



Mathematics (40)

1. Choose the correct answer

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- I. The product of a rational number and its reciprocal is
a) 0 b) 1 c) -1 d) none of these
- II. The number of digits in the square root of 298116 is
a) 4 b) 5 c) 3 d) 6
- III. The value of $(x^2 - 4) - (x - 2)(x + 2)$ is
a) 0 b) $x - 2$ c) $x + 2$ d) None of these
- IV. The area of a rectangle whose sides are $15pq$ and $12pq^2$ is
a) $27p^2q^3$ b) $180p^2q^3$ c) $-180p^2q^3$ d) None of these
- V. 5% when expressed as a fraction equals
a) $\frac{1}{5}$ b) $\frac{1}{20}$ c) $\frac{1}{2}$ d) $\frac{3}{10}$
- VI. The correct formula is
a) $loss\% = \frac{C.P. \times 100}{Loss}$ b) $\frac{Loss \times 100}{S.P.} = Loss\%$
c) $Loss\% = \frac{Loss \times 100}{C.P.}$ d) N.O.T
- VII. The sum of the angles of a quadrilateral is
a) 180° b) 270° c) 300° d) 360°
- VIII. The volume of a cube whose edge is $2x$ is
a) $8x^3$ b) $6x^3$ c) $2x$ d) None of these
- IX. Out of 125 times head appears 64 times when a coin is tossed. The probability of getting a head is
a) $\frac{1}{125}$ b) $\frac{1}{64}$ c) $\frac{64}{125}$ d) $\frac{125}{64}$
- X. The difference between the highest and the lowest value of observation as called its
a) Frequency b) Range c) Class interval d) None of these

2. Solve the following

- I. If $x - \frac{1}{x} = 9$, find the value of $x^2 + \frac{1}{x^2}$. 2
- II. If an angle of a parallelogram is four-fifth of its adjacent angle, find the angles of the parallelogram. 2
- III. Factorise: $(l + m)^2 - 4lm$ 2

- IV. 72% of 25 students are good in Mathematics. How many are not good in Mathematics? **3**
- V. If the area of a rhombus be 24cm^2 and one of its diagonals be 4 cm, find the perimeter of the rhombus. **3**

3. Solve the following:

- I. A man sells two wall watches at Rs. 99 each. On one, he gains 10% and on the other, he loses 10%. Find the C.P. of each wall watch. What is the total gain or loss %? **4**
- II. The lateral surface area of a hollow cylinder is 4224 cm^2 . It is cut along its height and formed a rectangular sheet of width 33 cm. Find the perimeter of rectangular sheet. **4**
- III. Arvind has Piggy bank. It is full of one-rupee and fifty-paise coins. It contains 3 times as many fifty paise coins as one rupee coins. The total amount of the money in the bank is Rs 35. How many coins of each kind are there in the bank? **5**
- IV. The area of the trapezium is 210 cm^2 and its height is 5 cm. If one of the parallel sides is longer than the other by 8 cm, find the two parallel sides. **5**

(Science 30)

4. Fill in the blanks.

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- I. A ----- is produced when combustible substance is in the vapour state.
- II. Cell organelle which help in cellular respiration -----.
- III. Use of fine powder on carom board ----- friction.
- IV. ----- is done to remove chaff from grains.

5. Match the following

2

- | | | |
|-------------------------|---|--|
| I. sulphur dioxide | - | damage ozone layer |
| II. carbon dioxide | - | reduces oxygen- carrying capacity of blood |
| III. carbon monoxide | - | acid rain |
| IV. chlorofluorocarbons | - | green house gas |

6. Define the following:

- I. Electrolyte **1**
- II. Parasite **1**
- III. Light year **1**
- IV. Metamorphosis **1**

7. Short answer type questions:

- I. What is endangered species? Explain with example. **2**
- II. A pendulum vibrates 30 times in 1 minute. calculate the frequency and time period of the sound wave. **2**
- III. What is internal and external fertilization? **2**
- IV. Write two advantage of ploughing. **2**
- V. Distinguish between regular and diffused reflection. Does diffused reflection mean the failure of the laws of reflection? **2**

8. Give reason.

- I. Why it is advised that spoon should not be placed in pickle Jar? **2**
- II. Why are forest called the lungs of nature **2**

- III. Why cockroach die when put in water 2
- IV. What is magnetic effect of electricity? Give some examples. 3
9. Describe and draw nitrogen cycle. 3

(Social Science 10)

10. Give one reason why English continued to be used in India after Independence. 1
11. What are tertiary activities? 1
12. What is “Public interest Litigation”? 1
13. State Article: 17 in the Right to Equality, in the Indian constitution. 1
14. Why do we need a constitution? 2
15. Explain Doctrine of lapse policy 2
16. How did the partition affect life in Delhi? 2

(English 20)

17. **Read the following passages given below carefully and answer the questions that follow.** 5

The cross cultural spread of English is unprecedented in other ways. It is more widely used than any of the other colonial languages like French, Portuguese or Spanish. It even has a wider use than some of the languages associated with international non-western religious traditions like Arabic or Sanskrit. In countries like India and Nigeria, English is used at all levels of society: in local English, language newspapers and broadcasting, in public administration, in university education, in major industries, in the courts and the civil services.

Its global stature is backed up by massive English-language training programmes, an international business that in textbooks, language courses, video programmes and computerized instruction is worth hundreds of millions of pounds or dollars to the economies of the US and the UK. The English language is now one of the Britain’s most reliable exports. It is an ideal British product, needing no workers and no work, no assembly lines and no assembly, no spare parts and very little servicing; it is used for the most intimate and the most public services everywhere. Indeed with nearly 200 languages, India needs English to unify the country. Professor Lal, a champion of Indian English who runs a well-known writers’ workshop and claims that in simple numerical terms, in a country of 840 million, more Indians speak English and write English than in England itself. Even Malcolm Muggeridge said – ‘The last Englishman left will be an Indian’.

Malcom Muggeridge’s insightful observation underlines the importance of the English language for India. The people of India have begun to understand the potential of English in terms of better job opportunities in the corporate world. There is therefore a strong desire among parents to admit their children in public school where the standard of English is very high. Our educationists are working towards improving the standard of English in state owned schools. Government schools need to improve their standard of teaching English to compete with the public English medium schools..

- (a) Why is English more important than other colonial languages?
- (b) Why is English so important in India?
- (c) What is the importance of the English language for the economies of the US and the UK?
- (d) Why does the author consider English as an ideal British export product?
- (e) What is meant by the word ‘traditions’? (Para 1)
- (i) ways (ii) habits
- (iii) customs (iv) ideas

18. **Change the voice of the following sentences.** 4

- I. Malini bought a colorful hat for her daughter.
- II. The dog was locked up in the kennel by its master.
- III. The winners were praised by the principal.
- IV. All the students celebrated Dipawali holidays.

19. **Rearrange the following words/phrases to make a complete and correct sentence.**

- I. covered/snow/with/land/are/hills/all the/of this. 1

II. a brave soldier/his medals/that/will/he/show/was **1**

III. is my friend/the boy/in an accident/died/whose brother. **1**

20. Anand witnessed an accident near the school gate where a child fell down and was hurt very badly. Many people were standing around but did not know what to do. Finally the child was carried to the hospital by a taxi driver. Anand felt the necessity to enable the students to render the first aid to the victim. He decides to write a letter to the editor of a local daily about the importance of knowing first aid. Write the letter on his behalf using your own ideas and the ideas from the unit 'Health and Medicine'. **4**

21. Describe the picture in your own words.



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