Question Paper
(March- 2007)

Class: VII | Max marks: 100

Subject: Mathematics | Max Time: 3hrs

SET-A

General Instructions:

- All Questions are Compulsory
- Question 1 – 10 carry 3 marks each
- Question 11 – 20 carry 4 marks each.
- Question 21 – 25 carry 6 marks each.

SECTION-A

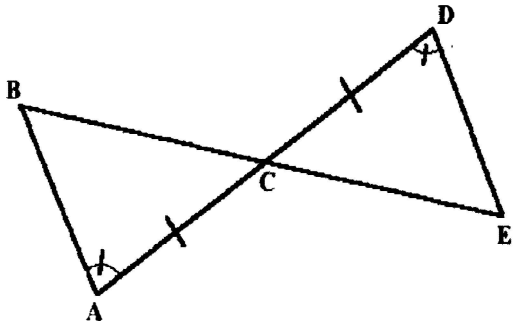
10 x 3 = 30

1) Use identity to find the product of $(10x-7)^2$

2) Factorise: $x^2 + 8x + 16$

3) What number should be added to $\frac{-5}{8}$ so as to get $\frac{4}{9}$?

4) In the given figure AC = CD and $\angle BAC = \angle EDC$.



a) Is $\angle ACB = \angle ECD$? Why?

b) Is $\Delta\, ABC \cong \Delta\, DEC$ by ASA congruence condition?

c) State the three facts you have used to answer (b).

5) (a) A class room is 12m long, 10m wide and 6m high. Find the areas of the four walls.

OR

(b) Find the surface area of a cuboid that measures 6cm, 4cm and 2cm.

6) A cuboidal vessel is 10cm long and 8cm wide. If it can hold 480cm^3 of water, what must be its height?

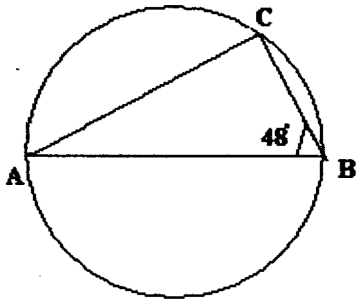
7) A man saves Rs.600 per month in his account. If this is 15 % of his monthly income, find his monthly income.

8) **Solve**: $\frac{2y+5}{y+4} = 1$ and verify your result.

9) The sum of three consecutive integers is 198. What are the integers?

10) In the given figure ΔABC is inscribed in a circle with AB as the diameter.

If $\angle B = 48°$, find $\angle CAB$



SECTION-B

10 X 4 = 40

11) Find x such that $\left[\frac{2}{9}\right]^{-5} \times \left[\frac{2}{9}\right]^{-11} \div \left[\frac{2}{9}\right]^{8} = \left[\frac{2}{9}\right]^{-8x}$

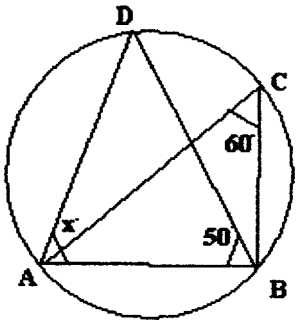
12) Evaluate and express the result in the form of $\left(\frac{p}{q}\right)^2$: $(2.2)^2 \times (2.5)^2$

13) Find the value of p if $5p = 47^2 - 42^2$ b) Evaluate using identity : $(102)^2$

14) Factorise: a) $25a^2 - 49b^2$ b) $9x + 3xy$

15) Vijay is 12 years elder than his sister. After four years, his age will be thrice of his sister's present age. Find their present ages.

16) In the given figure, $\angle ACB = 60°$, $\angle ABD = 50°$ find the value of x



17) (a) At what rate percent per annum will Rs.800 amount to Rs.1000 in 2 years?

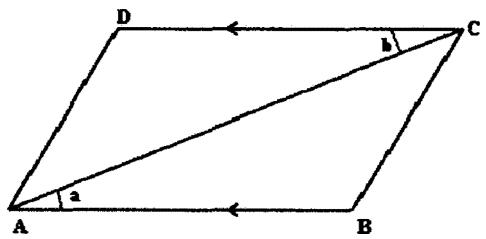
OR

(b) Find the time if the sum Rs.2100 yields Rs.735 as simple interest at 10% per annum?

18) Simplify $\frac{1}{3} + \frac{1}{4} + \frac{1}{5}$. Express the result as a decimal. Is it terminating or non terminating?

19) The angles of a quadrilateral are in the ratio 1:2:7:8. Find the angles.

20) In the given figure AB || CD and AB = CD



a) $\Delta ACD \cong \Delta ACB$?

b) State the three pairs of matching parts used to answer (a).

c) Which angle is equal to $\angle CAD$?

SECTION-C

5 X 6 =30

21) (a) A motor cycle passes through the hands of three dealers. Each dealer earns a profit of 10%. If the cost price of the first dealer is Rs.10, 000, find the cost price of the third dealer.

OR

(b) By selling a hand cart for Rs.720, a man lost 25%. At what price he must sell it, to gain 25%?

22) (a) Verify: $x \times (y+z) = (x \times y) + (x \times z)$ by taking x = $\frac{5}{7}$, y = $\frac{3}{4}$ and z = $\frac{5}{12}$

(b) Write $\frac{60}{72}$ in its lowest form.

23) A tea packet measures 10cm × 6cm × 4cm. How many such tea packets can be placed in a card board box of dimensions 50cm × 30cm × 20cm?

24) The following table shows the software exported (approximately) from India. Represent the information using a bar graph.

Years	1997-98	1998-99	1999-2000	2000-01	2001-02
Amount (Ten Crores)	800	110 0	1700	2800	3600

a) In which year the amount of export is more?

b) Find the total amount.

25) Two cross roads each 2m wide, run at right angles through the centre of a rectangular park of 72m by 48m such that each is parallel to one of the sides.

Find

a) The area covered by the roads.

b) The area of the remaining portion of the park.

c) The cost of cementing the roads at Rs.2 per m^2