English (20)

Q.1 Read the passage given below and answer the questions/complete the statements that follow:

"Something is coming uphill", said Mother Wolf, twitching one ear. "Get ready". The bushes rustled a little in the thicket and Father Wolf dropped on his haunches under him, ready for his leap. Then, if you had been watching, you would have seen the most wonderful thing in the world-the wolf checked in mid-spring. He made his leap before he saw what he was jumping at, and then he tried to stop himself. The result was that he had shot up straight into the air for four or five feet, landing almost where he had left the ground. "Man!" he snapped. "A man's cub. Look!"

Directly in front of him, holding on a low branch, stood a naked brown baby who could just walk-as soft and as dimpled a little atom as ever came to a wolf's cave at night. He looked up into Father Wolf's face and laughed.

"Is that a man's cub ?" said Mother Wolf. "I have never seen one. Bring it here. How little! How naked! How bold!" she said softly. The baby was pushing his way between the cubs to get close to the warm hide. "Aha! He is taking his meal with the others. And so this is a man's cub. Now, was there ever a wolf that could boast of a man's cub among her children ?"

"I have heard now and again of such a thing, but never in our pack or in my time", said Father Wolf. "He is altogether without hair, and I could kill him with a touch of my foot. But see, he looks up and is not afraid."

The moonlight was blocked out of the mouth of the cave, for Shere Khan's great square head and shoulders were thrust into the entrance. Tabaqui, behind him, was squeaking: "My Lord, My Lord, it went in here!"

"Shere Khan does us great honour", said Father Wolf, but his eyes were very angry. "What does Shere Khan need ?" .

My quarry. A man's cub went this way", said Shere Khan. "Its parents have run off. Give it to me."

Answer the following questions:

(a) Why did Father Wolf drop on his haunches ? 2

(b) Why did he stop in the middle of his jump ? 2

(c) What did a man's cub look like ? 2

(d) What did it do to keep itself warm ? , 2

Do as directed:

(e) What is meant by the word'bold'? (para 3) 1

(f) What is meant by the word 'altogether' ? (para 4) 1

Q.2 Read the following advertisement for products using solar energy. 4

SOLAR POWER SYSTEMS

FOR A GREENER INDIA

• EXCELLENT OFFERS

• Solar Cookers

• Solar Lanterns

• Solar Heating/Cooking Systems

• Solar Water Heater

Raj Solar Sales and Service

45-Panchkwan Road

New Delhi

Write a letter to the editor of an English daily, making a plea to the common people to switch over to solar energy to conserve electricity and limit electricity bills.

Q.3 Write a paragraph on "TERRORISM – AMENACE TO HUMANITY" or "THE COALITION POLITICS" in about 120 to 150 words. 4

Q.4 Complete the sentences in reported speech. Note whether the sentence is a request, a statement or a question. 1/2 x 4 = 2

1. He said, "I like this song."

2. "Where is your sister?" she asked me.

3. "I don't speak Italian," she said.

4. "Say hello to Jim," they said.

Mathematics (40)

Solve the following:

Q.5 If $x = k^2$ and $y = k$ is a solution of the equation $x – 5y + 6 = 0$, find the values of k. 2

Q.6 A rectangular sheet of paper 44 cm × 18 cm is rolled along its length and a cylinder is formed. Find the radius of the cylinder. 2

Q.7 If $27^x = \dfrac{9}{3^x}$, find x. 2

Q.8 If $x + y = 12$ and $xy = 27$, find the value of $x^3 + y^3$. 2

Q.9 If the supplement of an angle is three times its complement, find the angle. 2

Q.10 Three cubes each of side 5cm are joined end to end. Find the surface area of the resulting cuboid. 2

Solve the following: (any 4)

Q.11 Find the percentage increase in the area of a triangle if its each side is doubled. 3

Q.12 If x = $\dfrac{\sqrt{3}+\sqrt{2}}{\sqrt{3}-\sqrt{2}}$ and y = $\dfrac{\sqrt{3}-\sqrt{2}}{\sqrt{3}+\sqrt{2}}$, find x² + y². 3

Q.13 If $x^2 + \dfrac{1}{x^2} = 83$. Find the value of $x^3 - \dfrac{1}{x^3}$. 3

Q.14 P and Q are any two points lying on the sides DC and AD respectively of a parallelogram ABCD. Show that ar (Δ APB) = ar (Δ BQC). 3
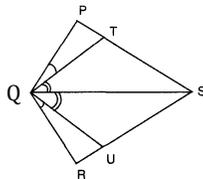
Q.15 A chord of a circle is equal to the radius of the circle, find the angle subtended by the chord at a point on the minor arc and also at a point on the major arc. 3

Solve the following:

Q.16 Prove that the quadrilateral formed by angle bisectors of a cyclic quadrilateral is also cyclic. 4

Q.17 If the bisectors of angles ∠ABC and ∠ACB of a triangle ABC meet at a point O, then show that $\angle BOC = 90° + \dfrac{1}{2}\angle A$ 4

Q.18 In below figure, PQRS is a quadrilateral and T and U are respectively points on PS and RS such that PQ = RQ, ∠PQT = ∠RQU and ∠TQS = ∠UQS. Prove that QT = QU. 4

Q.19 If h, C, V are respectively the height, the curved surface and the volume of a cone, prove that $3\pi V h^3 - C^2 h^2 + 9V^2 = 0$ 4

SCIENCE (18)

2 Marks each

Q.20 Find out the number of electron, proton and neutron in the following 2
Na⁺, Mg2⁺, Cl⁻, Fe³⁺

Q.21 Write difference between monocot & dicot plants. 2

Q.22 Give examples of 2 diseases caused by each of the following 2
a) Bacteria   b) Virus   c) Fungus   d) Protozoa

Q.23 a) What is fumigation? 2
b) Write for characteristics of meristematic tissues.

Q.24 Electronic configuration of a neutral atom x is 2,8,6. Find out the electronic configuration of x²-? 2

Q.25 Write the chemical formula of the following compounds 2

i. sodium sulphat   ii. Copper carbonate   iii. Calcium hydroxide   iv.   magnesium chloride

Q.26 Define the term (any 2)   2

i. speed   ii. Velocity   iii. Acceleration   iv. desplacement

Q.27 State Newton's second law of motion?   2

Q.28 Calculate the value of acceleration due to gravity on the surface of the moon. (Given: Mass of the moon = 7.4×10^{22} kg; Radius of moon = 1740 km; $G = 6.7 \times 10^{-11}$ Nm^2/kg^2)   2

SOCIAL SCIENCE (12)

Each question carry 1 mark

Q.29 What was the "Guillotine"? Who invented it?   1

Q.30 When students are allowed to speak in class, what kind of situation is it ?   1

Q.31 Which two countries are India's southern neighbours?   1

Q.32 Why had mid-day-meal been implemented?   1

Each question carries 2 marks

Q.33 Why does the North – South extent of India appear to be bigger than east – west extent? 2

Q.34 Describe any two steps taken by government in the field of education.   2

Q.35 State two main features of Enabling Act of 1933.   2

Q.36 Explain the role of infrastructure for the development of the rural economy.   2

हिंदी (10)

प्र.37   निम्नलिखित प्रश्नो के सही विकल्प चुनकर लिखिए –   5

1. 'दर्ज़ा' शब्द का सही वर्ण–विच्छेद है–

क. द् + आ + र् + ज़् + आ   ख. द् + र् + ज़् + आ   ग. द् + अ + र् + ज़्   घ. द् + अ + र् + ज़् + आ

2. 'सम् + कलन' से शब्द बना है–

क. समाकलन   ख. सामकलन   ग. संकलन   घ. सम्कलन

3. 'उपचार + इक' से नया शब्द बनेगा–

क. उपचरिक   ख. उपचारिक   ग. औपचारीक   घ. औपचारिक

4. 'गंगा' का पर्यायवाची शब्द नहीं है?

क. भागीरथी   ख. भवानी   ग. देवसरि   घ. सुरनदी

5. फेंक कर चलाया जाने वाला हथियार–

क. शस्त्र   ख. अस्त्र   ग. भाला   घ. त्रिशूल

प्र.38   समय का सदुपयोग और परिश्रम पर बल देते हुए छोटे भाई को एक प्रेरणादायक पत्र लिखिए।   5

अथवा

आपने अपने शहर में डिजाइनर, बुटिक खोला है। उसके प्रचार के लिए 20–25 शब्दों में एक विज्ञापन तैयार कीजिए।