



GOVT. OF NCT OF DELHI
Delhi Subordinate Services Selection Board
FC-18, Institutional Area, Karkardooma, Delhi – 110092.
www.dsssb.delhigovt.nic.in

Test Center Name:	iON Digital Zone iDZ 2 Sector 62
Test Date:	18/11/2018
Test Time:	4:00 PM - 6:00 PM
Subject:	TGT MATHS FEMALE

Section : Mental Ability

Q.1 Study the following information carefully to answer the question given below.
Following are the qualifications and conditions for certain posts in a "XYZ" company.

The candidate must:

- be an engineering graduate with at least 70% marks.
- be not less than 21 years and not more than 26 years of age as on 01/04/2018.
- have passed the written test with at least 60% of marks.
- be willing to pay a deposit of ₹ 2.5 lakh, to be refunded on completion of probation & training.

If the candidate satisfies (a)-(e) he/she would be referred as Engineer.

However, if the candidate satisfies all the above, except:

- at (a), has appeared for final semester exam; result yet to be declared; has 75% average marks up to seventh semester; would be referred as Project-Engineer.
- at (a), has done diploma in engineering with 75% of marks, would be referred as Asst. Engineer.
- at (d), is willing to pay ₹ 1.5 lakh as security deposit, would be referred as Engineer-Trainee.
- at (b), even if age is above 26 years as on 1/4/18, but with 3 years of experience, would be referred as Senior-Engineer.

Pranita has completed her B.E. in electronics with 71% of marks. She also has cleared written test with 75% of marks. She is 22 years old as on May 2018. She is willing to pay security deposit of ₹ 1.5 lakh. For which position will she be referred?

- Ans
- ☒ 1. Engineer
 - ☒ 2. Engineer Trainee
 - ☒ 3. Senior Engineer
 - ☒ 4. Project Engineer

Question ID : 1626531835

Q.2 The present ages of Ramu, Ranjeet, Naresh are in proportions 3 : 5 : 8. Five years ago, the sum of their ages was 65. Find their present ages (in years).

- Ans
- ☒ 1. 45, 23, 16
 - ☒ 2. 15, 25, 40
 - ☒ 3. 10, 20, 35
 - ☒ 4. 17, 19, 12

Question ID : 1626531843

Q.3 Identify the best option that suits the statement.

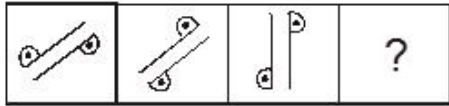
A text book always has _____.

- Ans
- ☒ 1. tables

- ✓ 2. pages
- ✗ 3. illustrations
- ✗ 4. pictures

Question ID : 1626531838

Q.4 Find the next number in the series.



Ans

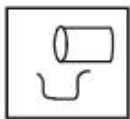
- ✗ 1.
- ✓ 2.
- ✗ 3.
- ✗ 4.

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adda247

Question ID : 1626531831

Q.5 Find the embedded figure given below from the options.



Ans

- ✗ 1.
- ✗ 2.
- ✓ 3.
- ✗ 4.

Q.6 जब आप कॉलेज जा रहे हैं, आप देखते हैं कि कुछ सीनियर आपके सहपाठियों की रैगिंग कर रहे हैं। स्थिति से निपटने के लिए अपनाया जाए ऐसा सब से अच्छा तरीका कौन सा है?

Ans

- ☒ 1. वरिष्ठों को रैगिंग न करने की चेतावनी दें।
- ☒ 2. जाएँ और अपनी कक्षा में बैठ जाएँ।
- ☒ 3. इस मामले को कॉलेज प्रिंसिपल के ध्यान में लाएँ।
- ☒ 4.

अपने सहपाठियों को उन के रैगिंग किये जाने की चेतावनी दें।

Question ID : 1626531836

Q.7 Find the odd pair of words.

Ans

- ☒ 1. Clothes : Word robe
- ☒ 2. Shoes : Leather
- ☒ 3. Omelets : Egg
- ☒ 4. Rubber : Latex

Question ID : 1626531844

Q.8 What will be the missing term in the following series?

PY, RW, UT, YP, ?

Ans

- ☒ 1. AV
- ☒ 2. GC
- ☒ 3. DK
- ☒ 4. RO

Question ID : 1626531847

Q.9 What will be the missing term in the following series?

37, 42, 40, ?, 43, 48

Ans

- ☒ 1. 45
- ☒ 2. 46
- ☒ 3. 50
- ☒ 4. 53

Question ID : 1626531846

Q.1 Find the odd pair of numerals.

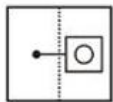
Ans

- ☒ 1. 81 – 9
- ☒ 2. 25 – 5

✓ 3. $115 - 15$ ✗ 4. $144 - 12$

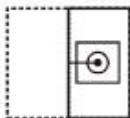
Question ID : 1626531845

Q.1 How the pattern would appear when the transparent sheet is folded at the dotted line?

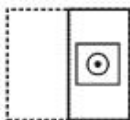


Ans

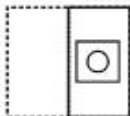
✓ 1.



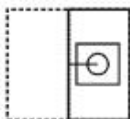
✗ 2.



✗ 3.



✗ 4.



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Question ID : 1626531837

Q.1 बैट, क्रिकेट से उसी प्रकार से संबंधित है जैसे स्टिक का निम्नलिखित से है?

Ans

✗ 1. रग्बी

✗ 2. बैडमिंटन

✗ 3. फुटबॉल

✓ 4. हॉकी

Question ID : 1626531828

Q.1 यदि \times का मतलब $+$, $<$ के लिए, $+$ मतलब \div , $>$ मतलब \times , $=$ 'बराबर' के लिए है, \div का मतलब $>$ और $=$ $<$ के लिए है तो निम्न कथन, $7 > 10 + 2 = 9 < 3 \times 4$ में किस प्रकार बदलेगा?

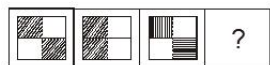
Ans

✗ 1. $40 < 2$ ✗ 2. $39 < 5$ ✗ 3. $45 < 10$ ✓ 4. $35 < 10$

Question ID : 1626531841

Q.1
4

Select the option that is related to the third figure in the same way as the second figure is related to the first figure.



Ans

☒ 1.



☒ 2.



☒ 3.

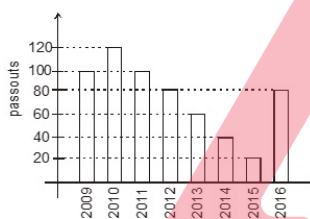


☒ 4.



Question ID : 1626531829

Q.1 The following bar chart shows information about NTSE pass out percentage for "XYZ" institute for past years. Read the chart carefully and answer the question.



How many students have passed NTSE from 'XYZ' during 2014 -16?

Ans ☒ 1. 160

☒ 2. 40

☒ 3. 20

☒ 4. 140

Question ID : 1626531833

Q.1 Find the number which, when added to itself 9 times, gives 140.

Ans ☒ 1. 12

☒ 2. 20

☒ 3. 14

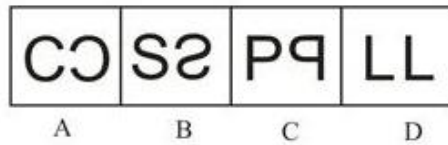
☒ 4. 16

Question ID : 1626531842

Q.1

7

Choose the odd figure in the series.



- Ans
- ☒ 1. C
 - ☒ 2. B
 - ☒ 3. D
 - ☒ 4. A

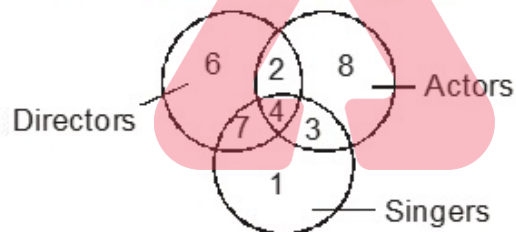
Question ID : 1626531830

Q.1
8 Sunanda is sister of Krishna. How is krishna's father's sister's daughter related to Sunanda?

- Ans
- ☒ 1. Sister
 - ☒ 2. Mother
 - ☒ 3. Cousin
 - ☒ 4. Aunt

Question ID : 1626531840

Q.1
9 Study the following carefully and answer the given question.

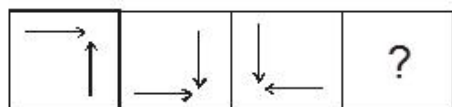


Which region denotes singers, who are directors but not actors?

- Ans
- ☒ 1. 3
 - ☒ 2. 4
 - ☒ 3. 10
 - ☒ 4. 7

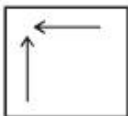
Question ID : 1626531839

Q.2
0 Find the next figure in the series.

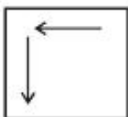


- Ans
- ☒ 1.

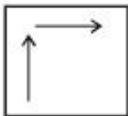
✓ 2.



✗ 3.



✗ 4.



Question ID : 1626531832

Section : General Awareness

Q.1 Who was the founder of the Indian National Congress?

Ans

✓ 1.

Allan Octavian Hume

✗ 2.

Sardar Vallabh Bhai Patel

✗ 3.

Jawaharlal Nehru

✗ 4.

Annie Besant

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Question ID : 1626531848

Q.2 ग्रीष्मकालीन संक्रांति, वर्ष के दौरान वह पल जब आकाश में सूर्य का मार्ग उत्तरी गोलार्ध में सबसे दूर उत्तर होता है, किस तारीख पर गिरता है?

Ans

✗ 1.

20 या 21 अगस्त

✗ 2.

20 या 21 जुलाई

✓ 3.

20 या 21 जून

✗ 4.

2 या 3 जून

Question ID : 1626531851

Q.3 How many members are nominated by the President from the Anglo-Indian community in Lok Sabha?

Ans

✗ 1.

Five

✗ 2.

One

✗ 3.

Three

✓ 4.

Two

Question ID : 1626531853

Q.4 सिंधी में निम्नलिखित सभ्यताओं में से कौन सा 'मृतकों का ढेर' के रूप में जाना जाता था?

Ans

✗ 1.

मिस्र सभ्यता

✗ 2.

हड़प्पा सभ्यता

✗ 3. मेसोपोटामिया

✓ 4. मोहनजोदड़ो

Question ID : 1626531850

Q.5 Nirmal paintings are associated with which of the following states?

Ans ✗ 1. Nagaland

✗ 2. Arunachal Pradesh

✗ 3. Meghalaya

✓ 4. Andhra Pradesh

Question ID : 1626531859

Q.6 Who among the following has the power to discontinue a session in the two Houses and dissolve the Lok Sabha (in consultation with the Executive)?

Ans ✗ 1. The Speaker of Lok Sabha

✓ 2. The President

✗ 3. The Prime Minister

✗ 4. The Vice President

Question ID : 1626531854

Q.7 In May 2018, which of the following firms partnered with the National Commission for Women (NCW) to launch a Digital Literacy Programme to train women on safe use of internet and social media?

Ans ✓ 1. Facebook

✗ 2. WhatsApp

✗ 3. Google

✗ 4. Twitter

Question ID : 1626531867

Q.8 Who among the following won gold in the 74 kg Junior Asian Wrestling Championship 2018, held at New Delhi?

Ans ✗ 1. Somveer Singh

✓ 2. Sachin Rathi

✗ 3. Suraj Rajkumar Kokate

✗ 4. Mohit

Question ID : 1626531861

Q.9 निम्नलिखित में से किसने कुतुब परिसर में स्थित प्रसिद्ध अलै-दरवाजा का निर्माण किया?

Ans ✗ 1. इल्तुतमिश

✓ 2. अलाउद्दीन खिलजी

✗ 3. कुतुब-उद-दीन ऐबक

✗ 4. फिरोज शाह तुगलक

Question ID : 1626531849

Q.1
0 When was the World Biofuel Day celebrated recently?

Ans ✓ 1. 10 August 2018

✗ 2. 18 June 2018

✗ 3. 20 July 2018

✗ 4. 10 March 2018

Question ID : 1626531866

Q.1
1 Which among the following is used to make non-stick cookware's?

Ans ✗ 1. Melamine

✓ 2. Teflon

✗ 3. Rayon

✗ 4. Bakelite

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Question ID : 1626531863

Q.1
2 Which law states that 'when the price of a product increases, the demand for the same product will fall'?

Ans ✗ 1. The law of competition

✓ 2. The law of demand

✗ 3. The law of increasing costs

✗ 4. The law of self-interest

Question ID : 1626531856

Q.1
3 _____ is unique form of art found in Kerala. It is essentially a ritualistic art practiced in temples where the representation of deities like Kali and Lord Ayyappa, are made on the floor.

Ans ✗ 1. Chakyar koothu

✗ 2. Pulikali

✓ 3. Kalamezhuthu

✗ 4. Theyyam

Question ID : 1626531858

Q.1
4 The Committee on the Welfare of Scheduled Castes and Scheduled Tribes consists of:

Ans ✗ 1.

10 members from the Lok Sabha and 20 members from the Rajya Sabha

✓ 2.

20 members from the Lok Sabha and 10 members from the Rajya Sabha

✗ 3.

20 members from the Lok Sabha and 20 members from the Rajya Sabha

✗ 4.

10 members from the Lok Sabha and 10 members from the Rajya Sabha

Question ID : 1626531855

Q.1
5 Where is the headquarters of the Asian Development Bank (ADB) located?

Ans ✗ 1. Shanghai, China

✓ 2. Manila, Philippines

✗ 3. Beijing, China

✗ 4. Jakarta, Indonesia

Question ID : 1626531864

Q.1
6 In the Archery World Cup held at Berlin, Indian women's compound team lost gold to the team from which of the following countries?

Ans ✗ 1. Germany

✓ 2. France

✗ 3. Italy

✗ 4. Turkey

TEACHERS

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Question ID : 1626531862

Q.1
7 Which among the following is also known as Lotus temple?

Ans ✗ 1. Badrinath Temple

✓ 2. Bahai Temple

✗ 3. Vaishno Devi Mandir

✗ 4. Brihadeeswara Temple

Question ID : 1626531860

Q.1
8 Who was elected as Zimbabwe's President after Robert Mugabe's removal in a coup in November 2017?

Ans ✗ 1. Nelson Chamisa

✓ 2. Emmerson Mnangagwa Grace Mugabe

✗ 3. Morgan Tsvangirai

✗ 4. Kayaking Expedition

Question ID : 1626531865

Q.1 Which among the following rivers is also called Tsangpo?

- Ans
- ☐ 1. Chenab
 - ☐ 2. Ganga
 - ☐ 3. Jhelum
 - ☒ 4. Brahmaputra

Question ID : 1626531852

Q.2 Which company topped the ET 500 2017 ranking, in the annual edition of top 500 companies in India put together by Economic Times?

- Ans
- ☐ 1. Reliance Industries Ltd.
 - ☒ 2. Indian Oil Corporation Ltd.
 - ☐ 3. State Bank of India
 - ☐ 4. Tata Consultancy Services

Question ID : 1626531857

Section : Arithmetic Ability

Q.1 A person spends 90% of his income. If his income is increased by 40%, he increases his expenditure by 30%. What is the percentage increase in his saving?

- Ans
- ☐ 1. 65%
 - ☐ 2. $\frac{2300}{13}\%$
 - ☒ 3. 130%
 - ☐ 4. $\frac{1000}{13}\%$

Question ID : 1626531875

Q.2 A train of length 300 m takes 20 seconds to pass another train of length 200 m travelling in the opposite direction. If the speed of the first train is 30 km/h, then what is the speed of the second train in km/h?

- Ans
- ☐ 1. 36
 - ☐ 2. 72
 - ☒ 3. 60
 - ☐ 4. 54

Question ID : 1626531881

Q.3 A boat can go 15 km upstream and 21 km downstream in 3 hours. It can go 25 km upstream and 14 km downstream in $3\frac{1}{2}$ hours. What is the speed of the boat in still water in km/h?

- Ans
- ☐ 1. 10
 - ☐ 2. 14
 - ☒ 3. 12
 - ☐ 4. 15

Q.4 Two numbers are in the ratio 4 : 3. If each number is increased by 6, the ratio becomes 5 : 4. The difference between the numbers is:

- Ans
- ☐ 1. 1
 - ☐ 2. 9
 - ☒ 3. 6
 - ☐ 4. 3

Question ID : 1626531873

Q.5 The ratio of the selling prices of two articles is 2 : 3. The first article is sold at a profit of 20% and the second at a loss of 20%. What is the overall profit or loss percentage?

- Ans
- ☐ 1. $\frac{100}{13}$ % profit
 - ☐ 2. $\frac{100}{11}$ % loss
 - ☐ 3. $\frac{100}{11}$ % profit
 - ☒ 4. $\frac{100}{13}$ % loss

Question ID : 1626531876

Q.6 यदि $a : b = 3 : 4$ है, तो $(7a - 3b)$ किसके बराबर होगा?

- Ans
- ☐ 1. 2 : 5
 - ☐ 2. 37 : 19
 - ☒ 3. 3 : 11
 - ☐ 4. 3 : 4

Question ID : 1626531872

Q.7 The height of a cylinder is increased by 10% and the radius of its base is decreased by 10%. What is the percentage increase or decrease in its curved surface area?

- Ans
- ☐ 1. No change
 - ☒ 2. 1% decrease
 - ☐ 3. 2% decrease
 - ☐ 4. 1% increase

Question ID : 1626531880

Q.8 The efficiencies of A, B and C are in the ratio 2 : 3 : 4. They together can complete a piece of work in 18 days. In how many days can A alone complete the same piece of work?

- Ans
- ☐ 1. 36
 - ☐ 2. 54
 - ☐ 3. 27
 - ☒ 4. 81

Q.9 Three numbers are in the ratio 5 : 6 : 8 and their LCM is 7200. What is their HCF?

- Ans ☒ 1. 60
☐ 2. 30
☐ 3. 120
☐ 4. 90

Question ID : 1626531871

Q.1 A sum of money becomes 130% of itself in 4 years at a certain rate of simple interest. What will be the simple interest on ₹ 2000 for 3 years at the same rate of simple interest?

- Ans ☐ 1. ₹ 480
☐ 2. ₹ 425
☒ 3. ₹ 450
☐ 4. ₹ 350

Question ID : 1626531877

Q.1 The value of $1.\overline{3} + 0.\overline{123} - 0.\overline{11}$ is equal to:

- Ans ☐ 1. $1.\overline{36}$
☐ 2. $1.\overline{369}$
☐ 3. $0.\overline{369}$
☒ 4. $1.\overline{369}$

TEACHERS

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Question ID : 1626531869

Q.1 What is the compound interest on ₹ 48000 for 3 years (interest rounded off to a rupee) if the rate of interest for the first 2 year is 8% per annum and it increases by 2% every subsequent years?

- Ans ☒ 1. ₹ 15867
☐ 2. ₹ 14726
☐ 3. ₹ 14480
☐ 4. ₹ 14528

Question ID : 1626531878

Q.1 The sides of a triangle are 26 cm, 28 cm and 30 cm. What is the length of its shortest altitude?

- Ans ☐ 1. 24 cm
☐ 2. 11.2 cm
☒ 3. 22.4 cm
☐ 4. 25.8 cm

Question ID : 1626531879

Q.1

- 4 The length of a rectangle is increased by 50%. By what percentage should its width be decreased so that its area remains the same?

Ans

☐ 1. $\frac{50}{3}\%$

☐ 2. 20%

☒ 3. $\frac{100}{3}\%$

☐ 4. 25%

Question ID : 1626531874

- Q.1 5 Two pipes A and B alone can fill an empty tank in 4 hours and 8 hours respectively. Pipe C can empty the full tank in 5 hours. Pipes A and B are opened when tank is empty and, after 2 hours, pipe C is opened. In how many hours will the tank be filled?

Ans

☐ 1. $\frac{26}{7}$

☒ 2. $\frac{24}{7}$

☐ 3. $\frac{27}{7}$

☐ 4. $\frac{25}{7}$

Question ID : 1626531884

- Q.1 6 The value of $\frac{(0.86)^3 + (0.14)^3}{(8.6)^2 + (1.4)^2 - 86 \times 0.14}$ is equal to:

Ans

☐ 1. 10

☒ 2. 0.01

☐ 3. 0.001

☐ 4. 0.1

Question ID : 1626531868

- Q.1 7 The LCM of two numbers is 35 times their HCF. If their HCF is 45 and both the numbers are three-digit numbers, then what is the sum of their reciprocals?

Ans

☐ 1. $\frac{12}{35}$

☒ 2. $\frac{4}{525}$

☐ 3. $\frac{7}{16}$

☐ 4. $\frac{2}{525}$

Question ID : 1626531870

Comprehension:

A survey was conducted among certain number of students about the subject that they like most. The number of students and the corresponding central angle on a pie chart are given in the table. Read the table and answer the following three questions.

Subject	English	Maths	Science	History	Mother Tongue
Central angle on pie chart	62.4°	$(5a)^\circ$	$(3a)^\circ$	52.8°	72°
No. of students	26	45	27	b	c

SubQuestion No : 18

Q.1
8 What is the total number of students surveyed?

- Ans
- ☒ 1. 180
 - ☒ 2. 120
 - ☒ 3. 150
 - ☒ 4. 200

Question ID : 1626531886

Comprehension:

A survey was conducted among certain number of students about the subject that they like most. The number of students and the corresponding central angle on a pie chart are given in the table. Read the table and answer the following three questions.

Subject	English	Maths	Science	History	Mother Tongue
Central angle on pie chart	62.4°	$(5a)^\circ$	$(3a)^\circ$	52.8°	72°
No. of students	26	45	27	b	c

SubQuestion No : 19

Q.1
9 What is the value of $(b + c)$?

- Ans
- ☒ 1. 48
 - ☒ 2. 52
 - ☒ 3. 56
 - ☒ 4. 54

Question ID : 1626531887

Comprehension:

A survey was conducted among certain number of students about the subject that they like most. The number of students and the corresponding central angle on a pie chart are given in the table. Read the table and answer the following three questions.

Subject	English	Maths	Science	History	Mother Tongue
Central angle on pie chart	62.4°	$(5a)^\circ$	$(3a)^\circ$	52.8°	72°
No. of students	26	45	27	b	c

SubQuestion No : 20

Q.2 What percentage of students like Maths most?

- Ans
- ☒ 1. 25%
 - ☒ 2. 30%
 - ☒ 3. 24%
 - ☒ 4. 20%

Question ID : 1626531888

TEACHERS

Section : General English

Q.1 Select the most appropriate option to fill in the blank.

_____ we live in the same colony, we hardly see each other.

- Ans
- ☒ 1. Although
 - ☒ 2. As long as
 - ☒ 3. Because
 - ☒ 4. In case

Question ID : 1626531893

Q.2 Arrange the parts of the sentence in a meaningful and grammatically correct order.

- A. how polluting industries
- B. the judges wondered
- C. continued to operate
- D. in the Taj Trapezium Zone
- E. despite the Supreme Court's order

- Ans
- ☒ 1. BADEC
 - ☒ 2. BACDE
 - ☒ 3. ADCEB
 - ☒ 4. ACDBE

Q.3 Select the most appropriate option to fill in the blank.

His barber's shop is located _____ a corner of the Hauzrani village.

- Ans
- ☒ 1. into
 - ☒ 2. on
 - ☒ 3. in
 - ☒ 4. at

Question ID : 1626531889

Q.4 Select the sentence structure that is grammatically correct.

- Ans
- ☒ 1. The Dragon tree with white flesh inside produces an oval shaped fruit, which can be eaten raw.
 - ☒ 2. An oval shaped fruit with white flesh inside, the Dragon tree produces, which can be eaten raw.
 - ☒ 3. The Dragon tree produces an oval shaped fruit with white flesh inside, which can be eaten raw.
 - ☒ 4. An oval shaped fruit, which can be eaten raw with white flesh inside, the Dragon tree produces.

Question ID : 1626531900

Q.5 Select the synonym of the given word.

ESTIMATE

- Ans
- ☒ 1. solve
 - ☒ 2. believe
 - ☒ 3. find
 - ☒ 4. assess

Question ID : 1626531896

Q.6 Select the most appropriate option to fill in the blank.

In our country, many people have the habit of offering _____ advice.

- Ans
- ☒ 1. unnatural
 - ☒ 2. unfounded
 - ☒ 3. unsolicited
 - ☒ 4. unasked

Question ID : 1626531895

Q.7

Select the most appropriate option to fill in the blank.

Rahul drew a line over the map and said, "We will visit at least four towns _____ this river."

- Ans
- ☒ 1. over
 - ☒ 2. under
 - ☒ 3. along
 - ☒ 4. across

Question ID : 1626531890

Q.8 In the following sentence, four words/phrases have been underlined. One of them is incorrect. Choose the INCORRECT word/phrase from the given options.

You can go now but you must be back in the office between 4 o'clock.

- Ans
- ☒ 1. can go
 - ☒ 2. between
 - ☒ 3. must be back
 - ☒ 4. but

Question ID : 1626531902

Q.9 Select the ANTONYM of the given word.

PERSEVERANCE

- Ans
- ☒ 1. resoluteness
 - ☒ 2. instability
 - ☒ 3. urgency
 - ☒ 4. determination

TEACHERS

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Question ID : 1626531899

Q.1 Select the synonym of the given word.

LYNCH

- Ans
- ☒ 1. beat
 - ☒ 2. raid
 - ☒ 3. kill
 - ☒ 4. attack

Question ID : 1626531897

Q.1 Select the most appropriate option to fill in the blank.

I have put on weight, _____ these trousers don't fit me any longer.

- Ans
- ☒ 1. but
 - ☒ 2. or

- ☒ 3. so
☐ 4. and

Question ID : 1626531892

Q.1
2 Select the most appropriate option to fill in the blank.

The landlord _____ Mr. Singhal when he failed to pay rent for four months.

- Ans ☐ 1. punished
☐ 2. threw
☒ 3. evicted
☐ 4. forced

Question ID : 1626531894

Q.1
3 Select the most appropriate option to fill in the blank.

Why are you taking away my plate? I _____ yet.

- Ans ☐ 1. will not have finished
☒ 2. haven't finished
☐ 3. did not finish
☐ 4. am not finishing

Question ID : 1626531891

Q.1
4 In the following sentence, four words/phrases have been underlined. One of them is incorrect. Choose the INCORRECT word/phrase from the given options.

No sooner we boarded the train than it started and picked up the speed.

- Ans ☐ 1. No sooner
☐ 2. picked up
☐ 3. than it started
☒ 4. we boarded

Question ID : 1626531903

Q.1
5 Select the ANTONYM of the given word.

EMERGE

- Ans ☐ 1. surface
☒ 2. vanish
☐ 3. materialise
☐ 4. appear

Question ID : 1626531898

Comprehension:

Read the following passage and answer the questions.

THE NAME KYIRONG means “the village of happiness.” I shall never cease thinking of this place with yearning, and if I can choose where to pass the evening of my life, it will be in Kyirong. When we arrived in January, the temperature was just below freezing; it seldom falls below -10 degrees centigrade. The seasons correspond to what we have in the Alps, but the vegetation is subtropical. One can go skiing the whole year round, and in the summer, there is a row of 20,000-footers to climb.

There are about eighty houses in the village, which is the seat of two district governors who administer thirty villages. We were told that we were the first Europeans who had ever come to Kyirong, and the inhabitants watched our entry with astonishment. We were quartered in the house of a farmer, which reminded me of our Austrian houses. As a matter of fact, the whole of the village might have been transplanted from the Alps, except that instead of chimneys the roofs of the houses were decorated with prayer flags.

On the ground floor were the stables for cows and horses. They were separated by a thick ceiling from the living rooms of the family, which are approached by a ladder from the courtyard. Thick stuffed mattresses served as beds and easy chairs, and near them were small, low tables. The members of the household kept their clothes in brightly painted wardrobes, and before the inevitable carved wooden altar, butter lamps were burning. In winter the whole family sat on the clean floorboards around a huge open log fire and sip their tea.


The room in which Aufschnaiter and I were put was rather small, so I soon shifted to the hay barn next door. Aufschnaiter carried on our unceasing struggle with rats and bugs, while I had to cope with mice and fleas. I never got the better of the vermin, but the view over glaciers and rhododendron forests made up for my discomfort. We had a fireplace in our room and were given wood to burn. We spent very little money; our provisions did not cost us more than £2 10s. a month each.

The staple food in this region is tsampa made of corn, which is made into a paste with butter tea or milk or beer, and then eaten. The Tibetans make a special cult of tsampa and have many ways of preparing it. We soon got accustomed to it, but never cared much for butter tea, which is usually made with rancid butter and is generally repugnant to Europeans. It is, however, universally drunk and appreciated by the Tibetans, who often drink as many as sixty cups in a day. The Tibetans of Kyirong, besides butter tea and tsampa, eat rice, buckwheat, maize, potatoes, turnips, onions, beans and radishes. Meat is a rarity, for as Kyirong is a particularly holy place no animal is ever slaughtered there. Meat appeared on the table only when it had been brought in from another district or, more often, when bears or panthers left part of their prey uneaten.

SubQuestion No : 16

Q.1
6 Match the words with their meaning.

- | | |
|--------------|---------------|
| a. yearning | 1. nauseating |
| b. quartered | 2. lodged |
| c. repugnant | 3. longing |

Ans  1. a-1, b-3, c-2

✓ 2. a-3, b-2, c-1

✗ 3. a-2, b-1, c-3

✗ 4. a-2, b-3, c-1

Question ID : 1626531907

Comprehension:

Read the following passage and answer the questions.

THE NAME KYIRONG means “the village of happiness.” I shall never cease thinking of this place with yearning, and if I can choose where to pass the evening of my life, it will be in Kyirong. When we arrived in January, the temperature was just below freezing; it seldom falls below -10 degrees centigrade. The seasons correspond to what we have in the Alps, but the vegetation is subtropical. One can go skiing the whole year round, and in the summer, there is a row of 20,000-footers to climb.

There are about eighty houses in the village, which is the seat of two district governors who administer thirty villages. We were told that we were the first Europeans who had ever come to Kyirong, and the inhabitants watched our entry with astonishment. We were quartered in the house of a farmer, which reminded me of our Austrian houses. As a matter of fact, the whole of the village might have been transplanted from the Alps, except that instead of chimneys the roofs of the houses were decorated with prayer flags.

On the ground floor were the stables for cows and horses. They were separated by a thick ceiling from the living rooms of the family, which are approached by a ladder from the courtyard. Thick stuffed mattresses served as beds and easy chairs, and near them were small, low tables. The members of the household kept their clothes in brightly painted wardrobes, and before the inevitable carved wooden altar, butter lamps were burning. In winter the whole family sat on the clean floorboards around a huge open log fire and sip their tea.

The room in which Aufschnaiter and I were put was rather small, so I soon shifted to the hay barn next door. Aufschnaiter carried on our unceasing struggle with rats and bugs, while I had to cope with mice and fleas. I never got the better of the vermin, but the view over glaciers and rhododendron forests made up for my discomfort. We had a fireplace in our room and were given wood to burn. We spent very little money; our provisions did not cost us more than £2 10s. a month each.

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7 The passage is an extract from:

- Ans
- ☒ 1. a biography
 - ☒ 2. an article
 - ☒ 3. a report
 - ☒ 4. a travelogue

Question ID : 1626531905

Comprehension:



Read the following passage and answer the questions.

THE NAME KYIRONG means “the village of happiness.” I shall never cease thinking of this place with yearning, and if I can choose where to pass the evening of my life, it will be in Kyirong. When we arrived in January, the temperature was just below freezing; it seldom falls below - 10 degrees centigrade. The seasons correspond to what we have in the Alps, but the vegetation is subtropical. One can go skiing the whole year round, and in the summer, there is a row of 20,000-footers to climb.

There are about eighty houses in the village, which is the seat of two district governors who administer thirty villages. We were told that we were the first Europeans who had ever come to Kyirong, and the inhabitants watched our entry with astonishment. We were quartered in the house of a farmer, which reminded me of our Austrian houses. As a matter of fact, the whole of the village might have been transplanted from the Alps, except that instead of chimneys the roofs of the houses were decorated with prayer flags.

On the ground floor were the stables for cows and horses. They were separated by a thick ceiling from the living rooms of the family, which are approached by a ladder from the courtyard. Thick stuffed mattresses served as beds and easy chairs, and near them were small, low tables. The members of the household kept their clothes in brightly painted wardrobes, and before the inevitable carved wooden altar, butter lamps were burning. In winter the whole family sat on the clean floorboards around a huge open log fire and sip their tea.

The room in which Aufschnaiter and I were put was rather small, so I soon shifted to the hay barn next door. Aufschnaiter carried on our unceasing struggle with rats and bugs, while I had to cope with mice and fleas. I never got the better of the vermin, but the view over glaciers and rhododendron forests made up for my discomfort. We had a fireplace in our room and were given wood to burn. We spent very little money; our provisions did not cost us more than £2 10s. a month each.

The staple food in this region is tsampa made of corn, which is made into a paste with butter tea or milk or beer, and then eaten. The Tibetans make a special cult of tsampa and have many ways of preparing it. We soon got accustomed to it, but never cared much for butter tea, which is usually made with rancid butter and is generally repugnant to Europeans. It is, however, universally drunk and appreciated by the Tibetans, who often drink as many as sixty cups in a day. The Tibetans of Kyirong, besides butter tea and tsampa, eat rice, buckwheat, maize, potatoes, turnips, onions, beans and radishes. Meat is a rarity, for as Kyirong is a particularly holy place no animal is ever slaughtered there. Meat appeared on the table only when it had been brought in from another district or, more often, when bears or panthers left part of their prey uneaten.

SubQuestion No : 18

Q.1
8 Which of the following foods was the narrator not able to relish?

- Ans
- ☒ 1. Butter tea
 - ☐ 2. Meat
 - ☐ 3. Tsampa
 - ☐ 4. Milk and beer

Comprehension:

Read the following passage and answer the questions.

THE NAME KYIRONG means “the village of happiness.” I shall never cease thinking of this place with yearning, and if I can choose where to pass the evening of my life, it will be in Kyirong. When we arrived in January, the temperature was just below freezing; it seldom falls below -10 degrees centigrade. The seasons correspond to what we have in the Alps, but the vegetation is subtropical. One can go skiing the whole year round, and in the summer, there is a row of 20,000-footers to climb.

There are about eighty houses in the village, which is the seat of two district governors who administer thirty villages. We were told that we were the first Europeans who had ever come to Kyirong, and the inhabitants watched our entry with astonishment. We were quartered in the house of a farmer, which reminded me of our Austrian houses. As a matter of fact, the whole of the village might have been transplanted from the Alps, except that instead of chimneys the roofs of the houses were decorated with prayer flags.

On the ground floor were the stables for cows and horses. They were separated by a thick ceiling from the living rooms of the family, which are approached by a ladder from the courtyard. Thick stuffed mattresses served as beds and easy chairs, and near them were small, low tables. The members of the household kept their clothes in brightly painted wardrobes, and before the inevitable carved wooden altar, butter lamps were burning. In winter the whole family sat on the clean floorboards around a huge open log fire and sip their tea.

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SubQuestion No : 19

Q.1
9 “If I can choose where to pass the evening of my life, it will be in Kyirong.” The narrator fell in love with Kyirong village mainly because:

Ans X 1. the name of the village meant ‘village of happiness’

- ✓ 2. the place was almost like his own village in Europe
- ✗ 3. they didn't have to spend much for their daily needs
- ✗ 4. the temperatures never fell below -10 degrees centigrade

Question ID : 1626531906

Comprehension:

Read the following passage and answer the questions.

THE NAME KYIRONG means "the village of happiness." I shall never cease thinking of this place with yearning, and if I can choose where to pass the evening of my life, it will be in Kyirong. When we arrived in January, the temperature was just below freezing; it seldom falls below -10 degrees centigrade. The seasons correspond to what we have in the Alps, but the vegetation is subtropical. One can go skiing the whole year round, and in the summer, there is a row of 20,000-footers to climb.

There are about eighty houses in the village, which is the seat of two district governors who administer thirty villages. We were told that we were the first Europeans who had ever come to Kyirong, and the inhabitants watched our entry with astonishment. We were quartered in the house of a farmer, which reminded me of our Austrian houses. As a matter of fact, the whole of the village might have been transplanted from the Alps, except that instead of chimneys the roofs of the houses were decorated with prayer flags.

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SubQuestion No : 20

Q.2 From which sentence can it be inferred that the narrator and his companion were mountaineers?

- Ans
- ☒ 1. The temperature seldom falls below -10 degrees centigrade.
 - ☒ 2. The whole of the village might have been transplanted from the Alps.
 - ☒ 3. One can go skiing the whole year round.
 - ☒ 4. In the summer, there is a row of 20,000-footers to climb.

Question ID : 1626531908

Section : General Hindi

Q.1 'पगड़ी उतारना' मुहावरे का अर्थ है:

- Ans
- ☒ 1. बात न मानना
 - ☒ 2. सम्मान करना
 - ☒ 3. जिद्दी हो जाना
 - ☒ 4. अपमान करना

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Question ID : 1626531927

Q.2 सकर्मक वाच्य वाला वाक्य कौन सा है?

- Ans
- ☒ 1. छात्रों को छुट्टी दी गई।
 - ☒ 2. लड़के बाहर सो रहे हैं।
 - ☒ 3. नानी कहानी सुनती थी।
 - ☒ 4. इस गरमी में सोया नहीं जाता।

Question ID : 1626531926

Q.3 तद्भव शब्द कौन सा है?

- Ans
- ☒ 1. श्रृंखला
 - ☒ 2. साँकल
 - ☒ 3. धार्मिक
 - ☒ 4. विश्वास

Question ID : 1626531921

Q.4 'बुरे कर्मों का फल अच्छा नहीं हो सकता' - इस आशय के लिए लोकोक्ति है:

Ans

- ✓ 1. बोया पेड़ बबूल का आम कहाँ से होय
- ✗ 2. माया को माया मिली कर-कर लंबे हाथ
- ✗ 3. दूध का दूध पानी का पानी
- ✗ 4. लेना एक न देना दो

Question ID : 1626531928

Q.5 विशेषण रूप में प्रयुक्त होने वाला शब्द है:

Ans

- ✗ 1. बहन
- ✗ 2. भवन
- ✓ 3. ममेरा
- ✗ 4. अमरुद

Question ID : 1626531919

Q.6 कंठ से उच्चरित होने वाले वर्ण कौन से वर्ग में हैं?

Ans

- ✓ 1. अ ख घ ह
- ✗ 2. च ग य श
- ✗ 3. ल ओ न श
- ✗ 4. ट ष र ड

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Question ID : 1626531911

Q.7 'नीलगाय' शब्द में कौन सा समास है?

Ans

- ✗ 1. द्वंद्व
- ✓ 2. कर्मधारय
- ✗ 3. द्विगु
- ✗ 4. अव्ययीभाव

Question ID : 1626531916

Q.8 फूल शब्द का बहुवचन (अविभक्तिक) होगा:

Ans

- ✗ 1. फूलो
- ✓ 2. फूल
- ✗ 3. फूलें

✗ 4. फूलों

Question ID : 1626531925

Q.9 'कडवाहट' शब्द में कौन सा प्रत्यय है?

Ans ✓ 1. आहट

✗ 2. हट

✗ 3. ट

✗ 4. वाहट

Question ID : 1626531918

Q.10 तत्सम शब्द कौन सा है?

Ans ✗ 1. जमीन

✗ 2. साँकल

✓ 3. विद्यार्थी

✗ 4. बात-चीत

Question ID : 1626531920

Q.11 ऊष्म वर्णों वाला वर्ग कौन सा है?

Ans ✓ 1. श ष स

✗ 2. य त द

✗ 3. ल र व

✗ 4. क ज भ

Question ID : 1626531910

Q.12 'कानों सुनी बात सच्ची नहीं है।' - वाक्य के रेखांकित पद में कारक है:

Ans ✗ 1. कर्ता

✗ 2. अधिकरण

✗ 3. कर्म

✓ 4. करण

Question ID : 1626531914

Q.13 'विधि' शब्द का विलोम होता है:

Ans ✓ 1. निषेध

✗ 2. संधि

- ✗ 3. विधान
✗ 4. विधाता

Question ID : 1626531923

Q.1
4 'प्रत्याशी' शब्द में उपसर्ग है:

- Ans
✗ 1. परा
✗ 2. प्रा
✗ 3. प्र
✓ 4. प्रति

Question ID : 1626531917

Q.1
5 'सुवर्ण' शब्द का पर्यायवाची नहीं है:

- Ans
✗ 1. हेम
✗ 2. कंचन
✗ 3. कनक
✓ 4. रजत

Question ID : 1626531924

Q.1
6 कौन सा वाक्य ग़लत है?

- Ans
✗ 1. जो करेगा सो भरेगा।
✗ 2. आप इधर आ जाइए।
✓ 3. उसने अपनी बात सप्रमाण सहित कही।
✗ 4. सुनो, यह काम कर दो।

Question ID : 1626531929

Q.1
7 'जीने की इच्छा' - इस वाक्यांश के लिए शब्द होगा:

- Ans
✓ 1. जिजीविषा
✗ 2. जिगीषा
✗ 3. दीर्घायुष्य
✗ 4. जिज्ञासा

Question ID : 1626531922

Q.1
8 'जगदीश' शब्द बना है:

Ans

- ✗ 1. जगद + ईश से
 ✓ 2. जगत् + ईश से
 ✗ 3. जगदी + श से
 ✗ 4. जग + दीश से

Question ID : 1626531915

Q.1
9 'मैं कालेज जाऊंगा।' - यह वाक्य किस काल का है?

- Ans ✗ 1. अपूर्ण भूत
 ✗ 2. वर्तमान
 ✓ 3. भविष्य
 ✗ 4. भूत

Question ID : 1626531913

Q.2
0 कौन सा शब्द अशुद्ध है?

- Ans ✗ 1. व्याकुल
 ✓ 2. साम्यता
 ✗ 3. सौख्य
 ✗ 4. अपराध

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Question ID : 1626531912

Section : Subject Related

Q.1 If 'p' is a prime, then the congruence $x^2 + 1 \equiv 0 \pmod{p}$ has a solution if and only if:

- Ans ✗ 1. $p = 1$ or $p \equiv 1 \pmod{3}$
 ✗ 2. $p \neq 2$ or $p \equiv 1 \pmod{2}$
 ✓ 3. $p = 2$ or $p \equiv 1 \pmod{4}$
 ✗ 4. $p = -2$ or $p \equiv 2 \pmod{3}$

Question ID : 1626531940

Q.2 Let A denote the set of all polynomials $P(x)$ of degree less than or equal to 2 such that $P(1) = 1$, $P(0) = 0$ and $P'(x) > 0$ for all $x \in [0, 1]$. Then:

- Ans ✓ 1. $A = \{(1 - a)x^2 + ax : a \in (0, 2)\}$
 ✗ 2. A is empty
 ✗ 3. $A = \{(1 - a)x^2 + ax : a \in (0, \infty)\}$

✗ 4. $A = \{(1-a)x^2 + ax : a \in (0,1)\}$

Question ID : 1626531948

Q.3 For any positive integers 'a' and 3, there exist unique integers 'q' and 'r' such that $a = 3q + r$, where r must satisfy:

Ans ✗ 1. $1 < r < 3$

✗ 2. $0 < r < 3$

✓ 3. $0 \leq r < 3$

✗ 4. $0 < r \leq 3$

Question ID : 1626531931

Q.4 Which of the following set of vectors $x = (x_1, x_2, x_3)$ and \mathbb{R}^3 is a subspace of \mathbb{R}^3 ?

Ans ✗ 1. all x such that x_2 is rational

✓ 2. all x such that $x_1 + 3x_2 = x_3$

✗ 3. all x such that $x_1 \geq 0$

✗ 4. all x such that $x_2 = x_1^2$

Question ID : 1626531946

Q.5 For what value of α , the vectors $(0, 0, 1, 0)$, $(\alpha, 0, 0, 8)$, $(2, 0, 0, \alpha)$ and $(1, 2, 9, 8)$ are linearly independent?

Ans ✓ 1. ± 4

✗ 2. -1

✗ 3. 3

✗ 4. ± 2

Question ID : 1626531943

Q.6 The matrix representation of T on \mathbb{R}^2 defined by $T(x, y) = (2y, 3x - y)$ relative to the basis $\{(1, 3), (2, 5)\}$ is:

Ans ✗ 1. $\begin{pmatrix} -30 & -48 \\ 19 & 29 \end{pmatrix}$

✗ 2. $\begin{pmatrix} -31 & -48 \\ 18 & 29 \end{pmatrix}$

✓ 3. $\begin{pmatrix} -30 & -48 \\ 18 & 29 \end{pmatrix}$

✗ 4. $\begin{pmatrix} -30 & -47 \\ 18 & 29 \end{pmatrix}$

Question ID : 1626531942

Q.7 For a positive integer n , by using Chinese Remainder Theorem, the number of solutions of the congruence $x^2 \equiv 1 \pmod{n}$, when $e \geq 3$ is:

Ans ✗ 1. $2^k + 1$

✗ 2. 2^{k+1}

✓ 3. 2^{k+2}

✗ 4. 2^k

Question ID : 1626531939

Q.8 The decimal expansion of number $\frac{441}{2^2 \times 5^3 \times 7}$ ———.

- Ans
- ✗ 1. is non-terminating but repeating
 - ✗ 2. terminates after two places of decimal
 - ✓ 3. has a terminating decimal
 - ✗ 4. is non-terminating and non-repeating

Question ID : 1626531934

Q.9 The HCF of 4052 and 12576 is:

- Ans
- ✓ 1. 4
 - ✗ 2. 2
 - ✗ 3. 6
 - ✗ 4. 3

Question ID : 1626531933

Q.1 If two zeroes of the polynomial $x^4 - 6x^3 - 26x^2 + 138x - 35$ are $2 \pm \sqrt{3}$, then other zeroes are:

- Ans
- ✗ 1. 2 and 5
 - ✓ 2. 7 and -5
 - ✗ 3. 5 and 8
 - ✗ 4. 3 and -10

Question ID : 1626531949

Q.1 Let W be the set of all triples (x_1, x_2, x_3) of real numbers that satisfy the equation $2x_1 - x_2 + 3x_3 = k$. If W is to be a vector space, then the value of k is:

- Ans
- ✗ 1. 1
 - ✓ 2. 0
 - ✗ 3. 2
 - ✗ 4. -1

Question ID : 1626531945

Q.1 By applying Euclid's division lemma, the cube of any positive integer is of the form:

- Ans
- ✗ 1. $9m, 9m + 2$ or $9m + 7$
 - ✓ 2. $9m, 9m + 1$ or $9m + 8$
 - ✗ 3. $9m, 9m + 4$ or $9m + 5$

✗ 4. $9m, 9m + 3$ or $9m + 6$

Question ID : 1626531930

Q.1
3 The order of 2 modulo 101 is:

Ans ✓ 1. 100

✗ 2. 98

✗ 3. 99

✗ 4. 97

Question ID : 1626531937

Q.1
4 For what least value of n , the natural number $(24)^n$ is divisible by 8?

Ans ✓ 1. 1

✗ 2. 0

✗ 3. No value of n is possible

✗ 4. -1

Question ID : 1626531932

Q.1 The Euclidean Algorithm is used to produce a sequence $X_1 > X_2 > X_3 > X_4 > X_5 = 0$ of positive integers where
5 $X_t = q_{t+1}X_{t+1} + X_{t+2}$, $t = 1, 2, 3$. The quotients are $q_2 = 3, q_3 = 2$, and $q_4 = 2$. Which of the following is correct?

Ans ✗ 1. $\gcd(X_1, X_2) = -2X_1 + 6X_2$

✗ 2. $\gcd(X_1, X_2) = 2X_1 + 7X_2$

✗ 3. $\gcd(X_1, X_2) = -2X_1 - 6X_2$

✓ 4. $\gcd(X_1, X_2) = -2X_1 + 7X_2$

Question ID : 1626531938

Q.1 For the operator T on \mathbb{R}^3 defined by $T(x, y, z) = (x - y, 2x + 3y + 2z, x + y + 2z)$, all eigenvalues and a basis
6 for each eigenspace as

Ans ✗ 1. $\lambda_1 = 1, (1, 1, -1); \lambda_2 = 2, (2, -2, -1); \lambda_3 = 3, (1, -2, -1)$

✓ 2. $\lambda_1 = 1, (1, 0, -1); \lambda_2 = 2, (2, -2, -1); \lambda_3 = 3, (1, -2, -1)$

✗ 3. $\lambda_1 = 1, (1, 0, 1); \lambda_2 = 2, (2, -2, 1); \lambda_3 = 3, (1, -2, -1)$

✗ 4. $\lambda_1 = 1, (1, 0, -1); \lambda_2 = 2, (2, 2, -1); \lambda_3 = 3, (1, -2, 1)$

Question ID : 1626531947

Q.1
7 A number $2.\overline{35}$ is:

Ans ✓ 1. a rational number

✗ 2. an irrational number

✗ 3. a rational number and a prime number

☒ 4. a prime number

Question ID : 1626531935

Q.1
8 Wilson's Theorem states that if 'p' is a prime, then:

- Ans
- ☒ 1. $p! = -1 \pmod{p}$
 - ☒ 2. $(p-1) = -1 \pmod{p}$
 - ☒ 3. $(p-1)! = -2 \pmod{p}$
 - ☒ 4. $(p-1)! = -1 \pmod{p}$

Question ID : 1626531941

Q.1
9 Which of the following statements is true?

- Ans
- ☒ 1. A number is rational if and only if its square is rational.
 - ☒ 2. A number n is odd if and only if $n(n+1)$ is even
 - ☒ 3. An integer n is odd if and only if $n^2 + 2n$ is odd.
 - ☒ 4. A number is irrational if and only if its square is irrational.

Question ID : 1626531936

Q.2
0 The value of λ for which the system of equations $2x - y - z = 2$, $x - 2y + z = -4$, $x + y + \lambda z = 4$ has no solution, is:

- Ans
- ☒ 1. 0
 - ☒ 2. -2
 - ☒ 3. 3
 - ☒ 4. -3

Question ID : 1626531944

Section : Subject Related

Q.1 The zeroes of the quadratic polynomial, the sum and product of whose zeroes are $\sqrt{2}$ and $\frac{-3}{2}$, respectively, are:

- Ans
- ☒ 1. $\frac{-1}{\sqrt{2}}, \frac{\sqrt{3}}{2}$
 - ☒ 2. $\frac{-1}{\sqrt{2}}, \frac{3}{\sqrt{2}}$
 - ☒ 3. $\frac{1}{\sqrt{2}}, \frac{-2}{\sqrt{3}}$
 - ☒ 4. $\frac{-1}{\sqrt{2}}, \frac{-3}{\sqrt{2}}$

Q.2 A manufacturer has 600 L of a 12% solution of acid. How many litres of a 30% acid solution must be added to it such that acid content in the resulting mixture will be more than 15% but less than 18%?

- Ans ☒ 1. more than 120 L but less than 300 L
☒ 2. more than 140 L but less than 320 L
☒ 3. more than 110 L but less than 290 L
☒ 4. more than 220 L but less than 300 L

Question ID : 1626531969

Q.3 Let T_r be the r^{th} term of an A.P. for $r = 1, 2, 3, \dots$. If for some positive integers m and n , we have $T_m = \frac{1}{n}$ and $T_n = \frac{1}{m}$, then T_{mn} equals:

- Ans ☒ 1. 0
☒ 2. $\left(\frac{1}{m}\right) + \left(\frac{1}{n}\right)$
☒ 3. $\frac{1}{mn}$
☒ 4. 1

Question ID : 1626531966

Q.4 If $x = 2$ is a solution of a quadratic equation $3x^2 - 2kx + 5 = 0$, then value of ' k ' is:

- Ans ☒ 1. $\frac{17}{4}$
☒ 2. $\frac{7}{4}$
☒ 3. $-\frac{17}{4}$
☒ 4. $\frac{4}{17}$

Question ID : 1626531962

Q.5 The solution of a quadratic equation $x^2 + 4\sqrt{2}x + 6 = 0$ is:

- Ans ☒ 1. $-\sqrt{2}, \sqrt{18}$
☒ 2. $\sqrt{2}, \sqrt{18}$
☒ 3. $-\sqrt{2}, -\sqrt{18}$
☒ 4. $\sqrt{2}, -\sqrt{18}$

Question ID : 1626531964

Q.6 For what value of k , the linear equations $(3k + 1)x + 3y = 2$, $(k^2 + 1)x + (k - 2)y = 5$ have no solution?

- Ans
- ☒ 1. 0
 - ☒ 2. 2
 - ☒ 3. 1
 - ☒ 4. -1

Question ID : 1626531954

Q.7 If the two of the zeroes of the cubic polynomial $ax^3 + bx^2 + cx + d$ are 0, then the third zero is:

- Ans
- ☒ 1. $-\frac{b}{a}$
 - ☒ 2. $-\frac{d}{a}$
 - ☒ 3. $\frac{b}{a}$
 - ☒ 4. $\frac{c}{a}$

Question ID : 1626531950

Q.8 Reduce the pair of equations $\frac{10}{x+y} + \frac{2}{x-y} = 4$, $\frac{15}{x+y} - \frac{5}{x-y} = -2$ into a pair of linear equations. Then find its solution from the following options:

- Ans
- ☒ 1. $x = 3, y = 2$
 - ☒ 2. $x = -3, y = -2$
 - ☒ 3. $x = -3, y = 2$
 - ☒ 4. $x = 3, y = -2$

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Question ID : 1626531955

Q.9 The solution of a quadratic equation $\frac{x+1}{x-1} + \frac{x-1}{x+1} = \frac{10}{3}$ is:

- Ans
- ☒ 1. -2, 3
 - ☒ 2. -2, 2
 - ☒ 3. -4, 4
 - ☒ 4. 2, 4

Question ID : 1626531963

Q.10 The solution of $|x^2 - 1| + (x - 1)^2 + \sqrt{x^2 - 3x + 2} = 0$:

- Ans
- ☒ 1. 1
 - ☒ 2. does not exist
 - ☒ 3. -1
 - ☒ 4. 2

Question ID : 1626531960

Q.1 The diagonal of a rectangular plot is 60 m more than the shorter side 'b'. If the longer side 'a' is 30 m more than the shorter side, then the size 'a × b' of the plot is:

- Ans
- ☒ 1. $90 \text{ m} \times 60 \text{ m}$
 - ☒ 2. $120 \text{ m} \times 90 \text{ m}$
 - ☒ 3. $60 \text{ m} \times 30 \text{ m}$
 - ☒ 4. $180 \text{ m} \times 150 \text{ m}$

Question ID : 1626531965

Q.1 The solution of pair of linear equations $3x - 5y = 4$, $9x - 2y = 7$ by the substitution method, is:

- Ans
- ☒ 1. $x = \frac{9}{13}, y = \frac{-5}{13}$
 - ☒ 2. $x = \frac{9}{13}, y = \frac{5}{13}$
 - ☒ 3. $x = \frac{-9}{13}, y = \frac{5}{13}$
 - ☒ 4. $x = \frac{-9}{13}, y = \frac{-5}{13}$

Question ID : 1626531956

Q.1 For what value of k , the system of linear equations $2x - y = 3$, $4x + ky = 4$ has no solution?

- Ans
- ☒ 1. -4
 - ☒ 2. -2
 - ☒ 3. 2
 - ☒ 4. -1

Question ID : 1626531959

Q.1 If the zeroes of the polynomial $x^3 - 3x^2 + x + 1$ are $a - b$, a and $a + b$ respectively, then the values of 'a' and 'b' are respectively:

- Ans
- ☒ 1. $1, \pm\sqrt{2}$
 - ☒ 2. $3, -\sqrt{2}$
 - ☒ 3. $-1, \sqrt{2}$
 - ☒ 4. $1, \pm\sqrt{\frac{3}{2}}$

Question ID : 1626531953

Q.1 The sum of the first '2n' terms of the A.P. 2, 5, 8, ... is equal to the sum of the first 'n' terms of the A.P. 57, 59, 61, ..., then 'n' equals:

- Ans
- ☒ 1. 12
 - ☒ 2. 13
 - ☒ 3. 10

✓ 4. 11

Question ID : 1626531967

Q.1 6 A train travels 360 km at a uniform speed. If the speed had been 5 km/h more, it would have taken 1 hour less for the same journey, then the speed of the train is:

- Ans
- ✗ 1. 30 km/h
 - ✗ 2. 50 km/h
 - ✗ 3. 45 km/h
 - ✓ 4. 40 km/h

Question ID : 1626531961

Q.1 7 If α, β, γ are zeroes of cubic polynomial $kx^3 - 5x + 9$, and if $\alpha^3 + \beta^3 + \gamma^3 = 27$, then the value of k is:

- Ans
- ✗ 1. 1
 - ✗ 2. 2
 - ✓ 3. -1
 - ✗ 4. -2

Question ID : 1626531952

Q.1 8 For what value of k , the system of linear equations $3x + 4y = 12, x + ky = 4$ has infinitely many solutions?

- Ans
- ✓ 1. $\frac{4}{3}$
 - ✗ 2. $\frac{3}{2}$
 - ✗ 3. $\frac{2}{3}$
 - ✗ 4. $\frac{3}{4}$

Question ID : 1626531958

Q.1 9 Sum to 'n' terms of the series $\frac{1}{1.2.3} + \frac{3}{2.3.4} + \frac{5}{3.4.5} + \frac{7}{4.5.6} + \dots$ is:

- Ans
- ✓ 1. $\frac{n(3n+1)}{4(n+1)(n+2)}$
 - ✗ 2. $\frac{n(n+2)}{(n+3)(n+4)}$
 - ✗ 3. $\frac{n(n+2)}{(n+1)(n+4)}$
 - ✗ 4. $\frac{n(n+1)}{2(n+1)(n+4)}$

Question ID : 1626531968

Q.2 The solution of pair of linear equations $\frac{1}{2}x + \frac{2}{3}y = -1$, $x - \frac{1}{3}y = 3$ by the elimination method, is:

- Ans
- ☒ 1. $x = 2, y = 3$
 - ☒ 2. $x = -2, y = -3$
 - ☒ 3. $x = -2, y = 3$
 - ☒ 4. $x = 2, y = -3$

Question ID : 1626531957

Section : Subject Related

Q.1 How many numbers must be selected from the set $\{1, 2, 3, 4, 5, 6\}$ to guarantee that at least one pair of these numbers add up to 7?

- Ans
- ☒ 1. 3
 - ☒ 2. 2
 - ☒ 3. 4
 - ☒ 4. 5

Question ID : 1626531970

Q.2 How many positive integers less than 200 are NOT divisible by three or more primes?

- Ans
- ☒ 1. 168
 - ☒ 2. 122
 - ☒ 3. 197
 - ☒ 4. 65

Question ID : 1626531973

Q.3 What is the coefficient of $x^{101}y^{99}$ in the expansion of $(2x - 3y)^{200}$?

- Ans
- ☒ 1. $-\binom{200}{99}2^{101}3^{99}$
 - ☒ 2. $\binom{200}{99}2^{101}3^{99}$
 - ☒ 3. $\binom{101}{99}2^{101}3^{99}$
 - ☒ 4. $-\binom{101}{99}2^{101}3^{99}$

Question ID : 1626531971

Q.4 The center of the nine point circle:

Ans

☒ 1. is a point in which one among nine points.

☒ 2.

does not lie at the midpoint of the segments joining the orthocenter to each of the vertices.

☒ 3. is the circumcenter of the triangle.

☒ 4. is not the midpoints of the three sides.

Question ID : 1626531984

Q.5 The value of the integral $\int \frac{e^x(1+\sin x)}{1+\cos x} dx$ is:

Ans ☒ 1. $\sin(\log x) + C$

☒ 2. $e^x \tan\left(\frac{x}{2}\right) + C$

☒ 3. $\log|\tan x| + C$

☒ 4. $e^x \cot x + C$

Question ID : 1626531980

Q.6 For proving that a quadrilateral is a parallelogram, prove any of the following valid conditions:

Ans ☒ 1. It is both a Rhombus and a Rectangle.

☒ 2. Its diagonals are perpendicular.

☒ 3. All 4 angles are congruent.

☒ 4. Both pairs of opposite angles are congruent.

Question ID : 1626531983

Q.7 The second derivative of the function $f(x) = x^{\left(\frac{1}{x}\right)}$ at $x = e$ is:

Ans ☒ 1. $e^{\left(\frac{1}{(e-2)}\right)}$

☒ 2. $e^{\left(\frac{1}{(e-3)}\right)}$

☒ 3. $-e^{\left(\frac{1}{e}\right)-3}$

☒ 4. $e^{\left(\frac{1}{e}\right)}$

Question ID : 1626531978

Q.8 How many positive integers not exceeding 1000 are divisible by 7 or 11?

Ans ☒ 1. 12

☒ 2. 90

☒ 3. 220

☒ 4. 142

Question ID : 1626531974

Q.9 If $(1.5, 0)$, $(1.5, 6)$ and $(-1, 6)$ are mid points of a triangle, then the incentre of the triangle is:

- Ans ☒ 1. $(1, 2)$
- ☒ 2. $(\frac{2}{3}, 4)$
- ☒ 3. $(2, 3)$
- ☒ 4. $(4, 0)$

Question ID : 1626531987

Q.10 The area of the triangle formed by the straight lines $7x - 2y + 10 = 0$, $7x + 2y - 10 = 0$ and $9x + y + 2 = 0$ is:

- Ans ☒ 1. $\frac{686}{275}$ sq. units
- ☒ 2. $\frac{686}{255}$ sq. units
- ☒ 3. $\frac{868}{275}$ sq. units
- ☒ 4. $\frac{688}{275}$ sq. units

Question ID : 1626531989

Q.11 In a triangle ABC with vertices $A(1, 2)$, $B(2, 3)$ and $C(3, 1)$ and $\angle C = \cos^{-1}(\frac{4}{5})$, $\angle B = \angle A = \cos^{-1}(\frac{1}{\sqrt{10}})$. Then the coordinates of circumcentre of the triangle are:

- Ans ☒ 1. $(\frac{11}{6}, 2)$
- ☒ 2. $(2, 13)$
- ☒ 3. $(11, 2)$
- ☒ 4. $(\frac{13}{6}, \frac{11}{6})$

Question ID : 1626531988

Q.12 The solution of the recurrence relation $a_n = 6a_{n-1} - 9a_{n-2}$, $a_0 = 1$, $a_1 = 6$ is:

- Ans ☒ 1. $a_n = (1 + n)3^n$
- ☒ 2. $a_n = (n - 1)3^n$
- ☒ 3. $a_n = (1 + n)6^n$
- ☒ 4. $a_n = (1 - n)3^n$

Question ID : 1626531972

Q.13 The set of all points where the function $f(x) = 2x|x|$ is differentiable, is:

- Ans ☒ 1. $(-\infty, \infty)$

- ☒ 2. $(0, \infty)$
- ☒ 3. $[0, \infty)$
- ☒ 4. $(-\infty, 0) \cup (0, \infty)$

Question ID : 1626531977

Q.1
4 If the function $f(x) = \begin{cases} ax^2 - b, & |x| < 1 \\ \frac{-1}{|x|}, & |x| \geq 1 \end{cases}$ is differentiable, then the values of a and b are respectively:

- Ans ☒ 1. 1, 2
- ☒ 2. 0.5, 1.5
- ☒ 3. 0.5, 0.5
- ☒ 4. 1, -1

Question ID : 1626531979

Q.1
5 If $f(x) = x(\sqrt{x} - \sqrt{x+1})$, then:

- Ans ☒ 1. $f(x)$ is not differentiable at $x = 0$
- ☒ 2. $f(x)$ is differentiable at $x = 0$
- ☒ 3. $f(x)$ is continuous but not differentiable at $x = 0$
- ☒ 4. $f(x)$ is differentiable at $x \neq 0$

Question ID : 1626531975

Q.1
6 Identify the false statement given below:

- Ans ☒ 1. If the quadrilateral is cyclic, then the product of the two diagonals is equal to the sum of the products of the opposite side lengths.
- ☒ 2. Ceva's theorem is concerned with concurrency of the lines.
- ☒ 3. Menelau's theorem is concerned with the collinearity of the points.
- ☒ 4. Menelau's theorem is a not dual version of Ceva's theorem.

Question ID : 1626531985

Q.1
7 The area of the quadrilateral whose vertices, taken in order, are $(-4, -2)$, $(-3, -5)$, $(3, -2)$ and $(2, 3)$, is:

- Ans ☒ 1. 22 sq. units
- ☒ 2. 23 sq. units
- ☒ 3. 26 sq. units
- ☒ 4. 28 sq. units

Question ID : 1626531986

Q.1
8 Euclid's fifth postulate is:

- Ans
- ☒ 1. All right angles are equal to one another.
 - ☒ 2. A circle may be described with any center and any radius.
 - ☒ 3. The whole is greater than the part.
 - ☒ 4.

If a straight line, falling on two straight lines, makes the interior angles on the same side of it, taken together less than two right angles, then the two straight lines if produced indefinitely, meet on that side on which the sum of angles is less than two right angles.

Question ID : 1626531981

Q.1
9 The following theorems present conditions under which triangles are similar. Which is a false conditions of the theorem?

- Ans ☒ 1.

The corresponding sides of the triangle are proportional and the corresponding angles are no congruent.

- ☒ 2.

Side-Angle-Side similarity requires the proportionality of all three sides. If all of the sides are proportional, then all of the angles must be congruent.

- ☒ 3.

Side-Angle-Side similarity requires the proportionality of two sides and the congruence of the angle between those sides.

- ☒ 4.

Side-Angle-Side similarity requires the congruence of two angles and the side between those angles.

Question ID : 1626531982

Q.2
0 If $f(x) = \frac{x}{\sin x}$ and $g(x) = \frac{x}{\tan x}$, where $0 \leq x \leq 1$, then in the interval:

- Ans
- ☒ 1. Both $f(x)$ and $g(x)$ are increasing functions
 - ☒ 2. $f(x)$ is an increasing function
 - ☒ 3. Both $f(x)$ and $g(x)$ are decreasing functions
 - ☒ 4. $g(x)$ is an increasing function

Question ID : 1626531976

Section : Subject Related

Q.1 The value of $\sin 25^\circ \cos 65^\circ + \cos 25^\circ \sin 65^\circ$ is:

- Ans
- ☒ 1. 1
 - ☒ 2. 2
 - ☒ 3. $\frac{1}{2}$
 - ☒ 4. 0

Question ID : 1626532003

Q.2 In a histogram, each class rectangle is constructed with base as:

- Ans ☒ 1. frequency
☒ 2. size of the class
☒ 3. class interval
☒ 4. range

Question ID : 1626532006

Q.3 If $\tan(A - B) = \frac{1}{\sqrt{3}}$, $\tan(A + B) = \sqrt{3}$, $0^\circ < \angle(A + B) < 90^\circ$ with $\angle A$ is greater than $\angle B$, then $\angle A$ and $\angle B$ are:

- Ans ☒ 1. $\angle A = 45^\circ, \angle B = 25^\circ$
☒ 2. $\angle A = 60^\circ, \angle B = 15^\circ$
☒ 3. $\angle A = 30^\circ, \angle B = 15^\circ$
☒ 4. $\angle A = 45^\circ, \angle B = 15^\circ$

Question ID : 1626532001

Q.4 A solid consisting of a right circular cone of height 1.20 m and radius 0.60 m standing on a hemisphere of radius 0.60 m is placed upright in a right circular cylinder full of water such that it touches the bottom. If the radius of the cylinder is 0.60 m and its height is 1.80 m, then the volume of water left in the cylinder is:

- Ans ☒ 1. 1132 m^3
☒ 2. 1130 m^3
☒ 3. 1131 m^3
☒ 4. 1031 m^3

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Question ID : 1626531999

Q.5 The circle $x^2 + y^2 = 1$ cuts the x-axis at A and B, another circle with centre at B and variable radius, intersects the first circle at C above the x-axis and the line segment AB at D. Then the maximum area of the triangle is:

- Ans ☒ 1. $\frac{4\sqrt{3}}{9}$ sq. units
☒ 2. $\frac{4\sqrt{2}}{3}$ sq. units
☒ 3. $\frac{4}{3\sqrt{3}}$ sq. units
☒ 4. $\frac{2\sqrt{3}}{9}$ sq. units

Question ID : 1626531994

Q.6 If the median of the distribution given below is 28.5,

Class:	0 – 10	10 – 20	20 – 30	30 – 40	40 – 50	50 – 60	
Freq.:	5	a	20	15	b	5	Total 60

then the missing values of a and b are respectively:

- Ans
- ☒ 1. 3, 7
 - ☒ 2. 2, 5
 - ☒ 3. 8, 7
 - ☒ 4. 8, 5

Question ID : 1626532009

Q.7 Construction of a cumulative frequency table is useful in determining the:

- Ans
- ☒ 1. mode
 - ☒ 2. median
 - ☒ 3. mean
 - ☒ 4. all the three given measures

Question ID : 1626532007

Q.8 The angle θ between the lines joining the points $(0, 0), (2, 3)$ and $(2, -2), (3, 5)$ is:

- Ans
- ☒ 1. $\tan^{-1}\left(\frac{1}{3}\right)$
 - ☒ 2. $\tan^{-1}\left(\frac{11}{23}\right)$
 - ☒ 3. $\tan^{-1}\left(\frac{11}{3}\right)$
 - ☒ 4. $\tan^{-1}\left(\frac{1}{23}\right)$

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Question ID : 1626531991

Q.9 The area of an equilateral triangle inscribed in the circle $x^2 + y^2 + 2gx + 2fy + c = 0$ is:

- Ans
- ☒ 1. $\frac{3\sqrt{3}}{4} \sqrt{(g^2 + f^2 - 1)}$ sq. units
 - ☒ 2. $\frac{3\sqrt{3}}{4} \sqrt{(g^2 + f^2 + 1)}$ sq. units
 - ☒ 3. $\frac{\sqrt{27}}{4} \sqrt{(g^2 + f^2 + 1)}$ sq. units
 - ☒ 4. $\frac{3\sqrt{3}}{4} \sqrt{(g^2 - f^2 - 1)}$ sq. units

Question ID : 1626531993

Q.1 The angle of elevation of the top of a building from the foot of a tower is 30° and the angle of elevation of the top of the tower from the foot of the building is 60° . If the tower is 50 m high, then the height of the building is:

- Ans
- ☒ 1. $\frac{51}{3}$ m
 - ☒ 2. $\frac{49}{3}$ m

✓ 3. $\frac{50}{3}$ m

✗ 4. $\frac{47}{3}$ m

Question ID : 1626532004

Q.1 The distance between two parallel lines is unity. A point A lies between the lines at a distance 'a' from one of them. If the vertex B lies on one of the parallel lines and the vertex C lies on the other line, then the length of a side of an equilateral triangle ABC is:

Ans ✗ 1. $\frac{2}{\sqrt{3}} \sqrt{(a^2 + a - 1)}$ units

✗ 2. $\frac{\sqrt{2}}{3} \sqrt{(a^2 - a + 1)}$ units

✓ 3. $\frac{2}{\sqrt{3}} \sqrt{(a^2 - a + 1)}$ units

✗ 4. $\frac{2}{\sqrt{3}} \sqrt{(a^2 + a + 1)}$ units

Question ID : 1626531990

Q.1 If $\sec 4A = \operatorname{cosec}(A - 20^\circ)$, where $4A$ is an acute angle, then the value of A is:

Ans ✗ 1. 24°

✗ 2. 20°

✓ 3. 22°

✗ 4. 21°

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Question ID : 1626532002

Q.1 A vessel is in the form of a hollow hemisphere mounted by a hollow cylinder. The diameter of the hemisphere is 14 cm and the total height of the vessel is 13 cm. Then the inner surface area of the vessel is:

Ans ✓ 1. 572 cm^2

✗ 2. 562 cm^2

✗ 3. 542 cm^2

✗ 4. 527 cm^2

Question ID : 1626531997

Q.1 The wheels of a taxi are of diameter 80 cm each. How many complete revolutions does each wheel make in 10 minutes when the taxi is traveling at a speed of 66 km/h?

Ans ✗ 1. 4355

✓ 2. 4375

✗ 3. 4735

✗ 4. 4325

Question ID : 1626531996

Q.1 In $\triangle ABC$, right angled at B, if $\tan A = \frac{1}{\sqrt{3}}$, then the value of $\sin A \cos C + \cos A \sin C$ is equal to:

- Ans ☒ 1. 0
☒ 2. 1
☒ 3. 2
☒ 4. 4

Question ID : 1626532000

Q.1 A medicine capsule is in the shape of cylinder with two hemispheres stuck to each of its ends .The length of the entire capsule is 14 mm and the diameter of the capsule is 5 mm. Then its surface area is:

- Ans ☒ 1. 210 mm^2
☒ 2. 220 mm^2
☒ 3.

if the radius of the cylinder is 60 cm and its height is 180 cm.

- ☒ 4. 120 mm^2

Question ID : 1626531998

Q.1 The perimeter of a triangle right angled at C is 70, and the in-radius is 6. Then $|a - b|$ equals:

- Ans ☒ 1. 2
☒ 2. 9
☒ 3. 8
☒ 4. 1

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Question ID : 1626531995

Q.1 A 120 cm tall boy spots a balloon moving with the wind in a horizontal line at a height of 8820 cm from the ground. The angle of elevation of the balloon from the eyes of the boy at one instant is 60° . After some time, the angle of elevation reduces to 30° . Then the distance travelled by the balloon during this interval is:

- Ans ☒ 1. $2900\sqrt{3} \text{ cm}$
☒ 2. $5700\sqrt{3} \text{ cm}$
☒ 3. $8700\sqrt{3} \text{ cm}$
☒ 4. $5800\sqrt{3} \text{ cm}$

Question ID : 1626532005

Q.1 Three circular coins each of radii 1 cm are kept in an equilateral triangle such that all the three coins touch each other and also the sides of the triangle. The area of the triangle is:

- Ans ☒ 1. $(6 + 4\sqrt{3}) \text{ cm}^2$
☒ 2. $\frac{1}{4}(12 + 7\sqrt{3}) \text{ cm}^2$
☒ 3. $(4 + 2\sqrt{3}) \text{ cm}^2$
☒ 4. $\frac{1}{4}(48 + 7\sqrt{3}) \text{ cm}^2$

Question ID : 1626531992

Q.2 In a retail market, fruit vendors were selling apples kept in packing boxes. These boxes contained varying number of apples. The following was the distribution of apples according to the number of boxes.

No. of apples: 50 – 52	53 – 55	56 – 58	59 – 61	62 – 64
No. of boxes: 15	110	135	115	25

Then the mean number of apples kept in a packing box was:

- Ans
- ☒ 1. 61.54
 - ☒ 2. 59.16
 - ☒ 3. 52.64
 - ☒ 4. 57.19

Question ID : 1626532008

Section : Subject Related

Q.1 The normal equations for finding a curve of the form $y = a + bx + cx^2$ for 'n' data are:

- Ans
- ☒ 1. $\sum y = na + b \sum x + c \sum x^2, \sum xy = a \sum x + b \sum x^2 + c \sum x^3, \sum x^2 y = a \sum x^3 + b \sum x^4 + c \sum x^5$
 - ☒ 2. $\sum y = na + b \sum x + c \sum x^2, \sum y^2 = a \sum xy + b \sum x^2 + c \sum x^3, \sum x^2 y = a \sum x^2 + b \sum x^3 + c \sum x^4$
 - ☒ 3. $\sum y = a + b \sum x + c \sum x^2, \sum xy = a \sum x + b \sum x^2 + c \sum x^3, \sum x^2 y = a \sum x^2 + b \sum x^3 + c \sum x^4$
 - ☒ 4. $\sum y = na + b \sum x + c \sum x^2, \sum xy = a \sum x + b \sum x^2 + c \sum x^3, \sum x^2 y = a \sum x^2 + b \sum x^3 + c \sum x^4$

Question ID : 1626532016

Q.2 Three identical dice are rolled. The probability that the same number will appear on each of them is:

- Ans
- ☒ 1. $\frac{1}{12}$
 - ☒ 2. $\frac{1}{6}$
 - ☒ 3. $\frac{1}{36}$
 - ☒ 4. $\frac{1}{18}$

Question ID : 1626532011

Q.3 If $\log e^{(x)}$ is normally distributed with mean 1 and variance 4, then $P(0.5 < x < 2)$ is:
(where the area between $z = 0$ and $z = 0.25$ is 0.0987 and the area between $z = 0$ and $z = 0.5$ is 0.1915)

- Ans
- ☒ 1. 0.95
 - ☒ 2. 0.693
 - ☒ 3. 0.29
 - ☒ 4. 0.396

Q.4 The standard error of the sample mean is:

Ans ☒ 1.

the square root of the variance of the population divided by the sample size

☒ 2. the variance of the population

☒ 3. the variance of the sample

☒ 4. the standard deviation of the sample mean

Question ID : 1626532019

Q.5 A boy noted the number of taxi passing through a spot on a road for 100 periods each of 3 minutes and summarized it in the table given below.

No. of taxi: 0 - 10 10 - 20 20 - 30 30 - 40 40 - 50 50 - 60 60 - 70 70 - 80

Frequency: 07 14 13 12 20 11 15 08

Then the mode is:

Ans ☒ 1. 29.8

☒ 2. 32.1

☒ 3. 37.5

☒ 4. 44.7

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Question ID : 1626532010

Q.6 A continuous random variable x has a probability density function $f(x) = \begin{cases} 6x(1-x), & 0 < x \leq 1 \\ 0, & \text{otherwise} \end{cases}$. Then the variance of x is:

Ans ☒ 1. $\frac{1}{20}$

☒ 2. $\frac{1}{40}$

☒ 3. $\frac{1}{5}$

☒ 4. $\frac{1}{2}$

Question ID : 1626532017

Q.7 If two regression coefficients are -0.1 and -0.9 , then correlation coefficient is:

Ans ☒ 1. -0.3

☒ 2. 0.3

☒ 3. -0.9

☒ 4. 0.9

Question ID : 1626532015

Q.8 The probability of getting 4 heads in 6 tosses of a fair coin is:

- Ans
- ☒ 1. $\frac{15}{128}$
 - ☒ 2. $\frac{15}{32}$
 - ☒ 3. $\frac{15}{64}$
 - ☒ 4. $\frac{30}{32}$

Question ID : 1626532014

Q.9 There are four machines and it is known that exactly two of them are faulty. They are tested, one by one, in a random order till both the faulty machines are identified. Then the probability that only two tests are needed is:

- Ans
- ☒ 1. $\frac{1}{4}$
 - ☒ 2. $\frac{1}{3}$
 - ☒ 3. $\frac{1}{2}$
 - ☒ 4. $\frac{1}{6}$

Question ID : 1626532012

Q.10 Let X be a Poisson random variable such that $2P(X = 0) = P(X = 2)$. Then the standard deviations of X is:

- Ans
- ☒ 1. $-\sqrt{2}$
 - ☒ 2. 4
 - ☒ 3. 2
 - ☒ 4. $\sqrt{2}$

Question ID : 1626532013

Q.11 In the classroom context when words are associated with pictures or meanings in language learning it is an example of:

- Ans
- ☒ 1. Trial and error method
 - ☒ 2. Discovery method of learning
 - ☒ 3. Classic conditioning
 - ☒ 4. Operant conditioning

Question ID : 1626532022

Q.12 Creativity is a mental process described as

Ans ☒ 1. Making models according to the given patterns

☒ 2.

Being able to see material not as they are but what they can become

☒ 3. Being able to make articles based on instructions

☒ 4. Following steps and procedures to reproduce given models

Question ID : 1626532027

Q.1
3 Which of the following is the law relevant to declining sex ratio?

Ans ☒ 1. Right against female foeticide

☒ 2. Right to educational opportunities

☒ 3. Right against being arrested at night

☒ 4. Right to property

Question ID : 1626532024

Q.1
4 One of the key recommendations by National Council of Teachers of Mathematics' Curriculum and Evaluation Standards for School Mathematics (1989) is that instruction in elementary school mathematics should _____.

Ans ☒ 1.

shift from skill based to exam oriented approach where students focus on outcomes

☒ 2.

stick to approaches that have been followed by our ancestors

☒ 3.

follow easy methods where in students can understand and remember with ease

☒ 4.

shift from a teacher-directed approach to those in which students are actively involved in searching for patterns and experimenting with their own conjectures.

Question ID : 1626532025

Q.1
5 जटिलता के रूप में एक अवधारणा कब कहा जाता है?

Ans ☒ 1. जब यह स्पष्टीकरण से परे है

☒ 2. जब इसका प्रतिनिधित्व नहीं किया जा सकता है

☒ 3. जब यह औसत व्यक्ति की समझ से ऊपर है

☒ 4. जब इसकी एक से अधिक विशेषता होती है

Question ID : 1626532020

Q.1
6 An observable inclusive practice in classroom is when _____.

Ans ☒ 1.

students with disabilities are not made just mute spectators in learning activities

☒ 2.

students without disabilities are actively participating in all activities

- ☒ 3. students with disabilities are made into groups
- ☒ 4. students with disabilities are taken out for remedial classes

Question ID : 1626532029

Q.1
7 पाठ्यचर्या को परिभाषित किया जा सकता है जो _____।

- Ans
- ☒ 1. विशेष स्कूलों के अनुरूप बनाया गया है
 - ☒ 2. स्कूल की आवश्यकताओं के आधार पर विकसित किया गया
 - ☒ 3. स्कूल विषयों, सीखने के अनुभव और गतिविधियों सहित
 - ☒ 4. सामग्री और ज्ञान के आधार पर विकसित किया गया

Question ID : 1626532028

Q.1
8 Identify the right sequence of a scientific method when:

a) testing hypothesis b) identifying the problem c) data gathering d) construct hypothesis

- Ans
- ☒ 1. d, a, c, b
 - ☒ 2. b, d, c, a
 - ☒ 3. c, b, d, a
 - ☒ 4. b, c, a, d

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Question ID : 1626532023

Q.1
9 "A process that happens when people look at a text and assign meaning to the written symbols in that text" can be defined as _____.

- Ans
- ☒ 1. Reading
 - ☒ 2. Drawing
 - ☒ 3. Writing
 - ☒ 4. Watching

Question ID : 1626532026

Q.2
0 Activities like climbing trees, plucking fruits, jumping, drama etc were part of educational programmes in educational institutions established by which of the following philosophers?

- Ans
- ☒ 1. Rousseau
 - ☒ 2. John Dewey
 - ☒ 3. Rabindranath Tagore
 - ☒ 4. Sri Aurobindo

Question ID : 1626532021

