p cm.   1

Q4. Find the area of rectangle whose sides are 6m and 20cm.   1

Section – B

**Q5.** Arrange 0.64 ,0.05, 0.1, 0.7, in descending order.   2

Q6. In a school of 550 students, 250 are girls. Find the ratio of girls to boys.   2

Q7. For the following expressions, form the statements.   2
a) 6y-5
b) x+15

Q8. Find the cost of flooring a rectangular room of length 5cm and width 2 cm, at Rs10 per sq.cm   2

Q9. Following pictograph shows the number of tractors in 5 villages.   2

Villages	Number of tractors 💥 = 1 tractor
Village A	💥 💥 💥 💥 💥 💥
Village B	💥 💥 💥 💥 💥
Village C	💥 💥 💥 💥 💥 💥 💥 💥
Village D	💥 💥 💥
Village E	💥 💥 💥 💥 💥 💥

Observe the pictograph and answer the following questions.

a) Which village has the minimum no. of tractors?
b) Which village has the maximum no. of tractors?
c) How many more tractors village C has as compared to village B?
d) What is the total no. of tractors in all the 5 villages?

Q10. With the same centre O, draw two circles with radii 3cm and 5cm. 2

Section – C

Q11. Construct an angle of 135° with the use of ruler and compasses. 3

Q12. Give expressions in the following cases:- 3
a) y is multiplied by -5 and the result is added to 18.
b) 6 times x from which 4 is subtracted.
c) p divided by 7.

Q13. The population of 4 major cities in India in a particular year is: 3

CITY	Mumbai	Kolkata	Delhi	Chennai
Population (in lakhs)	120	130	110	80

Draw a bar graph to illustrate the above data.

Q14. Pick out the solution of 2n+12=10 from the values given in the brackets. {1, 2, -1} 3
Show that the other values do not satisfy the equation.

Q15. Cost of 105 envelopes is Rs. 35. How many envelopes can be purchased for Rs. 10? 3

Q16. A floor is 5 m long and 4 m wide. A square carpet of sides 3 m is laid on the floor. Find the 3
area of the floor that is not carpeted.

Q17.
a) Draw a number line and locate $\frac{4}{5}$ on it. 1 ½

b) solve $\frac{5}{6} - \frac{1}{4}$ 1 ½

Q18. The following are the number of electric bulbs purchased for a lodging house during the first 4 3
months of a year:

Months	January	February	March	April
Number of bulbs	20	35	25	30

Represent the details by a pictograph.

Q19. Subtract the difference of 118.5 and 6.492 from the sum of 169.56 and 23.59 3

Q20. A piece of string is 120 cm long. What will be the length of each side if the string is used to
form:- 3
a) a regular pentagon?   b) a square?   c) a regular hexagon?

Section – D

Q21. Draw ∠120° and divide it into four equal parts using ruler and compasses. 4

Q22. Vishal earns Rs15000 in 3 months.
a) How much will he earn in 6 months? 2
b) In how many months will he earn Rs.95000? 2

Q23. Pooja runs around a square field of side 75 m, Bobby runs around a rectangular field with 4
length 160 m and breadth 105 m. Solve and find who covers more distance?

Q24. The total weight of three parcels is 48 kg57g. If two of them weigh 12 kg18 g and 18 kg15 g, 4
find the weight of the third parcel. (Concept of Decimal to be used)

Q25. Rohit had 20 pencils, Shivani had 50 pencils and Jacky had 80 pencils. After 4 months, Rohit used up 10 pencils, Shivani used up 25 pencils and Jacky used up 40 pencils. What fraction did each use up? Check if each has used up an equal fraction of her/his pencils?   4

Q26. Draw a line segment of length 12.8cm. Using compasses, divide it into four equal parts. Verify by actual measurement.   4

Q27. Determine if 12 kg, 15 kg , Rs 28 ,Rs 35 are in proportion. Also,write the middle term and extreme term if the ratio forms a proportion.   3 1

Q28. Match the solution of the equations:-

a) x+5=25   1) 12   4

b) 3x-7=35   2) 240

c) $\dfrac{q}{6}=40$ 3) 14

d) 4b=48   4) 20

Q29. i) Find the equivalent fraction of $\dfrac{3}{5}$ with

a) Denominator 20

b) Numerator 9   2

ii) Sunaina was given $1\dfrac{1}{2}$ piece of cake and Noor was given $1\dfrac{1}{3}$ piece of cake. Find the total amount of cake given to both of them?   2

Q30. Observe this bar graph which shows the sale of shirts in a readymade shop from Monday to Saturday.   4

Series 1
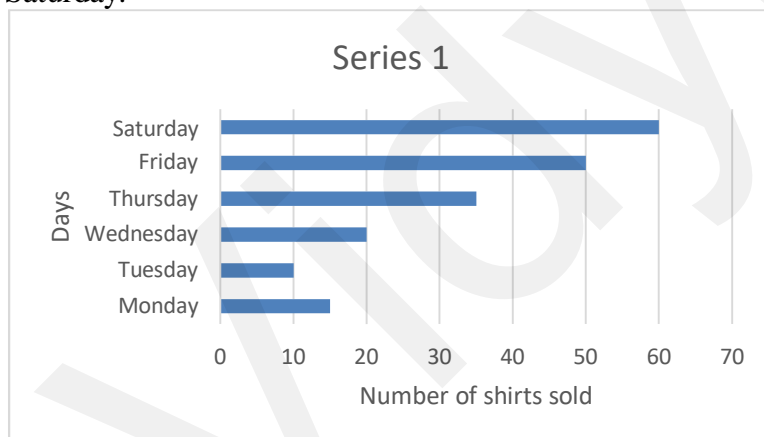
Now answer the following questions:

a) What is the scale chosen on the horizontal line representing the number of shirts?

b) On which day were the maximum number of shirts sold?

c) On which day were the minimum number of shirts sold?

d) How many shirts were sold on Thursday?

Q31. Srishti gets Rs 250.75 from her mother and Rs 100 from her father as pocket money and gave Rs 100.25 to charity and Rs 50.50 to a temple. How much money does she have now? What lesson do you get from this? What value is depicted by Shristi?   3 + 1