

OAVS PGT

**Previous Year Paper
(Maths) 30 May, 2018**





ALL EXAMS, **ONE** SUBSCRIPTION



Test. Analyze. Improve. Repeat.



*Don't just
prepare.
Perform.*

Test Prime – built only
for mock tests.



1,50,000+
Mock Tests



25,000+
Previous Year
Papers



800+
Exam
Covered



500%
Refund on
Selection



5 lakh+
Free Quizzes



Daily
Free PDFs



Top Alerts
Stay Updated

WHY TEST PRIME?

- ✓ Multilingual
- ✓ Detailed Solution
- ✓ Strong and Weak Areas
- ✓ All India Rankings



Safe & Reliable



Trusted by
Lakhs of Aspirants



Your Success,
Our Mission



**DOWNLOAD
TEST PRIME**

Your Success Partner!



Test

Prime



SUCCESS GALLERY!

MEET THE ACHIEVERS



Shreya, SBI PO



Sahil, SBI PO



Srijita, SBI PO



Vikram, IBPS PO



Neeti, IBPS PO



Arya, IBPS PO



Hasan, SSC CGL



Palak, SSC CGL



Priti, UP TGT



Aniket, Bihar Stet



Shaurya, NTPC



Sarita, CTET



Gourav, NTPC



Sanni, NTPC



Abhishek, CTET



Sapna, IBPS Clerk

THEY DID IT. YOU CAN TOO

READ THEIR STORIES!





ODISHA ADARSHA VIDYALAYA SANGATHAN

Participant ID:	
Participant Name:	
Test Center Name:	
Test Date:	30/05/2018
Test Time:	9:00 AM - 12:20 PM
Subject:	PGT MATHS

Section : Language Proficiency Test General English

Q.1 Complete the collective noun: ‘a _____ of geese’

- Ans
- ✓ 1. gaggle
 - ✗ 2. gang
 - ✗ 3. giggle
 - ✗ 4. group

Question ID : 6044813772
Status : Answered
Chosen Option : 4

Q.2 Identify the correct meaning of the below idiom from the options.

To beat around the bush

- Ans
- ✓ 1. To speak in a roundabout way
 - ✗ 2. To actively search for someone
 - ✗ 3. To hide in a bush
 - ✗ 4. To beat inside a bush

Question ID : 6044813779
Status : Answered
Chosen Option : 1

Q.3 Choose the correct homonym to fill in the blank.

She always requests for an _____ seat in a flight.

- Ans
- ✗ 1. isle
 - ✗ 2. I will
 - ✗ 3. I'll
 - ✓ 4. aisle

Question ID : 6044813776
Status : Not Attempted and Marked For Review
Chosen Option : --

Q.4 Pick the phrasal verb closest in meaning to ‘get by’.

Refer to the below sentence:

My Hindi is not good but it’s enough to get by.

- Ans
- ✗ 1. prevent
 - ✗ 2. control
 - ✓ 3. manage
 - ✗ 4. appear

Question ID : 6044813770
Status : Answered
Chosen Option : 3

Q.5

Question ID : 6044813767
Status : Answered

Fill in the blank with the correct conjunction.

Chosen Option : 1

_____ he was very ill, he did not go to a doctor.

- Ans
- ☒ 1. Although
 - ☐ 2. Since
 - ☐ 3. Where
 - ☐ 4. But

Q.6 Choose the correct synonym of the following word:
MANNEQUIN

Question ID : 6044813782

Status : Not Attempted and
Marked For Review

Chosen Option : --

- Ans
- ☐ 1. cannikin
 - ☐ 2. palanquin
 - ☒ 3. model
 - ☐ 4. pannikin

Q.7 Complete the sentence using the phrasal verb in the bracket correctly.

Shanta was offered a job in a bank but she _____ (turn down).

Question ID : 6044813778

Status : Answered

Chosen Option : 4

- Ans
- ☐ 1. turn it down
 - ☐ 2. downturned them
 - ☐ 3. turned them down
 - ☒ 4. turned it down

Q.8 Fill in the blank with the correct preposition.

We complained to the management _____ the dirty washrooms.

Question ID : 6044813768

Status : Answered

Chosen Option : 4

- Ans
- ☐ 1. around
 - ☐ 2. of
 - ☐ 3. from
 - ☒ 4. about

Q.9 Select the option that represents the correct order of adjectives.

Long/hair/jet black/beautiful/shiny

Question ID : 6044813781

Status : Answered

Chosen Option : 1

- Ans
- ☒ 1. Beautiful, long, jet black, shiny hair
 - ☐ 2. Shiny, long hair jet black, beautiful
 - ☐ 3. shiny hair, beautiful, long, jet black
 - ☐ 4. Beautiful hair, long, jet black, shiny

Q.10 Select the correct option to fill in the blank below.

He did not clear his interview; he was _____ for the fourth time.

Question ID : 6044813775

Status : Answered

Chosen Option : 2

- Ans
- ☐ 1. successfully
 - ☒ 2. unsuccessful
 - ☐ 3. unsuccessfully
 - ☐ 4. successful

Q.11

Choose the option that shows the corrected version of the highlighted words in the below sentence.
He is arrive at Imphal last week.

- Ans
- ✓ 1. arrived
 - ✗ 2. is arrive
 - ✗ 3. is arriving
 - ✗ 4. will arrive

Question ID : 6044813769
Status : Not Attempted and Marked For Review
Chosen Option : --

Q.12 Fill in the blank with the correct word in the future tense form.

Sanatan _____ wake up early. He went to bed after midnight.

- Ans
- ✗ 1. shall not
 - ✓ 2. will not
 - ✗ 3. will
 - ✗ 4. shall

Question ID : 6044813765
Status : Answered
Chosen Option : 2

Q.13 Arrange the following words in the correct order and choose the appropriate option.

always read in they languages newspapers regional

- Ans
- ✗ 1. They always read in languages newspapers regional
 - ✓ 2. They always read newspapers in regional languages.
 - ✗ 3. They newspapers always read in regional languages.
 - ✗ 4. They always read in languages newspapers regional.

Question ID : 6044813774
Status : Answered
Chosen Option : 2

Q.14 Identify the correct spelling from the options given.

- Ans
- ✗ 1. Pronouncation
 - ✗ 2. Pronounciation
 - ✓ 3. Pronunciation
 - ✗ 4. Pronounsation

Question ID : 6044813771
Status : Not Attempted and Marked For Review
Chosen Option : --

Q.15 Fill in the blank with the correct preposition.

Sheetal, the cat likes to be looked _____.

- Ans
- ✗ 1. upon
 - ✓ 2. at
 - ✗ 3. on
 - ✗ 4. up

Question ID : 6044813766
Status : Not Attempted and Marked For Review
Chosen Option : --

Q.16 Choose the option closest in meaning to the idiom:

‘at the drop of a hat’

- Ans
- ✗ 1. importantly
 - ✓ 2. instantly
 - ✗ 3. intelligently
 - ✗ 4. imaginatively

Question ID : 6044813784
Status : Not Attempted and Marked For Review
Chosen Option : --

Q.17 Fill in the gap with the correct preposition.

“You cannot depend _____ him”, she said in exasperation.

Ans ☒ 1. with
☒ 2. under
☒ 3. on
☒ 4. up

Question ID : 6044813777
Status : Answered
Chosen Option : 3

Q.18 Fill in the blank using the correct adverb.

I _____ watch reality shows on TV.

Ans ☒ 1. before
☒ 2. once
☒ 3. today
☒ 4. rarely

Question ID : 6044813773
Status : Answered
Chosen Option : 4

Q.19 Fill in the blank with the correct adjective from the options.

Anita rates politicians highly as she finds them _____.

Ans ☒ 1. terrifying
☒ 2. intelligent
☒ 3. boring
☒ 4. disgusting

Question ID : 6044813780
Status : Answered
Chosen Option : 2

Q.20 Words written on a tomb are called:

Ans ☒ 1. Epic
☒ 2. Epigram
☒ 3. Epigraph
☒ 4. Epitaph

Question ID : 6044813783
Status : Answered
Chosen Option : 3

Section : Language Proficiency Test Odia

Q.1 'ମୃତୁ'ର ସଂଲିଙ୍ଗ ନିରୂପଣ କର ।

Ans ☒ 1. ମୃତୁ
☒ 2. ମୃତୁଣୀ
☒ 3. ମୃତୁୀ
☒ 4. ମୃତୁନୀ

Question ID : 6044813794
Status : Not Attempted and Marked For Review
Chosen Option : --

Q.2 'ହିମାଳୟ' କି ପ୍ରକାର ବିଶେଷ୍ୟ ?

Ans ☒ 1. ନାମବାଚକ
☒ 2. ଗୁଣବାଚକ
☒ 3. ଜାତିବାଚକ
☒ 4. ବସ୍ତୁବାଚକ

Question ID : 6044813788
Status : Answered
Chosen Option : 1

Q.3 'ସୌହାର୍ଦ୍ଦୀକ ଏ ଦୁର୍ଗ ବାରବାଟି, ବାର ରଜ ପିଣ୍ଡେ ଗଢ଼ା ଯାର ମାଟି' - କି ପ୍ରକାର ଛନ୍ଦ ? Ans ☒ 1. ରସକୁଲ୍ୟା ☒ 2. ଗୁଜରୀ ☒ 3. ବଙ୍ଗଳାଶ୍ରୀ ☒ 4. ନଟବାଣୀ	Question ID : 6044813800 Status : Answered Chosen Option : 4
Q.4 କେଉଁଟି ଠିକ୍ ? Ans ☒ 1. ନ + ଅନ = ନୟନ ☒ 2. ନେ + ଅନ = ନୟନ ☒ 3. ନ + ଅୟନ = ନୟନ ☒ 4. ନ + ଯନ = ନୟନ	Question ID : 6044813802 Status : Not Attempted and Marked For Review Chosen Option : --
Q.5 ବିଭକ୍ତି କେତେ ପ୍ରକାର ? Ans ☒ 1. 2 ☒ 2. 7 ☒ 3. 6 ☒ 4. 4	Question ID : 6044813792 Status : Answered Chosen Option : 2
Q.6 'ବାବୁ ନାକଶିରୀ ଦାନ ଯୋଗ୍ୟ ଯୋଷାକୁ, ବିହର କାନନ କର ଆଳିଙ୍ଗନକୁ' ଏହା କି ଧରଣର ଅଳଙ୍କାର ? Ans ☒ 1. ଯମକ ☒ 2. ଅନୁପ୍ରାସ ☒ 3. ଶ୍ଳେଷ ☒ 4. ଉପମା	Question ID : 6044813799 Status : Answered Chosen Option : 3
Q.7 'ଜିଜ୍ଞାସୁ' ଶବ୍ଦରେ କି ଧରଣର ପ୍ରତ୍ୟୟ ଅଛି ? Ans ☒ 1. ଆ ☒ 2. ଉ ☒ 3. ଅନ୍ ☒ 4. ଉକ୍	Question ID : 6044813791 Status : Answered Chosen Option : 4
Q.8 'ଭୋଜନ' ଶବ୍ଦରେ କି ଧରଣର ପ୍ରତ୍ୟୟ ଲାଗିଛି ? Ans ☒ 1. ଇନ୍ ☒ 2. ଶିନ୍ ☒ 3. ଅନ୍ ☒ 4. ଅ	Question ID : 6044813790 Status : Not Answered Chosen Option : --
Q.9 ବାକ୍ୟ କେତେ ପ୍ରକାର ? Ans ☒ 1. 5 ☒ 2. 4 ☒ 3. 3 ☒ 4. 2	Question ID : 6044813797 Status : Answered Chosen Option : 3
Q.10 'ସୁଯୋଗିତ୍ବରେ ପଦ୍ମ ପୁଟେ'- ରେଖାଙ୍କିତ ପଦଟି କି ପ୍ରକାର ବିଭକ୍ତି ?	Question ID : 6044813803

- Ans ☒ 1. ଷଷ୍ଠୀ
☒ 2. ପଞ୍ଚମୀ
☒ 3. ଚତୁର୍ଥା
☒ 4. ସପ୍ତମୀ

Status : Answered
Chosen Option : 4

Q.11 'ଯତୀନ୍ଦ୍ର' – ସହି ବିଚ୍ଛେଦ କର ।

- Ans ☒ 1. ଯଜ୍ଞ + ଇନ୍ଦ୍ର
☒ 2. ଯତ୍ + ଇନ୍ଦ୍ର
☒ 3. ଯତି + ଇନ୍ଦ୍ର
☒ 4. ଯତିଃ + ଇନ୍ଦ୍ର

Question ID : 6044813795
Status : Answered
Chosen Option : 3

Q.12 'ଷ' କି ଧରଣର ଧ୍ବନି ?

- Ans ☒ 1. ଓଷ୍ଠ
☒ 2. କଣ୍ଠ୍ୟ
☒ 3. ମୂର୍ଦ୍ଧନ୍ୟ
☒ 4. ତାଳବ୍ୟ

Question ID : 6044813785
Status : Answered
Chosen Option : 3

Q.13 'ପୁଲଫଳ' କି ପ୍ରକାର ସମାସ ?

- Ans ☒ 1. ବହୁବ୍ରହ୍ମୀ
☒ 2. ଦ୍ବନ୍ଦ୍ବ
☒ 3. କର୍ମଧାରୟ
☒ 4. ଦ୍ବିଗୁ

Question ID : 6044813796
Status : Answered
Chosen Option : 2

Q.14 'କୂଅରେ ଆଶୁଏ ପାଣି ଅଛି' – ବାକ୍ୟରେ ବିଶେଷଣ ପଦଟି କ'ଣ ?

- Ans ☒ 1. ଆଶୁଏ
☒ 2. ଅଛି
☒ 3. କୂଅରେ
☒ 4. ପାଣି

Question ID : 6044813789
Status : Answered
Chosen Option : 1

Q.15 ବିଦେଶରୁ ଆଗତ ଯେ _____ । ଶୂନ୍ୟ ସ୍ଥାନରେ କି ଶବ୍ଦ ଲାଗିବ ?

- Ans ☒ 1. ବୈଦେଶିକ
☒ 2. ବିଦେଶାଗମୀ
☒ 3. ବିଦେଶୁଆ
☒ 4. ବିଦେଶାଗତ

Question ID : 6044813801
Status : Answered
Chosen Option : 4

Q.16 'ଯହିଁରେ କର ଦେବାକୁ ହୁଏ ନାହିଁ' – ଏକ ପଦରେ ପ୍ରକାଶ କର ।

- Ans ☒ 1. କରଦେୟ
☒ 2. କରଛା
☒ 3. ନିଷ୍କର
☒ 4. ନକର

Question ID : 6044813804
Status : Answered
Chosen Option : 3

Q.17 'ଗଛରୁ ପତ୍ର ଖସୁଛି' - ରେଖାଙ୍କିତ ପଦଟି କି ପ୍ରକାର ବିଭକ୍ତି ?

Ans ☒ 1. ଚତୁର୍ଥୀ
☒ 2. ପ୍ରଥମା
☒ 3. ପଞ୍ଚମୀ
☒ 4. ତତ୍ତ୍ୱାୟା

Question ID : 6044813793
Status : Answered
Chosen Option : 3

Q.18 'ବଧୂ' କି ଧାରଣାର ଶବ୍ଦ ?

Ans ☒ 1. ଦେଶଜ
☒ 2. ତତ୍ତ୍ୱବ
☒ 3. ବୈଦେଶିକ
☒ 4. ତତ୍ତ୍ୱସମ

Question ID : 6044813786
Status : Answered
Chosen Option : 4

Q.19 ଧ୍ୱନିଧାରକ ଶବ୍ଦଟି ଚିହ୍ନିଅ ।

Ans ☒ 1. ଚକ୍ରମାଳ
☒ 2. ଚକ୍ରଭାଗ
☒ 3. ଚକ୍ରରାଜ
☒ 4. ଚକ୍ରଚକ୍ର

Question ID : 6044813798
Status : Not Attempted and Marked For Review
Chosen Option : --

Q.20 ବିଶେଷ୍ୟ ପଦ କେତେ ପ୍ରକାର ?

Ans ☒ 1. 6
☒ 2. 2
☒ 3. 4
☒ 4. 5

Question ID : 6044813787
Status : Answered
Chosen Option : 4

Section : Current Affairs

Q.1 Name the youngest-ever chancellor of a university in India to win the Babasaheb Ambedkar International Foundation Award 2017. The award was instituted by the Kerala State Government.

Ans ☒ 1. Amitabh Mattoo
☒ 2. M Rajaram
☒ 3. Dileep K Nair
☒ 4. P. Venkat Ranjan

Question ID : 6044813821
Status : Answered
Chosen Option : 4

Q.2 Name the owner of Rotomac Global and the maker of Rotomac pens who was recently arrested for allegedly swindling the Indian banking system in a massive loan default case.

Ans ☒ 1. Nirav Modi
☒ 2. Gokulnath Shetty
☒ 3. Vijay Mallaya
☒ 4. Vikram Kothari

Question ID : 6044813808
Status : Answered
Chosen Option : 4

Q.3 Which is the number one Indian brand as per the 2017 Interbrand valuations?

Ans ☒ 1. Birla
☒ 2. Reliance
☒ 3. Tata
☒ 4. HDFC

Question ID : 6044813829
Status : Answered
Chosen Option : 2

Q.4 Which country is slated to host the 2022 Winter Olympics? Ans ☒ 1. China ☒ 2. Canada ☒ 3. Finland ☒ 4. Japan	Question ID : 6044813826 Status : Answered Chosen Option : 2
Q.5 What is the (pseudo) name of the person(s) who are credited with the discovery of the Blockchain technology? Ans ☒ 1. Kazuo Ishiguro ☒ 2. Naruhito ☒ 3. Satoshi Nakamoto ☒ 4. Yoji Muto	Question ID : 6044813834 Status : Not Attempted and Marked For Review Chosen Option : --
Q.6 Which small village in Maharashtra has earned the title of the 'Village of Books'? The village boasts of thousands of rare books and magazines in Marathi. Ans ☒ 1. Bhilar ☒ 2. Saptashrungi ☒ 3. Shingnapur ☒ 4. Aurangabad	Question ID : 6044813812 Status : Answered Chosen Option : 3
Q.7 Who was the first Indian actor to deliver the prestigious TED Talk? Ans ☒ 1. Shah Rukh Khan ☒ 2. Irfan Khan ☒ 3. Amitabh Bachchan ☒ 4. Mohanlal	Question ID : 6044813818 Status : Answered Chosen Option : 1
Q.8 In an unprecedented move, the Communist Party of China (CPC) has proposed that they will remove the constitutional restriction of the president running only two consecutive terms. Name the current president who is slated for a third term as the Chinese President as of March 2018. Ans ☒ 1. Jack Ma ☒ 2. Xi Jinping ☒ 3. Hu Jintao ☒ 4. Jiang Zemin	Question ID : 6044813816 Status : Answered Chosen Option : 2
Q.9 Who is the Deputy Governor of the Reserve Bank of India (RBI) as of March 2018? He was previously a professor of Economics at the New York University Stern School of Business (NYU-Stern). Ans ☒ 1. Subir Gokarn ☒ 2. B. P. Kanungo ☒ 3. Viral Acharya ☒ 4. S. S. Mundra	Question ID : 6044813825 Status : Answered Chosen Option : 2
Q.10 Name the Indian teenage girl who won the Miss Teen Universe 2017 contest? The event was held in the Nicaraguan capital of Managua. Ans ☒ 1. Priya Prakash Varrier ☒ 2. Palak Muchhal ☒ 3. Manushi Chhillar ☒ 4. Srishti Kaur	Question ID : 6044813819 Status : Answered Chosen Option : 4
Q.11 Who is the author of the book 'The Perils of being Moderately Famous', which talks about being reasonably famous in a very famous family? Ans ☒ 1. Abhishek Bachchan	Question ID : 6044813814 Status : Answered Chosen Option : 4

- ☒ 2. Soha Ali Khan
- ☐ 3. Twinkle Khanna
- ☐ 4. Varun Gandhi

Q.12 The Defence Research and Development Organisation (DRDO) has produced and tested products with names such as Abhyas, Lakshya, Nishant and Rustom. What are these products?

- Ans
- ☐ 1. Fighter aircrafts
- ☐ 2. Satellites
- ☐ 3. Missiles
- ☒ 4. Drones

Question ID : 6044813822
Status : Answered
Chosen Option : 1

Q.13 Which country hosted the ICC Under-19 Cricket World Cup in January-February 2018?

- Ans
- ☐ 1. Bangladesh
- ☐ 2. India
- ☐ 3. Sri Lanka
- ☒ 4. New Zealand

Question ID : 6044813806
Status : Answered
Chosen Option : 1

Q.14 In 2017, which Indian sand artist won a gold medal in the 10th Sand Art Championship held in Moscow?

- Ans
- ☐ 1. Nitish Bharti
- ☐ 2. Rahul Arya
- ☒ 3. Sudarsan Pattnaik
- ☐ 4. Manas Kumar Sahoo

Question ID : 6044813811
Status : Answered
Chosen Option : 3

Q.15 A subsidised two-wheeler scheme for lower-salaried working women was launched recently in which Indian state? The scheme was launched by the Indian prime minister.

- Ans
- ☐ 1. Karnataka
- ☐ 2. Andhra Pradesh
- ☐ 3. Telangana
- ☒ 4. Tamil Nadu

Question ID : 6044813824
Status : Answered
Chosen Option : 1

Q.16 Which is the first Indian city to win the 2017 Pierre L'enfant International Planning Excellence Award? The award is given out by the American Planning Association (APA) for good and advanced town planning.

- Ans
- ☐ 1. Alleppey
- ☐ 2. Mysore
- ☐ 3. Jaipur
- ☒ 4. Bhubaneswar

Question ID : 6044813817
Status : Answered
Chosen Option : 2

Q.17 The current Japanese emperor will be the first emperor in 200 years to formally abdicate his throne. Name this emperor who will be relinquishing his throne by stepping down in April 2019?

- Ans
- ☐ 1. Emperor Yamazaki
- ☐ 2. Emperor Mizushima
- ☐ 3. Emperor Takachi
- ☒ 4. Emperor Akihito

Question ID : 6044813823
Status : Answered
Chosen Option : 1

Q.18 In February 2018, which of the following countries unveiled its own ICC-approved T20 cricket league?

- Ans
- ☐ 1. Italy
- ☐ 2. Germany
- ☐ 3. Austria
- ☒ 4. Canada

Question ID : 6044813810
Status : Answered
Chosen Option : 4

Q.19 Which actress won the 2017 Oscar award for Best Actress for her portrayal of an aspiring actress in the romantic musical comedy drama 'La La Land'?

- Ans
- ☒ 1. Meryl Streep
 - ☒ 2. Jennifer Lawrence
 - ☒ 3. Natalie Portman
 - ☒ 4. Emma Stone

Question ID : 6044813805
Status : Answered
Chosen Option : 3

Q.20 Which of the following things cannot be done by the newly proposed 'Payment Banks' (small-scale banks with their own RBI regulations)?

- Ans
- ☒ 1. Accept deposits
 - ☒ 2. Make third-party payments
 - ☒ 3. Conduct net banking transactions
 - ☒ 4. Give loans

Question ID : 6044813828
Status : Answered
Chosen Option : 4

Q.21 The United Arab Emirates (UAE) opened its first-ever solar-powered gas station in which of the following cities?

- Ans
- ☒ 1. Abu Dhabi
 - ☒ 2. Dubai
 - ☒ 3. Sharjah
 - ☒ 4. Ras al-Khaimah

Question ID : 6044813820
Status : Answered
Chosen Option : 1

Q.22 In the context of 'Real Time Gross Settlement' (RTGS) payments, which of these statements is always true?

- Ans
- ☒ 1. RTGS settling is available on a 24/7 basis.
 - ☒ 2. Payments can be settled across countries.
 - ☒ 3. Settlement happens only in batches.
 - ☒ 4. Payment settling is instantaneous.

Question ID : 6044813833
Status : Answered
Chosen Option : 4

Q.23 Name the Indian under-19 (U19) batsman who scored a century and remained not out in the recent ICC U19 World Cup final against Australia in February 2018.

- Ans
- ☒ 1. Unmukt Chand
 - ☒ 2. Prithvi Shaw
 - ☒ 3. Shubman Gill
 - ☒ 4. Manjot Kalra

Question ID : 6044813813
Status : Answered
Chosen Option : 3

Q.24 Which of the following cities is slated to host the 2020 Summer Olympics?

- Ans
- ☒ 1. Seoul
 - ☒ 2. London
 - ☒ 3. Beijing
 - ☒ 4. Tokyo

Question ID : 6044813809
Status : Answered
Chosen Option : 1

Q.25 Airtel is collaborating with which video streaming service provider to expand its content offering through the mobile app route?

- Ans
- ☒ 1. Hotstar
 - ☒ 2. Hulu
 - ☒ 3. Netflix
 - ☒ 4. Amazon

Question ID : 6044813832
Status : Answered
Chosen Option : 1

Q.26 In which country was Kentucky Fried Chicken (KFC) forced to close most of its outlets due to a temporary shortage in the supply of chicken?

- Ans
- ☒ 1. China
 - ☒ 2. UK

Question ID : 6044813831
Status : Answered
Chosen Option : 3

- 3. Japan
- 4. India

Q.27 Which best-selling author from India wrote the book ‘The Bestseller She Wrote’? Incidentally, this author began his career as a banker.

- Ans
- 1. Chetan Bhagat
 - 2. Ravi Subramanian
 - 3. Amish Tripathi
 - 4. Robin Sharma

Question ID : 6044813815
Status : Answered
Chosen Option : 3

Q.28 Which global city is at a major imminent risk of fully running out of drinking water in a few months from now? The city is in Africa.

- Ans
- 1. Nairobi
 - 2. Harare
 - 3. Lagos
 - 4. Cape Town

Question ID : 6044813827
Status : Answered
Chosen Option : 4

Q.29 Which Indian state emerged on top in the medal tally in the recently concluded Khelo India School Games held in Delhi?

- Ans
- 1. Himachal Pradesh
 - 2. Karnataka
 - 3. Haryana
 - 4. Punjab

Question ID : 6044813807
Status : Answered
Chosen Option : 3

Q.30 Bangladesh is selling 25% stake of the Dhaka Stock Exchange (DSE) to a foreign consortium. Which country's consortium is the buyer?

- Ans
- 1. USA
 - 2. China
 - 3. Japan
 - 4. India

Question ID : 6044813830
Status : Answered
Chosen Option : 4

Section : Reasoning

Q.1 ବିକଳ ଗୁଡ଼ିକ ମଧ୍ୟରୁ ସେହି ଶବ୍ଦ ଗୁଡ଼ିକର ଚୟନ କରନ୍ତୁ ଯାହାକି ଦିଆଯାଇଥିବା ଶବ୍ଦ ଭଳି ସମାନ ଭାବରେ ପରସ୍ପର ସହିତ ସମ୍ବନ୍ଧିତ।

ବଳ : ପଞ୍ଜିବା : _____ : _____

- Ans
- 1. ହକି : ବଲ
 - 2. ସ୍ତବ୍ଧ : ରିଫିଲ
 - 3. ବଲ : ବ୍ୟାଟ
 - 4. କୁକୁର : ଥାପୁଡେଇବା

Question ID : 6044813849
Status : Not Answered
Chosen Option : --

Q.2 Which number should come next in the following sequence?

36485948, 3444, 10, _____.

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

Question ID : 6044813848
Status : Answered
Chosen Option : 1

Q.3

Question ID : 6044813839
Status : Answered
Chosen Option : 3

In a code language,
'horpirquat' means lighthouse,
'ceelhorpir' means redlight and
'ceelclak' means redbell.

Which of the following words could mean 'houseguest'?

- Ans
- ☒ 1. ceelmoki
 - ☒ 2. horpirhunde
 - ☒ 3. quathunde
 - ☒ 4. clakquat

Q.4 In a certain language,
'belfbaga' means carefree,
'obaga' means careful and
'ferbaga' means careless.

Question ID : 6044813855
Status : Answered
Chosen Option : 4

Which word would mean 'care' in that language?

- Ans
- ☒ 1. belf
 - ☒ 2. obaga
 - ☒ 3. fer
 - ☒ 4. бага

Q.5 Which word among the below options is an essential part of a city?

- Ans
- ☒ 1. Bus station
 - ☒ 2. Apartments
 - ☒ 3. Residents
 - ☒ 4. Parks

Question ID : 6044813841
Status : Answered
Chosen Option : 3

Q.6 Select the option that is related to the first term in the same way as the fourth term is related to the third term.
MAIN : _____ :: MOON : MOOD

- Ans
- ☒ 1. GAIN
 - ☒ 2. MAID
 - ☒ 3. ROAD
 - ☒ 4. PATH

Question ID : 6044813836
Status : Answered
Chosen Option : 2

Q.7 Which of the following options is an essential part of oscillation?

- Ans
- ☒ 1. Physics
 - ☒ 2. Sound
 - ☒ 3. Motion
 - ☒ 4. Science

Question ID : 6044813858
Status : Answered
Chosen Option : 3

Q.8

Question ID : 6044813842
Status : Answered
Chosen Option : 2

Study the following information carefully and answer the question given below.

Following are the criteria to recruit a Software Consultant in an organisation:

The candidate must

- a. be a graduate in Computers B.Tech (CSE/IT)/B.Sc (Computers)/ B.Com (Computers) with minimum 65% marks.
- b. be above 26 years and not above 35 years of age as on 1 January 2017.
- c. have an experience of minimum three years in any of the above areas.
- d. be ready to be on probation for one year.

In the question below are given details of one candidate. You have to take one of the following courses of action based on the information provided and the conditions and sub conditions given above.

You are not to assume anything other than the information provided in each question. All these cases are given to you as on 1 January 2017.

Rahul holds a B.Tech (CSE) with 65% marks. He completed 26 years of age in 2016. But he is not ready to join on one-year probation.

Ans

- ☒ 1. The candidate is not to be selected due to insufficient percentage.
- ☒ 2. The candidate is not to be selected due to age constraints.
- ☒ 3. The candidate is to be selected.
- ☒ 4. The candidate is not to be selected due to the reason that the candidate is not ready to join on one year probation.

Q.9 ନିମ୍ନରେ ଦିଆଯାଇଥିବା ଅଭିଜ୍ଞାନ (A) ଓ ଜ୍ଞାନୀ (R) ପାଇଁ ନିମ୍ନରେ ଦିଆଯାଇଥିବା ବିକଳ ଗୁଡ଼ିକ ମଧ୍ୟରୁ ସଠିକ୍‌ତାକୁ ଚୟନ କରନ୍ତୁ।
ଅଭିଜ୍ଞାନ (A): କାବେରୀ ନଦୀ ପୂର୍ବ ଦିଗକୁ ବହେ।
ଜ୍ଞାନୀ (R): କାବେରୀ ଆରବ ସାଗରରେ ମିଶିଛି।

Ans

- ☒ 1. A ଠିକ୍ ଏବଂ R ଭୁଲ୍ ଅଟେ।
- ☒ 2. A ଭୁଲ୍ ଏବଂ R ଠିକ୍ ଅଟେ।
- ☒ 3. A ଓ R ଉଭୟ ଠିକ୍ ଏବଂ A ର ସଠିକ୍ ବାଣୀ୍ୟା ହେଉଛି R।
- ☒ 4. ଉଭୟ A ଓ R ଠିକ୍ କିନ୍ତୁ A ର ସଠିକ୍ ବାଣୀ୍ୟା ହେଉଛି R ନୁହେଁ।

Question ID : 6044813862
Status : Answered
Chosen Option : 1

Q.10 In a joint family, the members are a father, a mother, three married sons and one unmarried daughter. Of the three married sons, two have two daughters each and one has a son. Find the ratio of the total number of female members to the total number of male members in the family.

Ans

- ☒ 1. 9 : 5
- ☒ 2. 5 : 9
- ☒ 3. 8 : 5
- ☒ 4. 5 : 8

Question ID : 6044813860
Status : Not Answered
Chosen Option : --

Q.11 Starting from her school, Divya walks 4 km to the east. Then, she turns to her right and walks for 3 km and reaches her house. What is the final distance from her school to her house?

Ans

- ☒ 1. 4 km
- ☒ 2. 4.5 km
- ☒ 3. 5 km
- ☒ 4. 5.5 km

Question ID : 6044813859
Status : Answered
Chosen Option : 3

Q.12 Arrange the following words in the order they would normally appear in the English dictionary.

- a. Fan
- b. Egg
- c. Grasshopper
- d. Grass

Ans

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

Question ID : 6044813853
Status : Answered
Chosen Option : 2

Q.13 Six friends, A, B, C, D, E and F are sitting in a row facing North. C is sitting between A and E. D is not at any end of the row. B is sitting to the immediate right of E. F is not at the right end. Who is seated to the extreme right?

Question ID : 6044813852

- Ans
1.

E

2.

G

3.

B

4.

F

Status : Not Answered

Chosen Option : --

Q.14

The given question is followed by two statements. Identify which of the statements is/are sufficient to answer the question.

Question:

Is 'alpha' positive?

Statements:

I. $p + q$ is positive

II. $p - q$ is positive

Question ID : 6044813861

Status : Answered

Chosen Option : 4

- Ans
1.

Both statement I and II together are necessary to answer the question.

2.

Statement II alone is sufficient to answer the question.

3.

Statement I alone is sufficient to answer the question.

4.

Both statements I and II together are not sufficient to answer the question.

Q.15

Pointing to a photograph, Satheesh said, "She is the only sister of my grandfather's son." How is the woman related to Satheesh?

Ans

1.

Aunt

2.

Sister-in-law

3.

Sister

4.

Cousin

Question ID : 6044813864

Status : Answered

Chosen Option : 1

Q.16

How many pair(s) of letters in the word 'TABLE' have/has as many letters between them in the word as they have in the English alphabet?

Ans

1.

3

2.

1

3.

4

4.

2

Question ID : 6044813863

Status : Answered

Chosen Option : 1

Q.17

Identify the odd one from the given group of words.

Jasmine, Tulip, Bud, Rose

Ans

1.

Bud

2.

Rose

3.

Jasmine

4.

Tulip

Question ID : 6044813837

Status : Answered

Chosen Option : 1

Q.18

ନିମ୍ନରେ ଦିଆଯାଇଥିବା ସଂଖ୍ୟା କ୍ରମରେ ଖାଲି ସ୍ଥାନରେ କେଉଁ ସଂଖ୍ୟା ଆସିବ?

1, 0, 4, 2, 9, 6, 16, 12, 25 _____.

Ans

1.

20

2.

21

3.

36

4.

27

Question ID : 6044813835

Status : Answered

Chosen Option : 1

Q.19

Letters of a word have been jumbled up and numbered. Choose the option which gives the correct order of the letters as indicated by the numbers to form the word.

D O M A B N E

1 2 3 4 5 6 7

Question ID : 6044813840

Status : Answered

- Ans ☒ 1. 4, 5, 1, 6, 7, 2, 3
- ☒ 2. 4, 5, 1, 2, 7, 6, 3
- ☒ 3. 4, 5, 1, 2, 3, 7, 6
- ☒ 4. 4, 5, 2, 1, 7, 6, 3

Chosen Option : 3

Q.20 In a railway waiting hall, Arjun meets a man and 6 ladies .Each lady has 2 daughters and a son. After some time, two ladies along with their children leave the hall. Then how many people are remaining in the waiting hall?

- Ans ☒ 1. 18
- ☒ 2. 14
- ☒ 3. 20
- ☒ 4. 16

Question ID : 6044813857

Status : Answered

Chosen Option : 2

Q.21 How many P's are there in the following series which are immediately followed by C as well as immediately preceded by Z?

P M C Z P N P P C Z P C P Z C P P Z P C P Z P C

- Ans ☒ 1. One
- ☒ 2. Two
- ☒ 3. None
- ☒ 4. Three

Question ID : 6044813844

Status : Not Answered

Chosen Option : --

Q.22 Rajamouli has seven sons, namely, A, B, C, D, E, F and G, who are sitting around a circular dining table, facing the centre and having their lunch. E is the neighbour of A and D. G is not between F and C and F is on the immediate right of A. Then who are the neighbours of B?

- Ans ☒ 1. A and F
- ☒ 2. A and G
- ☒ 3. C and D
- ☒ 4. F and C

Question ID : 6044813856

Status : Not Answered

Chosen Option : --

Q.23 In a code language, UNCLE is coded as ECLUN. In that language, CLEAR will be coded as:

- Ans ☒ 1. REALC
- ☒ 2. RAECL
- ☒ 3. ERACL
- ☒ 4. REACL

Question ID : 6044813847

Status : Answered

Chosen Option : 4

Q.24 Rajaiah is the father-in-law of Divya, who is the sister-in-law of Haritha. Lakshmi is the mother of Satheesh, the only brother of Haritha. How is Rajaiah related to Haritha?

- Ans ☒ 1. Brother
- ☒ 2. Father
- ☒ 3. Uncle
- ☒ 4. Father-in-law

Question ID : 6044813846

Status : Not Answered

Chosen Option : --

Q.25 In the given series, what should come in place of ‘?’

D41A, A14D, E53C, C35E, G73C, ?

- Ans ☒ 1. C3G7
- ☒ 2. C37G
- ☒ 3. 3C7G
- ☒ 4. C73G

Question ID : 6044813843

Status : Answered

Chosen Option : 2

Q.26 Consider the following series.

B C S # D 1 2 A Z @ / * 4 3 5 0 P
Q 7 1 1 ? % € 9 8 8 0 2 L M 4 - 0
5 1 3 Z A K L R

In the above series, if all the symbols are eliminated and only letters and numbers are considered, then in the resultant series, identify the number of pairs where a number is preceded by a number and followed by a letter?

Question ID : 6044813838

Status : Not Answered

Chosen Option : --

- Ans ☒ 1. 5
☒ 2. 4
☒ 3. 2
☒ 4. 3

Q.27 ଦିଆଯାଇଥିବା ଶବ୍ଦ ସମୂହ ମଧ୍ୟରୁ ଭିନ୍ନଟିକୁ ଚୟନ କରନ୍ତୁ।
ଆଲସ୍ତ୍ରୋମେରିଆ, ଆନିମୋନ୍, ଫିଲ୍ମର, ପୋଡୋକାର୍ପସ

Question ID : 6044813850
Status : Not Answered
Chosen Option : --

- Ans ☒ 1. ଆଲସ୍ତ୍ରୋମେରିଆ
☒ 2. ପୋଡୋକାର୍ପସ
☒ 3. ଫିଲ୍ମର
☒ 4. ଆନିମୋନ୍

Q.28 In a code language if GOOD is coded as 41 and BAD is coded as 7, then what will SEEN be coded as?

- Ans ☒ 1. 48
☒ 2. 43
☒ 3. 46
☒ 4. 50

Question ID : 6044813854
Status : Answered
Chosen Option : 4

Q.29 Consider the given statement and the following assumptions numbered I and II and decide which of the assumptions is/are implicit in the statement.

Statement:
Bank of America should always check financial status before lending money to any corporate firm.
Assumption:
I. Checking before lending would give a clear analysis of the corporate firm's financial status.
II. Sometimes, corporate firms may not present the correct picture of their ability to repay loan amount to the bank.

Question ID : 6044813851
Status : Not Answered
Chosen Option : --

- Ans ☒ 1. Only assumption II is implicit.
☒ 2. Neither assumption I nor II is implicit.
☒ 3. Only assumption I is implicit.
☒ 4. Either assumption I or II is implicit.

Q.30 ଦିଆଯାଇଥିବା ବିକଳ୍ପ ମଧ୍ୟରୁ କେଉଁଟି ଜୋଡା ପାଇଁ ଅନିବାର୍ଯ୍ୟ ଅଂଶ ଅଟେ?

- Ans ☒ 1. ସୋଲ୍
☒ 2. ଚମଡ଼ା
☒ 3. ବକଲ୍
☒ 4. ପଞ୍ଜି

Question ID : 6044813845
Status : Answered
Chosen Option : 2

Section : Subject Content and Methodology

Q.1 If $\sin x = \frac{4}{5}$ and $0 < x < \frac{\pi}{2}$, find the value of $\sin 4x$.

- Ans ☒ 1. $\frac{336}{625}$
☒ 2. $\frac{36}{62}$
☒ 3. $\frac{-336}{625}$
☒ 4. $\frac{-36}{62}$

Question ID : 6044813923
Status : Not Attempted and Marked For Review
Chosen Option : --

Q.2 Find all pairs of consecutive odd natural numbers, both of which are larger than 10, such that their sum is less than 40.

- Ans
- ☒ 1. (13, 15), (15, 17), (17, 19), (19, 21)
 - ☒ 2. (11, 13), (13, 15), (15, 17), (17, 19)
 - ☒ 3. (15, 17), (17, 19), (19, 21), (21, 23)
 - ☒ 4. (11, 13), (13, 15), (15, 17), (19, 21)

Question ID : 6044813890

Status : Answered

Chosen Option : 2

Q.3 The modulus of the complex number $\frac{1+7i}{(2-i)^2}$ is:

- Ans
- ☒ 1. $\sqrt{2}$
 - ☒ 2. 1
 - ☒ 3. $\sqrt{7}$
 - ☒ 4. $\sqrt{5}$

Question ID : 6044813883

Status : Answered

Chosen Option : 1

Q.4 The position vectors of the points A, B and C are $\hat{i} + \hat{j} + \hat{k}$, $\hat{i} + 5\hat{j} - \hat{k}$ and $2\hat{i} + 3\hat{j} + 5\hat{k}$ respectively. The greatest angle of the triangle ABC is:

- Ans
- ☒ 1. $\cos^{-1} \frac{5}{7}$
 - ☒ 2. 90°
 - ☒ 3. 0
 - ☒ 4. $\cos^{-1} \frac{2}{3}$

Question ID : 6044813954

Status : Not Attempted and Marked For Review

Chosen Option : --

Q.5 If $A = \{x | x^2 = 9\}$ and $B = \{x | x^2 - 4x + 3 = 0\}$ then $A \cap B = ?$

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

Question ID : 6044813866

Status : Answered

Chosen Option : 4

Q.6 $\int \frac{dx}{\sqrt{x+1}-\sqrt{x}} = ?$

- Ans
- ☒ 1. $\frac{3}{2}(x+1)^{\frac{3}{2}} + x^{\frac{3}{2}} + c$
 - ☒ 2. $(x+1)^{\frac{3}{2}} + x^{\frac{3}{2}} + c$
 - ☒ 3. $(x+1)^{\frac{3}{2}} - x^{\frac{3}{2}} + c$
 - ☒ 4. $\frac{3}{2} \left[(x+1)^{\frac{3}{2}} + x^{\frac{3}{2}} \right] + c$

Question ID : 6044813940

Status : Answered

Chosen Option : 4

Q.7 The integral of the differential equation $\frac{dy}{dx} = e^{x-y} + x^2 e^{-y}$ is:

- Ans
- ☒ 1. $e^x = e^y + y^2 + c$
 - ☒ 2. $e^y = e^x + \frac{x^3}{3} + c$
 - ☒ 3. $e^x = e^y + \frac{y^3}{3} + c$
 - ☒ 4. $e^y = e^x + x^2 + c$

Question ID : 6044813948

Status : Answered

Chosen Option : 2

Q.8 If one of the roots of the equation $4x^2 + 2x - 1 = 0$ is α , then the other root will be:

- Ans
- 1. $\alpha - \beta$
 - 2. $\alpha + \beta$
 - 3. $4\alpha^3 - 3\alpha$
 - 4. $\alpha^2 + \beta^2$

Question ID : 6044813906

Status : Not Attempted and Marked For Review

Chosen Option : --

Q.9 If $\tan(\pi \cos \theta) = \cot(\pi \sin \theta)$ ($0 < \theta < \frac{\pi}{2}$), then $\cos(\theta - \frac{\pi}{4}) = ?$

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

Question ID : 6044813924

Status : Answered

Chosen Option : 2

Q.10 If the vertices of a triangle are $-3 + i$, $8 + 5i$, and $-2 - 3i$, the modulus of the complex number representing the centroid of this triangle is:

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

Question ID : 6044813885

Status : Answered

Chosen Option : 3

Q.11 If z_1 and z_2 both satisfy $z + \bar{z} = 2|z - 1|$ and $\arg(z_1 - z_2) = \frac{\pi}{4}$, then $\text{Im}(z_1 + z_2) = ?$

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

Question ID : 6044813886

Status : Not Attempted and Marked For Review

Chosen Option : --

Q.12 Find the approximate value of $\sqrt{0.037}$:

- Ans
- 1. 0.02
 - 2. 0.01925
 - 3. 0.1925
 - 4. 1.925

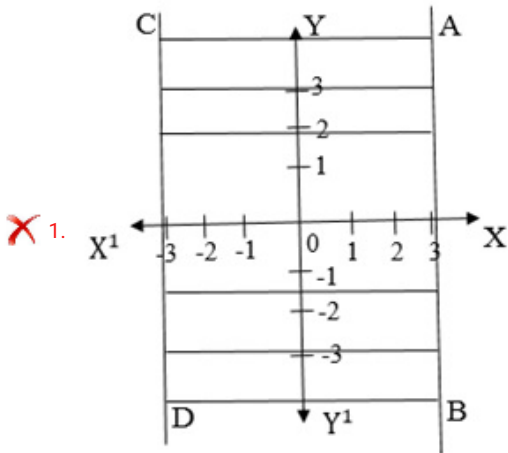
Question ID : 6044813938

Status : Not Attempted and Marked For Review

Chosen Option : --

Q.13 Using graphical method, solve the inequality $y - x \geq 0$

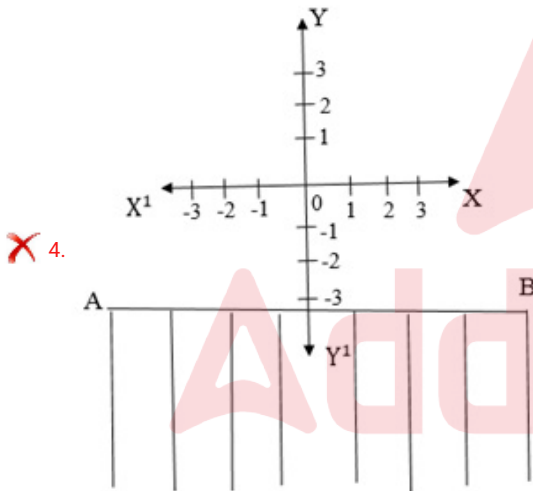
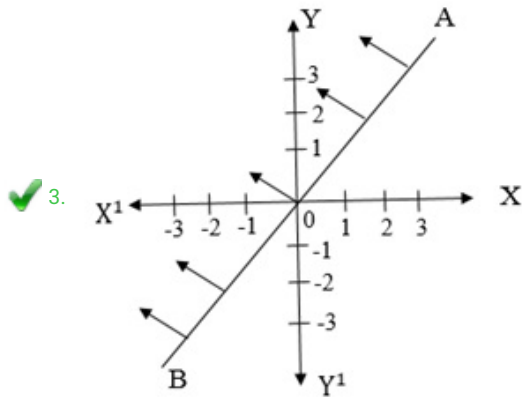
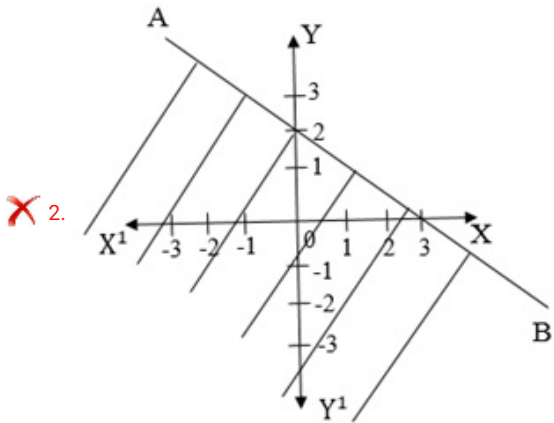
Ans



Question ID : 6044813888

Status : Answered

Chosen Option : 3



Q.14 $(1 + \sqrt{5})^5 + (1 - \sqrt{5})^5 = ?$

- Ans
- 1. 350
 - 2. 360
 - 3. 352
 - 4. 362

Question ID : 6044813891

Status : Not Attempted and
Marked For Review

Chosen Option : --

Q.15 Evaluate $\lim_{x \rightarrow 0} \frac{\sin 3x}{5x} :$

- Ans
- 1. 5
 - 2. 3
 - 3. 1
 - 4. $\frac{3}{5}$

Question ID : 6044813931

Status : Answered

Chosen Option : 4

Q.16 ଏକ ଚତୁର୍ଥୀ ସମୀକରଣ $x^2 + 2(\lambda + 2)x + 3(2\lambda + 1) = 0$, ଯେଉଁ λ ର ମୂଲ୍ୟ ନିର୍ଣ୍ଣୟ କରନ୍ତୁ, ଯାହାକି ଏହାକୁ ଏକ ପୂର୍ଣ୍ଣସଂଖ୍ୟାରେ ପରିଣତ କରେ।

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

Question ID : 6044813907

Status : Not Attempted and Marked For Review

Chosen Option : --

Q.17 If $\vec{a}$, $\vec{b}$ are the position vectors of the points $(1, -1)$ and $(-2, m)$, find the value of m for which $\vec{a}$ and $\vec{b}$ are collinear.

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

Question ID : 6044813952

Status : Answered

Chosen Option : 2

Q.18 Three integers x, y, z satisfy $34x + 51y = 6z$. If y and z are primes, what are these numbers?

- Ans
- ☒ 1. $(0, 2, 17)$
 - ☒ 2. $(3, 7, 23)$
 - ☒ 3. $(1, 3, 19)$
 - ☒ 4. $(0, 3, 17)$

Question ID : 6044813902

Status : Answered

Chosen Option : 1

Q.19 Find a unit vector perpendicular to both the vectors $4\hat{i} - \hat{j} + 3\hat{k}$ and $-2\hat{i} + \hat{j} - 2\hat{k}$.

- Ans
- ☒ 1. $\frac{1}{3}\hat{i} - \frac{2}{3}\hat{j} + \frac{2}{3}\hat{k}$
 - ☒ 2. $\hat{i} + \hat{j} + \hat{k}$
 - ☒ 3. $\hat{i} - \frac{2}{3}\hat{j} + \frac{1}{3}\hat{k}$
 - ☒ 4. $-\frac{1}{3}\hat{i} + \frac{2}{3}\hat{j} + \frac{2}{3}\hat{k}$

Question ID : 6044813953

Status : Answered

Chosen Option : 4

Q.20 The coefficients of X^m and X^n (m and n are positive integers) in the expression $(1 + X)^{m+n}$ are:

- Ans
- ☒ 1. None of the given options
 - ☒ 2. Reciprocal of each other
 - ☒ 3. Equal
 - ☒ 4. Equal with opposite sign

Question ID : 6044813892

Status : Answered

Chosen Option : 3

Q.21 Consider the following function:

$$f(x) = \begin{cases} (x^2 + 3x + a), & \text{when } x \leq 1; \\ (bx + 2), & \text{when } x > 1 \end{cases}$$

Find the values of a and b so that the above function is differentiable at each $x \in R$.

- Ans
- ☒ 1. $(3, 5)$
 - ☒ 2. $(1, 1)$
 - ☒ 3. $(5, 3)$
 - ☒ 4. $(3, 3)$

Question ID : 6044813932

Status : Marked For Review

Chosen Option : 4

Q.22 If $P(n)$: " $2 \cdot 4^{2n+1} + 3^{3n+1}$ is divisible by λ for all $n \in N$ " is true, then the value of λ is:

- Ans
- ☒ 1. 21
 - ☒ 2. 23
 - ☒ 3. 11
 - ☒ 4. 10

Question ID : 6044813873

Status : Answered

Chosen Option : 3

Q.23 If coefficients $C_0, C_1, C_2, \dots, C_n$ are given in the expression $(1+x)^n$, then $\frac{C_0}{C_0} + 2\frac{C_2}{C_1} + 3\frac{C_3}{C_2} + \dots + n$ terms = ?

- Ans
- ☐ 1. $\left[n\left(\frac{n+1}{2}\right)\right]^2$
 - ☐ 2. n^2
 - ☒ 3. $n\left(\frac{n+1}{2}\right)$
 - ☐ 4. $\frac{n(n+1)(2n+1)}{2}$

Question ID : 6044813894
Status : Answered
Chosen Option : 3

Q.24 Evaluate $\sin\left[2\cot^{-1}\left(\frac{5}{12}\right)\right]$:

- Ans
- ☐ 1. $\frac{12}{169}$
 - ☒ 2. $\frac{-120}{169}$
 - ☐ 3. $\frac{5}{12}$
 - ☐ 4. $\frac{120}{169}$

Question ID : 6044813925
Status : Answered
Chosen Option : 4

Q.25 Calculate the mean for the following frequency distribution:

Class Interval:	0-8	8-16	16-24	24-32	32-40	40-48
Frequency:	8	7	16	24	15	7

- Ans
- ☐ 1. 24
 - ☐ 2. 30
 - ☐ 3. 27
 - ☒ 4. 25.404

Question ID : 6044813959
Status : Answered
Chosen Option : 4

Q.26 If five students score 23, 46, 16, 25 and 20 marks in Mathematics, calculate variance and standard deviation values respectively.

- Ans
- ☐ 1. 100, 10
 - ☐ 2. 110, 9
 - ☐ 3. 108.5, 11.25
 - ☒ 4. 109.2, 10.45

Question ID : 6044813961
Status : Answered
Chosen Option : 4

Q.27 If $A(2, -2), B(1, 1)$ and $C(-1, 0)$ are the vertices of ΔABC and $AD \perp BC$, find the equation of altitude AD .

- Ans
- ☐ 1. $x + 2y = 2$
 - ☐ 2. $2x + y + 2 = 0$
 - ☐ 3. $x + y = 2$
 - ☒ 4. $2x + y = 2$

Question ID : 6044813919
Status : Answered
Chosen Option : 4

Q.28 Suppose the arcs of same length in two circles subtend angles of 60° and 75° at the centre, find the ratio of their radii.

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

Question ID : 6044813922
Status : Not Attempted and Marked For Review
Chosen Option : --

Q.29 Find order and power, respectively, of the differential equations $f(x, y)\left(\frac{d^m y}{dx^m}\right)^p + \phi(x, y)\left(\frac{d^{m-1} y}{dx^{m-1}}\right)^q + \dots = 0$;

Question ID : 6044813945

- Ans
- ☐ 1. $m - 1, p$
 - ☐ 2. $p, m - 1$
 - ☐ 3. q, m
 - ☒ 4. m, p

Status : Answered
Chosen Option : 4

Q.30 $\int_0^\pi \frac{x \sin x}{(1 + \cos^2 x)} dx = ?$

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

Question ID : 6044813944
Status : Answered
Chosen Option : 1

Q.31 If $f(x) = \frac{2x}{(1+x^2)}$, then which of the following is correct?

- Ans
- ☒ 1. $f(\tan \theta) = \sin 2\theta$
 - ☐ 2. $f(\sec \theta) = \sin 2\theta$
 - ☐ 3. $f(\operatorname{cosec} \theta) = \sin 2\theta$
 - ☐ 4. $f(\cot \theta) = \sin 2\theta$

Question ID : 6044813930
Status : Answered
Chosen Option : 1

Q.32 How many triangles made by four points of a circle meet together?

- Ans
- ☐ 1. 8
 - ☒ 2. 4
 - ☐ 3. 6
 - ☐ 4. 12

Question ID : 6044813881
Status : Answered
Chosen Option : 2

Q.33 If the coefficient of x^7 in $[ax^2 + (\frac{1}{bx})]^{11}$ is equal to the coefficient of x^{-7} in $[ax + (\frac{1}{bx^2})]^{11}$, then a and b are connected by the relation:

- Ans
- ☐ 1. $a + b = -1$
 - ☐ 2. $b = \frac{a}{2}$
 - ☐ 3. $a = \frac{-b}{2}$
 - ☒ 4. $ab = 1$

Question ID : 6044813895
Status : Answered
Chosen Option : 4

Q.34 The function $f(x) = \tan x - x$:

- Ans
- ☐ 1. Never increases
 - ☐ 2. Sometimes increases and sometimes decreases
 - ☒ 3. Always increases
 - ☐ 4. Always decreases

Question ID : 6044813937
Status : Answered
Chosen Option : 2

Q.35 $\int \left[\log(\log x) + \frac{1}{x \log x} \right] e^x = ?$

- Ans
- ☒ 1. $e^x \log(\log x) + c$
 - ☐ 2. $e^x \log(\sec x + \tan x) + c$

Question ID : 6044813942
Status : Answered
Chosen Option : 1

- ☒ 3. $e^x \sec x + c$
- ☒ 4. $e^x \log(\sec x) + c$

Q.36 If $A = \{1, 3, 5\}$ and $B = \{x|x \text{ is odd natural number which is less than } 6\}$ then choose the correct answer.

- Ans
- ☒ 1. $A < B$
- ☒ 2. $A = B$
- ☒ 3. $A > B$
- ☒ 4. $A \neq B$

Question ID : 6044813865
Status : Answered
Chosen Option : 2

Q.37 Show by the principle of finite induction: $3.6 + 6.9 + 9.12 + \dots + 3n. (3n + 3) = ?$

- Ans
- ☒ 1. $3n(n + 1)(n + 2)$
- ☒ 2. $(3n + 1)$
- ☒ 3. $3n(n + 1)$
- ☒ 4. $3n$

Question ID : 6044813901
Status : Answered
Chosen Option : 1

Q.38 If F is a field, then F is a/an:

- Ans
- ☒ 1. Abelian group
- ☒ 2. Subfield
- ☒ 3. Vector Space
- ☒ 4. Space

Question ID : 6044813941
Status : Answered
Chosen Option : 3

Q.39 Find the number of diagonals in an n -sided polygon.

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

Question ID : 6044813878
Status : Answered
Chosen Option : 1

Q.40 A line makes angles α, β, γ and δ with four diagonals of a cube, then $\cos^2 \alpha + \cos^2 \beta + \cos^2 \gamma + \cos^2 \delta = ?$

- Ans
- ☒ 1. $\frac{7}{2}$
- ☒ 2. $\frac{4}{3}$
- ☒ 3. $\frac{5}{2}$
- ☒ 4. $\frac{3}{2}$

Question ID : 6044813955
Status : Answered
Chosen Option : 2

Q.41 If the line $px + qy = 1$ is the tangent to the circle $x^2 + y^2 = r^2$, then the locus of the point (p, q) will be:

- Ans
- ☒ 1. $x^2 + y^2 = 1$
- ☒ 2. $r^2(x^2 + y^2) = 1$
- ☒ 3. $x^2 + y^2 = r^2$
- ☒ 4. $x^2 + y^2 = 2r^2$

Question ID : 6044813916
Status : Answered
Chosen Option : 3

Q.42 n persons are seated on n chairs at a round table. Find the probability that two specified persons are sitting next to each other.

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

Question ID : 6044813964
Status : Answered
Chosen Option : 1

Q.43 The marks obtained by 60 students in a certain paper out of 75 are given below. Calculate the median.

Marks range	Number of Students
15-20	4
20-25	5
25-30	11
30-35	6
35-40	5
40-45	8
45-50	9
50-55	6
55-60	4
60-65	2
Total	60

- Ans
- 1. 41
 - 2. 40
 - 3. 42
 - 4. 39

Question ID : 6044813963
Status : Answered
Chosen Option : 4

Q.44 In how many ways can six '+' and four '-' signs be arranged in a straight line so that two '-' signs are never to come together?

- Ans
- 1. 60
 - 2. 30
 - 3. 35
 - 4. 25

Question ID : 6044813879
Status : Not Answered
Chosen Option : --

Q.45 Calculate the following determinant:

$$\begin{vmatrix} 1 & \omega & \omega^2 \\ \omega & \omega^2 & 1 \\ \omega^2 & 1 & \omega^2 \end{vmatrix}$$

- Ans
- 1. 0
 - 2. 1
 - 3. ω^2
 - 4. ω

Question ID : 6044813911
Status : Answered
Chosen Option : 1

Q.46 If the line $y = mx + c$ touches the ellipse $\frac{x^2}{a^2} + \frac{y^2}{b^2} = 1$, then the value of c will be:

- Ans
- 1. $c = a\sqrt{1 + m^2}$
 - 2. $c = \pm\sqrt{a^2m^2 - b^2}$
 - 3. $c = \frac{a}{m}$
 - 4. $c = \pm\sqrt{a^2m^2 + b^2}$

Question ID : 6044813918
Status : Answered
Chosen Option : 2

Q.47 If $P_5^n : P_3^n = 2 : 1$, then what is n ?

- Ans
- 1. 2
 - 2. 6
 - 3. 3

Question ID : 6044813880
Status : Answered
Chosen Option : 4

✓ 4. 5

Q.48 Consider that f has second derivative at c such that $f'(c) = 0$ and $f''(c) > 0$, then c is a point of:

- Ans
- ✗ 1. Absolute maxima
 - ✗ 2. Absolute minima
 - ✓ 3. Local minima
 - ✗ 4. Local maxima

Question ID : 6044813936
Status : Answered
Chosen Option : 2

Q.49 $A \cap (A \cup B)' = ?$

- Ans
- ✗ 1. B
 - ✓ 2. $\emptyset$
 - ✗ 3. A
 - ✗ 4. U

Question ID : 6044813867
Status : Answered
Chosen Option : 2

Q.50 If $y = x - x^2 + x^3 - x^4 + \dots$, then x equals to:

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

Question ID : 6044813893
Status : Not Answered
Chosen Option : --

Q.51 Select the correct option by using the principle of mathematical induction $\sum_{k=0}^n k^2 \cdot {}^nC_k$.

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

Question ID : 6044813877
Status : Answered
Chosen Option : 4

Q.52 Let S be the sum, P be the product and R be the sum of the reciprocals of 3 terms of a G.P. Then $P^2R^3 : S^3$ is equal to:

- Ans
- ✓ 1. 1 : 1
 - ✗ 2. None of the given options
 - ✗ 3. (common ratio)ⁿ : 1
 - ✗ 4. (first term)² : (common ratio)²

Question ID : 6044813899
Status : Answered
Chosen Option : 1

Q.53 Two systems of rectangular axis have the same origin. If a plane cuts them at distances a, b, c and a', b', c' respectively, from the origin, then which of the following is true?

- Ans
- ✗ 1. $a^2 + b^2 + c^2 = a'^2 + b'^2 + c'^2$
 - ✗ 2. $\frac{c^2}{a^2 + b^2} = \frac{c'^2}{a'^2 + b'^2}$
 - ✓ 3. $\frac{1}{a^2} + \frac{1}{b^2} + \frac{1}{c^2} = \frac{1}{a'^2} + \frac{1}{b'^2} + \frac{1}{c'^2}$
 - ✗ 4. $\frac{a^2 + b^2}{c^2} = \frac{a'^2 + b'^2}{c'^2}$

Question ID : 6044813957
Status : Not Answered
Chosen Option : --

Q.54

Question ID : 6044813912
Status : Not Answered

If $A = \frac{1}{\pi} \begin{bmatrix} \sin^{-1}(x\pi) & \tan^{-1}\left(\frac{x}{\pi}\right) \\ \sin^{-1}\left(\frac{x}{\pi}\right) & \cot^{-1}(x\pi) \end{bmatrix}$, $B = \frac{1}{\pi} \begin{bmatrix} -\cos^{-1}(x\pi) & \tan^{-1}\left(\frac{x}{\pi}\right) \\ \sin^{-1}\left(\frac{x}{\pi}\right) & \tan^{-1}(x\pi) \end{bmatrix}$, then $A - B = ?$

Chosen Option : --

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

Q.55 If equation $2x^2 - 6x + 3 = 0$, with roots as α and β , then find the value of $\frac{\alpha}{\beta} + \frac{\beta}{\alpha}$.

Question ID : 6044813908
Status : Answered
Chosen Option : 2

- Ans
- ☒ 1. 6
 - ☒ 2. 4
 - ☒ 3. 2
 - ☒ 4. 8

Q.56 Find the value of $2 \sin^{-1} x$.

Question ID : 6044813927
Status : Answered
Chosen Option : 3

- Ans
- ☒ 1. $\cos^{-1}(2x^2 - 1)$
 - ☒ 2. $\cos^{-1}(4x^3 - 3x)$
 - ☒ 3. $\sin^{-1}[2x\sqrt{1-x^2}]$
 - ☒ 4. $\sin^{-1}(3x - 4x^3)$

Q.57 If $A = \{1, 2, 3, 4\}$ and $B = \{2, 4, 6, 8\}$ and the relation (R) between A and B is "x is greater than y", then the range of R is:

Question ID : 6044813870
Status : Answered
Chosen Option : 3

- Ans
- ☒ 1. $\{2, 4\}$
 - ☒ 2. $\{3, 4\}$
 - ☒ 3. $\{2, 6, 8\}$
 - ☒ 4. $\{2\}$

Q.58 For every positive integer n , the number $3(1^5 + 2^5 + \dots + n^5)$ is divisible by:

Question ID : 6044813905
Status : Answered
Chosen Option : 1

- Ans
- ☒ 1. $(1 + 2 + \dots + n)$
 - ☒ 2. $(1^4 + 2^4 + \dots + n^4)$
 - ☒ 3. $(1^2 + 2^2 + \dots + n^2)$
 - ☒ 4. $(1^3 + 2^3 + \dots + n^3)$

Q.59 A general equation of second degree represents a hyperbola if:

Question ID : 6044813915
Status : Answered
Chosen Option : 1

- Ans
- ☒ 1. $h^2 < ab$
 - ☒ 2. $h = 0$
 - ☒ 3. $h^2 > ab$
 - ☒ 4. $h^2 = ab$

Q.60 Which option represents the solution of the following differential equation? $\left(1 + e^{\frac{x}{y}}\right) dx + e^{\frac{x}{y}} \left(1 - \frac{x}{y}\right) dy = 0$.

Question ID : 6044813947
Status : Answered
Chosen Option : 3

- Ans
- ☒ 1. $y + xe^{\frac{x}{y}} = c$
 - ☒ 2. None of the given options
 - ☒ 3. $x + ye^{\frac{x}{y}} = c$

✗ 4. $x - ye^{\frac{x}{y}} = c$

Q.61 Find the probability distribution of the number of successes in two tosses of a die, where a success is defined as 'a number greater than 4'.

- Ans
- ✗ 1. $\begin{bmatrix} 0 & 1 & 2 \\ \frac{1}{9} & \frac{4}{9} & \frac{1}{9} \end{bmatrix}$
- ✗ 2. $\begin{bmatrix} 0 & 1 & 2 \\ \frac{4}{9} & \frac{2}{9} & \frac{4}{9} \end{bmatrix}$
- ✓ 3. $\begin{bmatrix} 0 & 1 & 2 \\ \frac{4}{9} & \frac{4}{9} & \frac{1}{9} \end{bmatrix}$
- ✗ 4. $\begin{bmatrix} 0 & 1 & 2 \\ \frac{4}{9} & \frac{1}{9} & \frac{4}{9} \end{bmatrix}$

Question ID : 6044813909
Status : Answered
Chosen Option : 4

Q.62 Find the position vectors of the points that divide the join of the points $2\vec{a} - 3\vec{b}$ and $3\vec{a} - 2\vec{b}$, internally and externally, in the ratio 2 : 3.

- Ans
- ✗ 1. $\vec{a} - 5\vec{b}$,
- ✓ 2. $-5\vec{b}$,
- ✗ 3. $5\vec{a}$
- ✗ 4. $5\vec{a} - \vec{b}$,

Question ID : 6044813951
Status : Answered
Chosen Option : 2

Q.63 Three straight lines l_1 , l_2 and l_3 are parallel and lie in the same plane. A total number of m points are taken on l_1 ; n points on l_2 and k points on l_3 . The maximum number of triangles formed with vertices at these points are:

- Ans
- ✗ 1. $mC_3 + nC_3 + kC_3$
- ✗ 2. $(m + n + k)C_3$
- ✗ 3. $mC_3 \times nC_3 \times kC_3$
- ✓ 4. $(m + n + k)C_3 - mC_3 - nC_3 - kC_3$

Question ID : 6044813882
Status : Answered
Chosen Option : 4

Q.64 Find the principal value of $\sin^{-1}\left(\frac{1}{\sqrt{2}}\right)$.

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

Question ID : 6044813926
Status : Answered
Chosen Option : 4

Q.65 The arithmetic mean between $(x - y)^2$ and $(x + y)^2$ is:

- Ans
- ✗ 1. $\frac{x^2 - y^2}{2}$
- ✗ 2. $x^2 - y^2$
- ✓ 3. $x^2 + y^2$
- ✗ 4. xy

Question ID : 6044813896
Status : Answered
Chosen Option : 3

Q.66 The average salary of male employees in a firm was ₹ 5,200 and that of females was ₹ 4,200. The mean salary of all the employees was ₹ 5,000. Find the percentage of male and female employees respectively.

- Ans
- ☒ 1. 70%, 30%
 - ☒ 2. 80%, 20%
 - ☒ 3. 60%, 40%
 - ☒ 4. 50%, 50%

Question ID : 6044813960
Status : Answered
Chosen Option : 2

Q.67 The straight lines, whose direction cosines are $al + bm + cn = 0$ and $fmn + gnl + hlm = 0$, will be perpendicular if $\frac{f}{a} + \frac{g}{b} + \frac{h}{c} = ?$

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

Question ID : 6044813956
Status : Answered
Chosen Option : 2

Q.68 $\int_{-\infty}^{+\infty} \cos\left(\frac{\pi x^2}{2}\right) dx = ?$

- Ans
- ☒ 1. 1
 - ☒ 2. 2
 - ☒ 3. 5
 - ☒ 4. 0

Question ID : 6044813943
Status : Answered
Chosen Option : 1

Q.69 A car is running on a straight road. The distance travelled and the time taken are connected by the formula $s = (t^2 - 2t)$, where s is measured in kilometer and t in hour. When the reading of odometer is 63, what is the reading of the speedometer?

- Ans
- ☒ 1. 64
 - ☒ 2. 32
 - ☒ 3. 48
 - ☒ 4. 16

Question ID : 6044813935
Status : Not Answered
Chosen Option : --

Q.70 If A, B, C are the angles of a triangle, then:

$$\begin{vmatrix} \sin^2 A & \cot A & 1 \\ \sin^2 B & \cot B & 1 \\ \sin^2 C & \cot C & 1 \end{vmatrix} = ?$$

- Ans
- ☒ 1. 0
 - ☒ 2. 1
 - ☒ 3. 90
 - ☒ 4. 180

Question ID : 6044813913
Status : Answered
Chosen Option : 1

Q.71 Which option among the below represents Cauchy-Schwarz inequality?

- Ans
- ☒ 1. $(\sum_{i=1}^n (a_i + b_i)^p)^{1/p} \leq (\sum_{i=1}^n a_i^p)^{1/p} + (\sum_{i=1}^n b_i^p)^{1/p}$
 - ☒ 2. $\sum_{i=1}^n a_i b_i \leq (\sum_{i=1}^n a_i^p)^{1/p} \cdot (\sum_{i=1}^n b_i^q)^{1/q}$
 - ☒ 3. $\sum_{i=1}^n |a_i b_i| \leq (\sum_{i=1}^n |a_i|^2)^{1/2} \cdot (\sum_{i=1}^n |b_i|^2)^{1/2}$
 - ☒ 4. $\sum_{i=1}^n (a_i + b_i)^p \leq (\sum_{i=1}^n a_i^p) + (\sum_{i=1}^n b_i^p)$

Question ID : 6044813889
Status : Answered
Chosen Option : 2

Q.72 The greatest and the least value of $(\sin^{-1} x)^2 + (\cos^{-1} x)^2$ are, respectively:

- Ans
- ☐ 1. $\frac{\pi}{2}$ and $\frac{-\pi}{2}$
- ☐ 2. $\frac{\pi^2}{4}$ and $\frac{-\pi^2}{4}$
- ☒ 3. $\frac{5\pi^2}{4}$ and $\frac{\pi^2}{8}$
- ☐ 4. $\frac{-\pi^2}{4}$ and 0

Question ID : 6044813929

Status : Answered

Chosen Option : 2

Q.73 If $\alpha \neq 1$ is any n^{th} root of unity, then $S = 1 + 3\alpha + 5\alpha^2 + \dots$ upto n terms is equal to:

- Ans
- ☐ 1. $\frac{2n}{(1+\alpha)}$
- ☐ 2. $\frac{-2n}{(1+\alpha)}$
- ☐ 3. $\frac{2n}{(1-\alpha)}$
- ☒ 4. $\frac{-2n}{(1-\alpha)}$

Question ID : 6044813887

Status : Answered

Chosen Option : 3

Q.74 Two finite sets have m and n elements, respectively. The total number of subsets of the first set is 120 more than the total number of subsets of the second set. The values of m and n , respectively, are:

- Ans
- ☐ 1. 5, 1
- ☒ 2. 7, 3
- ☐ 3. 8, 7
- ☐ 4. 7, 6

Question ID : 6044813868

Status : Answered

Chosen Option : 2

Q.75 What is the domain and range of the function $f(x) = \sqrt{1-x^2}$?

- Ans
- ☒ 1. $D = [-1, 1], R = [0, 1]$
- ☐ 2. $D = R, R = [0, \infty]$
- ☐ 3. $D = R - \{1\}, R = R - \{0\}$
- ☐ 4. $D = R, R = [-1, 1]$

Question ID : 6044813869

Status : Answered

Chosen Option : 1

Q.76 The condition of orthogonality of two circles is:

- Ans
- ☐ 1. $(g_1 + g_2) = (f_1 + f_2)$
- ☐ 2. $(g_1 g_2 + f_1 f_2) = c_1 + c_2$
- ☐ 3. $(g_1 g_2) = (f_1 f_2)$
- ☒ 4. $2(g_1 g_2 + f_1 f_2) = c_1 + c_2$

Question ID : 6044813917

Status : Answered

Chosen Option : 3

Q.77 If $f: R \rightarrow R, f(x) = 2x + 1$ and $g: R \rightarrow R, g(x) = x^3$, then $(g \circ f)^{-1}(27) = ?$

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

Question ID : 6044813872

Status : Answered

Chosen Option : 2

Q.78 Find the equation of the sphere concentric with $x^2 + y^2 + z^2 - 2x - 4y - 6z - 11 = 0$, but of double the radius.

- Ans
- ☐ 1. $(x - 1)^2 + (y - 2)^2 + (z - 3)^2 = 5^2$

Question ID : 6044813958

Status : Answered

- ☒ 2. $x^2 + y^2 + z^2 - 2x - 4y - 6z - 22 = 0$
- ☒ 3. $(x - 1)^2 + (y - 2)^2 + (z - 3)^2 = 11^2$
- ☒ 4. $x^2 + y^2 + z^2 - 2x - 4y - 6z - 86 = 0$

Chosen Option : 1

Q.79 If a and b are any two integers, where both are non-zero numbers, then there exist integers x and y such that $\gcd(a, b) = ?$

- Ans ☒ 1. $x + y$
- ☒ 2. xy
- ☒ 3. $ax + by$
- ☒ 4. $x - y$

Question ID : 6044813904

Status : Answered

Chosen Option : 2

Q.80 A relation R_1 is defined in a set R of real numbers such that $aRb \leftrightarrow a - b + \sqrt{2}$ is an irrational number. Relation R_1 is:

- Ans ☒ 1. Symmetric
- ☒ 2. Anti-symmetric
- ☒ 3. Reflexive
- ☒ 4. Transitive

Question ID : 6044813871

Status : Answered

Chosen Option : 2

Q.81 Which of the following will be other than principal value branch of $\tan^{-1} x$?

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

Question ID : 6044813928

Status : Answered

Chosen Option : 3

Q.82 If $x = 1 + a + a^2 + a^3 + \dots \infty$, where $|a| < 1$ and $y = 1 + b + b^2 + b^3 + \dots \infty$, where $|b| < 1$, then $1 + ab + a^2b^2 + \dots = ?$

- Ans ☒ 1. $\frac{xy}{x+y-1}$
- ☒ 2. $\frac{y}{x+y+1}$
- ☒ 3. $\frac{xy}{x+y+1}$
- ☒ 4. $\frac{x}{x+y+1}$

Question ID : 6044813897

Status : Answered

Chosen Option : 3

Q.83 Solve the following equation:

$$\left[1 + \left(\frac{1}{2} + \frac{1}{3}\right) \cdot \frac{1}{4} + \left(\frac{1}{4} + \frac{1}{5}\right) \cdot \frac{1}{4^2} + \left(\frac{1}{6} + \frac{1}{7}\right) \cdot \frac{1}{4^3} + \dots \infty\right]$$

- Ans ☒ 1. $\log \sqrt{12}$
- ☒ 2. $\log \sqrt{5}$
- ☒ 3. $\log \sqrt{2}$
- ☒ 4. $\log \sqrt{3}$

Question ID : 6044813900

Status : Answered

Chosen Option : 4

Q.84 A student was asked to prove a statement $P(n)$ by induction. He proved that $p(k + 1)$ is true whenever $P(k)$ is true for all $k > 6 \in \mathbb{N}$ and also that $P(5)$ is true. On the basis of this, he could conclude that $P(n)$ is true:

Question ID : 6044813876

- Ans
- ☐ 1. for all $n > 6$
 - ☐ 2. for all $n < 6$
 - ☐ 3. for all $n \in \mathbb{N}$
 - ☒ 4. for all $n \geq 6$

Status : Answered
Chosen Option : 1

Q.85 For $a \in [\pi, 2\pi]$, the function $f(x) = \frac{1}{3} \sin a \tan^3 x + (\sin a - 1) \tan x + \frac{\sqrt{a-2}}{\sqrt{8-a}}$ has:

- Ans
- ☐ 1. $x = (2n + 1) \pi (n \in I)$ as critical points
 - ☒ 2. no critical points
 - ☐ 3. $x = n\pi (n \in I)$ as critical points
 - ☐ 4. $x = 2n\pi (n \in I)$ as critical points

Question ID : 6044813939
Status : Not Answered
Chosen Option : --

Q.86 The points representing the complex number z for which $\arg\left(\frac{z-2}{z+2}\right) = \frac{\pi}{3}$ lie on a/an:

- Ans
- ☐ 1. Parabola
 - ☐ 2. Ellipse
 - ☒ 3. Circle
 - ☐ 4. Straight line

Question ID : 6044813884
Status : Answered
Chosen Option : 3

Q.87 Show that $u = \frac{1}{\sqrt{t}} \exp\left(\frac{-x^2}{4kt}\right)$ is the solution of the equation: $\frac{\partial^2 u}{\partial x^2} = ?$

- Ans
- ☐ 1. $\frac{\partial u}{\partial y}$
 - ☐ 2. $\frac{\partial^2 u}{\partial t^2}$
 - ☐ 3. $\frac{\partial u}{\partial x}$
 - ☒ 4. $\frac{1}{k} \frac{\partial u}{\partial t}$

Question ID : 6044813946
Status : Not Answered
Chosen Option : --

Q.88 If $\sin x + \sin^2 x = 1$, then the value of $\cos^{12} x + 3 \cos^{10} x + 3 \cos^8 x + \cos^6 x - 1 = ?$

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

Question ID : 6044813921
Status : Answered
Chosen Option : 3

Q.89 If $y = \frac{x \sin^{-1} x}{\sqrt{1-x^2}}$, find $\frac{dy}{dx}$.

- Ans
- ☐ 1. $\frac{x\sqrt{1-x^2} + \sin x}{(1-x)^{\frac{3}{2}}}$
 - ☒ 2. $\frac{x\sqrt{1-x^2} + \sin^{-1} x}{(1-x^2)^{\frac{3}{2}}}$
 - ☐ 3. $\frac{x\sqrt{1-x^2} + \cos^{-1} x}{(1-x^2)^{\frac{3}{2}}}$

Question ID : 6044813933
Status : Answered
Chosen Option : 1

✗ 4. $\frac{x\sqrt{1-x^2} + \sin x}{(1-x^2)^{\frac{3}{2}}}$

Q.90 For every positive integer n , $7^n - 3^n$ is divisible by:

- Ans
- ✗ 1. 3
 - ✗ 2. 5
 - ✗ 3. 7
 - ✓ 4. 4

Question ID : 6044813874

Status : Answered

Chosen Option : 4

Q.91 If p^{th} term of an A.P. is a and q^{th} term is b , then the sum of its $(p+q)$ terms is:

- Ans
- ✗ 1. $\frac{p-q}{2} \left[a+b + \frac{a-b}{p-q} \right]$
 - ✓ 2. $\frac{p+q}{2} \left[a+b + \frac{a-b}{p-q} \right]$
 - ✗ 3. $\frac{p+q}{2} \left[b + \frac{a-b}{p-q} \right]$
 - ✗ 4. $\frac{p+q}{2} \left[a + \frac{a-b}{p-q} \right]$

Question ID : 6044813898

Status : Not Answered

Chosen Option : --

Q.92 An equation relating to the stability of an aeroplane is $\frac{dv}{dt} = g \cos \alpha - kv$, where v is the velocity and g, k are constants. Find the expression for velocity if $v = 0$ when $t = 0$.

- Ans
- ✗ 1. $v = \cos \alpha (1 - e^{-t})$
 - ✓ 2. $v = \frac{g}{k} \cos \alpha (1 - e^{-kt})$
 - ✗ 3. $v = \sec \alpha (1 + e^t)$
 - ✗ 4. $v = \frac{g}{k} \sec \alpha (1 + e^{-kt})$

Question ID : 6044813949

Status : Answered

Chosen Option : 2

Q.93 The six-digit number $a1989b$ is divisible by 72. Determine the values of a and b .

- Ans
- ✗ 1. $a = 2, b = 2$
 - ✗ 2. $a = 3, b = 3$
 - ✗ 3. $a = 2, b = 3$
 - ✓ 4. $a = 3, b = 6$

Question ID : 6044813903

Status : Answered

Chosen Option : 4

Q.94 For all $n \in \mathbb{N}$, $2 \cdot 7^n + 3 \cdot 5^n - 5$ is divisible by:

- Ans
- ✗ 1. 23
 - ✓ 2. 24
 - ✗ 3. 29
 - ✗ 4. 25

Question ID : 6044813875

Status : Answered

Chosen Option : 2

Q.95 If $A = \begin{bmatrix} 4 & 2 \\ -1 & 1 \end{bmatrix}$, then $(A - 2I)(A - 3I) = ?$

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

Question ID : 6044813910

Status : Answered

Chosen Option : 4

Q.96 The value of c in Rolle's theorem for the function $f(x) = x^3 - 3x$ in the interval $[0, \sqrt{3}]$ is:

Question ID : 6044813934

**Test
Prime**

By Adda247

PREVIOUS YEAR PAPERS PDF



PRACTICE MORE, SCORE HIGHER!



**Free
25,000+
PDF's**

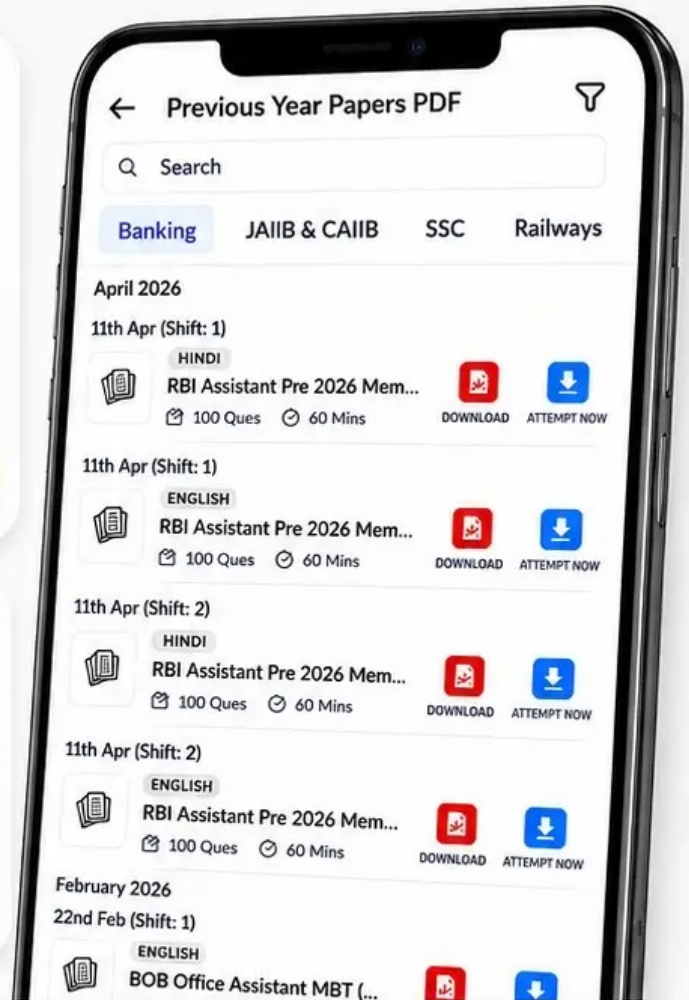
High-Quality | Exam-Wise | Updated Regularly



**ATTEMPT AS
MOCK**



Turn PDFs into real exam experience.
Analyze. Improve. Succeed.



Topic-wise &
Exam-wise PDFs



Download &
Study Offline



Attempt as Mock
& Track Score



Smart Analysis
& Performance

AVAILABLE IN



Banking



SSC



Railway



Teaching



UGC



Agriculture



Nursing



Bihar



UP



Punjab



WB



Odisha



TN



AP & Telangana



Haryana



DOWNLOAD TEST PRIME

Test

Prime



SUCCESS GALLERY!

★ MEET THE ACHIEVERS ★



Kunal, RRB JE



Shivam, UPSSSC AGTA



Priya, ANM



KHALILUR, LDA



Manoj, PWD



Atin, JENPAS



Shatarupa, OPSC



Arpita, JENPAS



Shital, SSC JE (Mech)



Nancy, UGC NET



Atul, SSC JE (ELCT)



Rahul, SSC JE (CIVIL)



Anand, SSC JE (ELCT)



Mohan, SSC JE (ELCT)



Saurabh, UGC NET



Ved, SSC JE (Mech)

★ THEY DID IT. YOU CAN TOO ★

READ THEIR STORIES!



Ans

- 1. $\frac{3}{2}$
- 2. -1
- 3. 1
- 4. $\frac{1}{3}$

Status : Answered
Chosen Option : 3

Q.97 Which of the following represents the value of $\sin 18^\circ$?

Ans

- 1. $\frac{\sqrt{5}}{4}$
- 2. $\frac{\sqrt{5} + 1}{4}$
- 3. $\frac{-1 - \sqrt{5}}{4}$
- 4. $\frac{\sqrt{5} - 1}{4}$

Question ID : 6044813920
Status : Answered
Chosen Option : 4

Q.98 If the system of equations $x = cy + bz$, $y = az + cx$ and $z = bx + ay$ has a non-trivial solution, then a , b and c are connected by the relation:

Ans

- 1. $a^2 + b^2 + c^2 = abc$
- 2. $abc = 1$
- 3. $a^2 + b^2 + c^2 + 2abc = 1$
- 4. $a^2 + b^2 + c^2 = 1$

Question ID : 6044813914
Status : Answered
Chosen Option : 2

Q.99 In any distribution, if the arithmetic mean is $\bar{x}$, then find mean deviation.

Ans

- 1. $\frac{\sum f_i(x_i - \bar{x})^2}{N}$
- 2. $\sum f_i |x_i - \bar{x}|$
- 3. $\frac{\sum f_i(x_i - \bar{x})}{N}$
- 4. $\frac{\sum f_i |x_i - \bar{x}|}{N}$

Question ID : 6044813962
Status : Answered
Chosen Option : 4

Q.10 Find the direction and magnitude of $\vec{a} - \vec{b}$, when $\vec{a}$ has magnitude 5 and points towards North-east, while $\vec{b}$ has magnitude 5 and points towards North-west.

Ans

- 1. $\vec{a} - \vec{b}$ is a vector pointing towards West and whose magnitude is 5 units.
- 2. $\vec{a} - \vec{b}$ is a vector pointing towards South-west and whose magnitude is $5\sqrt{2}$ units.
- 3. $\vec{a} - \vec{b}$ is a vector pointing towards East and whose magnitude is $5\sqrt{2}$ units.
- 4. $\vec{a} - \vec{b}$ is a vector pointing towards West and whose magnitude is $5\sqrt{2}$ units.

Question ID : 6044813950
Status : Answered
Chosen Option : 2