

O. P. JINDAL SCHOOL, SAVITRI NAGAR
Annual Examination - (2022 – 2023)
Sample Paper

Class / Section: VIII
Subject: Mathematics

Name: _____

MM: 80

Time: 3 Hrs.

Roll No. : _____

(Fifteen Minutes Extra will be given for reading the Question Paper.)

General Instructions:

- (i) *This question paper has 5 sections A-E.*
- (ii) *Section A has 20 MCQs carrying 1 mark each.*
- (iii) *Section B has 5 questions carrying 2 marks each.*
- (iv) *Section C has 6 questions carrying 3 marks each.*
- (v) *Section D has 4 questions carrying 5marks each.*
- (vi) *Section E has 3 case based integrated units of assessment (04 marks each) with sub-parts of the values of 1 mark each.*
- (vii) *All the questions are compulsory. There is no overall choice. However an internal choice has been provided. You have to attempt only one of the alternatives in all questions.*

SECTION – A

- Q1.** A graph is used to compare parts of a whole, is known as
 (a) Line graph b) Histogram c) Pie - chart d) Linear graph
- Q2.** 294 is divisible by:
 a) 9 b) 3 c) 4 d) 8
- Q3.** A polyhedron has 6 vertices and 12 edges then its faces are:
 a) 6 b) 10 c) 8 d) 12
- Q4.** Find product of: $-4p$ and $3p$
 a) $12p$ b) $-12p^2$ c) $+4p^2$ d) $-12p$
- Q5.** What are the common factors of $18x$ and $20x^2$.
 a) $6x^2$ b) $2x$ c) $9x^2$ d) $5x$
- Q6.** Exponential form of $2^{-3} \times 2^7$
 a) 2^{-10} b) 2^{-4} c) 2^{10} d) 2^4
- Q7.** 1cubic centimeter = _____mm³
 a) 10 b) 100 c) 1000 d) 10000

- Q8.** If $(x - 3) = -6$, then x is
- a) -9 b) -3 c) +3 d) +9
- Q9.** If $x\%$ of $400 = 80$, then x is
- a) 10 b) 20 c) 5 d) None of these
- Q10.** Two numbers are in ratio $2 : 3$. If the sum of the numbers is 100, then larger number is
- a) 20 b) 40 c) 60 d) 80
- Q11.** How many vertices are in a triangular prism?
- a) 4 b) 6 c) 3 d) None of these
- Q12.** Value of $\left(\frac{-3}{4}\right)^{-2}$
- a) $\frac{-9}{16}$ b) $\frac{9}{16}$ c) $\frac{16}{-9}$ d) $\frac{16}{9}$
- Q13.** x and y vary directly. When $x = 3$, then $y = 12$. Find x when $y = 36$.
- a) 12 b) 9 c) 3 d) 1
- Q14.** What are the factors of $5z - 15z^3$?
- a) $5z(1 - 3z^2)$ b) $5z(5 - 3z)$ c) $5z(1 - 3z)$ d) $5z^2(1 - 3z)$
- Q15.** In a right angled triangle, base and perpendicular are 12cm and 10cm respectively, then find its area.
- a) 120cm^2 b) 100cm^2 c) 60cm^2 d) None of these
- Q16.** Find addition of $(2x + 5)$ and $(-3x + 2)$.
- a) $-5x + 3$ b) $-x + 3$ c) $5x + 7$ d) $-x + 7$
- Q17.** Standard form of 30200000 is
- a) 3.02×10^3 b) 302×10^5 c) 3.02×10^7 d) 3.02×10^{-7}
- Q18.** If $4xy7$ is exactly divisible by 9, then the smallest value of $(x + y)$ is
- a) 9 b) 7 c) 0 d) 5

Q28. Using identity, find the value of: $(99)^2$

OR

Simplify: $(x^2 - 5)(x + 5) + x(x + 5)$

Q29. The following line graph shows the yearly sales figures for a manufacturing company.

(a) What were the sales in (i) 2002 (ii) 2006?

(b) What were the sales in (i) 2003 (ii) 2005?

(c) Compute the difference between sales in 2002 and 2006.

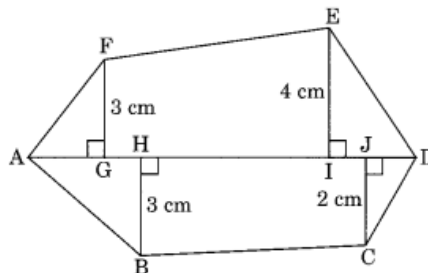


Q30. 8 persons can build a wall in 5 days. How many persons are required to finish the work in 4 days?

Q31. Arun bought a pair of skates at a sale where the discount given was 20%. If the amount he pays is ₹1,600, find the marked price.

SECTION – D

Q32. Find the area of the hexagon ABCDEF given below. Given that: $AD = 8$ cm, $AJ = 6$ cm, $AI = 5$ cm, $AH = 3$ cm, $AG = 2.5$ cm and FG, BH, EI and CJ are perpendiculars on diagonal AD from the vertices F, B, E and C respectively.



Q33. If the weight of 12 sheets of thick paper is 40 grams, how many sheets of the same paper would weigh

(i) $2\frac{1}{2}$ Kg

(ii) $\frac{3}{4}$ Kg

Q34. Draw line graph for the following data:

Side of square (in cm)	2	3	3.5	5	6
Perimeter (in cm)	8	12	14	20	24

OR

Draw the line passing through (2, 3) and (3, 2). Find the coordinates of the points at which this line meets the x-axis and y-axis. Is (1, 2) and (4, 2) will lie on this line?

Q35. Arif took a loan of ₹ 80,000 from a bank. If the rate of interest is 10% per annum, find the difference of amounts he would be paying after 18 months if the interest is
(i) compounded annually (ii) compounded half-yearly

OR

A shopkeeper bought two TV sets at ₹10,000 each. He sold one at a profit of 10% and the other at a loss of 10%. Find whether he made an overall profit or loss.

SECTION-E

- Q36.** In a building there are 24 cylindrical pillars. The radius of each pillar is 28 cm and height is 4 cm.
(i) What is the curved surface area of each pillar?
(ii) What will be the cost of painting the pillars at the rate of ₹ 8 per m²?
(iii) If the height of the pillars is halved and radius is doubled then what will be the change in curved surface area.
(iv) What will be the volume of each pillar?
- Q37.** Smita has an amount of ₹ ($p^2 - 5p + 6$). She has to distribute this amount equally between $(p - 2)$ workers.
(i) What are the factors of amount?
(ii) How much amount each worker will get?
(iii) What is the amount if $p = 10$?
(iv) What is the amount that each worker will get if $p = 10$?
- Q38.** The cost of an article was ₹15,550 and ₹ 450 were spent on its repairing.
(i) Find selling price of the article if it is sold at a profit of 10%.
(ii) If the selling price of the article is ₹18,000 then find loss or profit on it.
(iii) If ₹200 were spent on article in place of ₹450 then what is the cost price of the article.
(iv) If there is a loss of 10% on selling the article then what is the selling price.
