

English:

The Amazon rainforest is the largest rainforest in the world, covering an area of over 5.5 million square kilometers. It is home to an incredible diversity of plant and animal life, and is considered to be one of the most important ecosystems on Earth.

The Amazon rainforest plays a vital role in regulating the global climate. It absorbs large amounts of carbon dioxide from the atmosphere, and helps to regulate rainfall patterns. The rainforest is also a major source of fresh water, and provides a home for many indigenous peoples.

- 1. What is the main function of the Amazon rainforest?
- (A) To provide a home for indigenous peoples
- (B) To regulate the global climate
- (C) To provide a source of fresh water
- (D) All of the above

2. How many square kilometers does the Amazon rainforest cover?

(A) 5.5 million (B) 10.5 million (C) 15.5 million (D) 20 million

3. The somber silence in the room was broken only by the ticking of the clock. This ticking of the clock made the old man think about his life's journey.

Question:

What is the meaning of the word "somber"?

(A) Happy (B)	Sad (C) Excite	d (D) Gloomy
---------------	----------------	--------------

4. He will	his post when the enemy will attack. The	was a
delicious chocolate ca	ke.	
(A) desert, dessert		
(B) desert, desert		
(C) dessert, dessert		
(D) dessert, desert		
5. The teacher took h	i <u>m to task</u> for not doing his homework.	

Write the meaning of the underlined phrase.

(A) scolded him (B) praised him (C) ignored him (D) rewarded him

Aptitude:

6.Complete the series 7, 26, 63, 124, 215, 342, ? (A)392 (B)511

(C)481 (D)421

7.An Informal Gathering occurs when a group of people get together in a casual, relaxed manner. Which situation below is the best example of an Informal Gathering?

(A) A debating club meets on the first Sunday morning of every month.

(B) After finding out about his salary raise, Jay and a few colleagues go out for a quick dinner after work.

(C)Meena sends out 10 invitations for a bachelorette party she is giving for her elder sister.

(D) Whenever she eats at a Chinese restaurant, Roop seems to run into Dibya.

8. Today is Monday. After 61 days, it will be :

A) Tuesday B) Monday

C) Sunday D) Saturday

9.In an election between two candidates, one got 55% of the total valid votes, 20% of the votes were invalid. If the total number of votes was 7500, the number of valid votes that the other candidate got, was :

A) 2500	B	2700
•	,	=	,

C) 2900 D) 3100

10. The car dealer found that there was a tremendous response for the new XYZ's car booking with long queues of people complaining about the duration of business hours and arrangements. Courses of action:

I. People should make their arrangement of lunch and snacks while going for car XYZ's booking and be ready to spend several hours.

II. Arrangement should be made for more booking desks and increase business hours to serve more people in less time.

A. If only I follows

B. If only II follows

C. If either I or II follows

D. If neither I nor II follows

E. If both I and II follow

Physics

11.An object of mass 5 kg falls from rest through a vertical distance of 20 m and attaches a velocity of 10 m/s. How much work is done by the resistance of the air on the object ? (g = 10 m/s 2)

(A) –150 J (B) 225 J (C) –750 J (D) 1000 J

12.An aircraft executes a horizontal loop at a speed of 720 km/h with its wings banked at 15°. What is the radius of the loop?

(A)15 km (B)23.567 m (C)12.781 m (D)14 km

13.A weight is attached to the free end of a sonometer wire. It gives resonance at a length 40 cm when it is resonanced with a tuning fork of frequency 51 Hz. The weight is then immersed wholly in water, the resonant length is reduced to 30 cm. The relative density in which weight suspended is

(A) 16/9 (B) 16/7 (C) 16/5	(D) 16/3
----------------------------	----------

14.A student unable to answer a question on Newton's laws of motion attempts to pull himself up by tugging on his hair. He will not succeed

(A) As the force exerted is small

(B) Newton's law of inertia is not applicable to living beings.

(C)The frictional force while gripping, is small

(D)As the force applied is internal to the system.

15.A particle is executing a simple harmonic motion. Its maximum acceleration is α and maximum velocity is β . Then, its time period of vibration will be

(A)
$$\frac{2\pi\beta}{\alpha}$$
 (B) $\frac{\beta^2}{\alpha^2}$ (C) $\frac{\alpha}{\beta}$ (D) $\frac{\beta^2}{\alpha}$

Chemistry

16.When potassium dichromate, K_2 Cr₂ O₇ is converted into K_2 Cr O₄, the change in oxidation number of chromium is :

(A)	Six	(B) Zero	(C) Four	(D) Seven
17. Identify the smallest alkane which can form a ring structure.				

- (A) Ethane (B) Cyclo ethane
- (C) Propane (D) Cyclopropane

18. 59g of an amide obtained from a carboxylic acid, RCOOH, upon heating with alkali liberated 17g of ammonia. The acid is

(A)Formic Acid	(B)Acetic Acid
(C)Propionic Acid	(D)Benzoic Acid

- 19.Which of the following salts are soluble in water?
- (A)Lead sulphate (B)Barium sulphate
- (C)Calcium sulphate (D) None of these

20.Which of the following is / are correct statements with respect to Copper (Cu), Silver (Ag) and Gold (Au)?

- 1. All of them are can be found naturally in their elemental state
- 2. All of them belong to same group in the periodic table

Select the correct option from the codes given below:

(A) Only 1	(B) Only 2	(C) Both 1 & 2	(D) None of these
------------	------------	----------------	-------------------

Mathematics:

21.Rajan got married 8 years ago. His present age is 6/5 times his age at the time of his marriage. Rajan's sister was 10 years younger to him at the time of his marriage. The present age of Rajan's sister is

(A) 32 years	(B) 36 years	(C) 38 years	(D) 40 years		
() = j =	(_)	(-)	(
22 The distance of	a point (2.3) from the	$\sin \theta 2x - 3y + \theta = 0$	measured along a line		
22. The distance of a point $(2,3)$ from the line $2x - 3y + 9 = 0$ measured along a line					
x-y +1 =0 is :					
x-y + 1 =0 15 .					
(A)4√2 Units	(B)2√2 Units	(C)√2 Units	(D)2 Units		
(A)4VZ Units			(D)2 Units		

23. There are 15 bulbs in a room. Each one of them can be operated independently. The number of ways in which the room can be lighted is _____.

(A) $8^5 + 1$ (B) $(32)^2 - 1$ (C) $(32)^3 - 1$ (D) None of these.

24. The value of 3 tan⁶ $10^{\circ} - 27$ tan⁴ $10^{\circ} + 33$ tan² 10° equals _____.

(A) 0 (B) –1 (C) 1 (D) 2

25.Karan and Arjun run a 100 metre race, where Karan beats Arjun by 10 metres. To do a favour to Arjun, Karan starts 10 metres behind the starting line in a second 100 metre race. They both run at their earlier speeds. Which of the following is true in connection with the second race ?

(A) Karan and Arjun reach the finishing line simultaneously

(B) Arjun beats Karan by 1 metre

(C) Arjun beats Karan by 11 metres

(D) Karan beats Arjun by 1 metre

Answers:

1.D 2.A 3.D 4.A 5.A 6.B 7.B 8.D 9.B 10.B 11.C 12.A 13.B 14.D 15.A 16.B 17.D 18.B 19.D 20.C 21.C 22.A 23.C 24.C 25.D