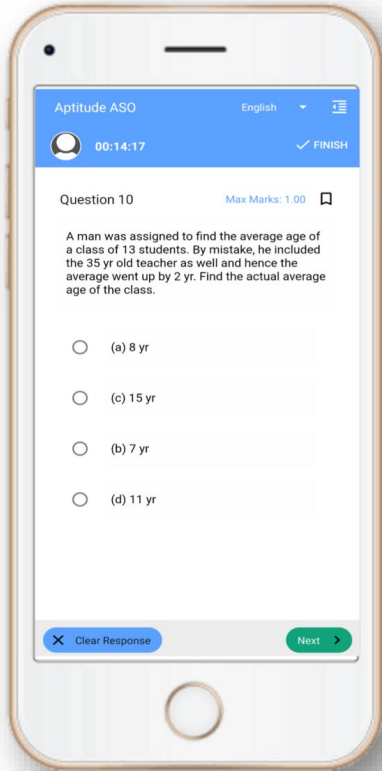


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ODISHA ADARSHA VIDYALAYA SANGATHAN

Participant ID	Techofworld.In
Participant Name	Techofworld.In
Test Center Name	Black Diamond College of Engineering & Technology
Test Date	30/01/2021
Test Time	2:20 PM - 5:40 PM
Subject	PGT MATHS

Section : Language Proficiency Test

Q.1 Choose the most suitable meaning of the given idiom/phrase from the following options.

Spill the beans

- Ans
- 1. To keep a secret
 - 2. To gather the beans
 - 3. To tell someone a secret
 - 4. To keep a promise

Question ID : 6009293019

Status : Answered

Chosen Option : 3

Q.2 Choose the one - word substitute for the given group of words.

A person having great love and understanding for nature, art, etc.

- Ans
- 1. Artist
 - 2. Critic
 - 3. Connoisseur
 - 4. Cynic

Question ID : 6009293021

Status : Not Answered

Chosen Option : --

Q.3 Choose the INCORRECTLY spelt word from the following options.

- Ans 1. Ettiquete
 2. Catalogue
 3. Corrigendum
 4. Saccharin

Question ID : 6009293018
Status : Not Answered
Chosen Option : --

Q.4 The given sentence is in the active voice. Choose the option which best expresses the same sentence in passive voice.

We must put an end to this discussion.

- Ans 1. This discussion should be put an end to.
 2. This discussion should be ended.
 3. This discussion must be put an end to.
 4. This discussion must put an end to.

Question ID : 6009293026
Status : Answered
Chosen Option : 1

Q.5 Choose the most suitable meaning of the given idiom/ phrase from the following options.

Paying through our nose

- Ans 1. Buying on credit
 2. Paying dearly
 3. Paying in instalments
 4. Reducing our expenses

Question ID : 6009293020
Status : Not Answered
Chosen Option : --

Q.6 The given sentence is in the active voice. Choose the option which best expresses the same sentence in passive voice.

Everyone says he is a great artist.

- Ans 1. He is being said to be a great artist.
 2. He is a great artist said by everyone.
 3. He is said to be a great artist.
 4. He is called a great artist.

Question ID : 6009293025

Q.7 The given sentence is in direct speech. Choose the option which best expresses the same sentence in indirect speech.

She said to me, "I am sorry I lost the dress you gave me".

- Ans 1. She apologised for losing the dress I had given her.
 2. She argued for losing the dress I gave her.
 3. She is feeling sorry for losing the dress she gave me.
 4. She told me sorry because she had lost the dress.

Question ID : 6009293029

Status : Answered

Chosen Option : 1

Q.8 Choose the most appropriate ANTONYM of the following word:

Clandestine

- Ans 1. Covert
 2. Virtuous
 3. Open
 4. Veiled

Question ID : 6009293013

Status : Not Answered

Chosen Option : --

Q.9 Choose the one - word substitute for the given group of words.

A speech by an actor at the end of a play

- Ans 1. Prelude
 2. Preface
 3. Prologue
 4. Epilogue

Question ID : 6009293022

Status : Not Answered

Chosen Option : --

Q.10 Choose the most appropriate synonym of the following word:

Pensive

- Ans 1. Engrossed
 2. Inconsiderate
 3. Clumsy
 4. Superficial

Q.11 Choose the most appropriate option to fill in the blanks.

No sooner _____ we reach there than it _____ to rain.

- Ans
- 1. had, began
 - 2. do, began
 - 3. does, began
 - 4. did, began

Question ID : 6009293028
Status : Answered
Chosen Option : 1

Q.12 Choose the most appropriate option that can improve the underline part of the given sentence.

I wish my bus did not arrive so late; then I could have reached home on time.

- Ans
- 1. has not arrived
 - 2. had not arrived
 - 3. does not arrive
 - 4. do not arrive

Question ID : 6009293024
Status : Answered
Chosen Option : 2

Q.13 Choose the most appropriate synonym of the following word:

Reprimand

- Ans
- 1. Tribute
 - 2. Appreciate
 - 3. Recommend
 - 4. Upbraid

Question ID : 6009293011
Status : Not Answered
Chosen Option : --

Q.14 Choose the correctly spelt word from the following options.

- Ans
- 1. Synchronize
 - 2. Resterurant
 - 3. Farenheit
 - 4. Renaissance

Question ID : 6009293017
Status : Not Answered

04/02/2021

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Q.15 Choose the most appropriate word from the options to fill in the blank.

His excellent memory and inquisitive mind have made him a very _____ man.

- Ans
- 1. benevolent
 - 2. malevolent
 - 3. altruistic
 - 4. erudite

Question ID : 6009293015

Status : Not Answered

Chosen Option : --

Q.16 The first and last sentences of a paragraph (S1 and S6) are given along with four jumbled sentences (P, Q, R and S). Choose the option that arranges these four sentences in correct order to form a coherent paragraph.

(S1) Automobile Engineers have developed a variety of technically advanced motor cars.

(P) But with all these facilities it also has disadvantages.

(Q) Pollution and accidents are two hazardous aspects of motor cars.

(R) It has reduced the long distance and made journeys fast and comfortable.

(S) The motor car is one of the useful gifts of modern science.

(S6) Finally all human beings have to take the responsibility to save themselves and the environment.

- Ans
- 1. QRPS
 - 2. SPRQ
 - 3. PRSQ
 - 4. SRPQ

Question ID : 6009293030

Status : Answered

Chosen Option : 4

Q.17 Choose the one - word substitute for the given group of words.

Ridiculous use of words

- Ans
- 1. Malapropism
 - 2. Neologism
 - 3. Onomatopoeia
 - 4. Pun

Question ID : 6009293023

Q.18 Choose the correctly spelt word from the following options.

- Ans 1. Surveillance
 2. Survellience
 3. Surveliance
 4. Survelience

Question ID : 6009293016
 Status : Answered
 Chosen Option : 1

Q.19 Choose the most appropriate word from the options to fill in the blank.

With the growing _____ in the country, the Government is also gearing itself to control the rebellion among the people.

- Ans 1. harmony
 2. unrest
 3. peace
 4. nonviolence

Question ID : 6009293014
 Status : Answered
 Chosen Option : 2

Q.20 Choose the most appropriate option to fill in the blanks.

One should make _____ best efforts if _____ wishes to achieve success in this competition.

- Ans 1. his, he
 2. one's, one's
 3. one's, one
 4. one, one's

Question ID : 6009293027
 Status : Answered
 Chosen Option : 1

Q.21 'ଖୁଅ କାଢ଼ିବା' କହିଲେ କଣ ବୁଝାଏ?

- Ans 1. ଦୋଷ ଖୋଜିବା
 2. ପ୍ରଶ୍ନର ଦେବା
 3. କ୍ଷମା କରିବା
 4. ପଥ ହରେଇବା

Q.22 କୁରୁମ୍ବ ସହିତ ହେଲେ କଣ ହୁଏ?

- Ans
- 1. ସହଜାତ
 - 2. ସପତ୍ନୀ
 - 3. ପରିବାର
 - 4. ସକୁରୁମ୍ବ

Question ID : 6009293035
Status : Answered
Chosen Option : 4

Q.23 କେଉଁ ଶବ୍ଦଟିରେ ବନାନଗତ ତ୍ରୁଟି ରହିଛି?

- Ans
- 1. ଶୀକାର
 - 2. ଭୂଲି
 - 3. ଜୀବିତ
 - 4. ନୀତ

Question ID : 6009293033
Status : Answered
Chosen Option : 2

Q.24 "ଗବେଷଣା ପାଇଁ ସେ ଆବଶ୍ୟକୀୟ ତଥ୍ୟ ସଂଗ୍ରହରେ ବ୍ୟସ୍ତ ଅଛନ୍ତି" - ବାକ୍ୟରେ କେଉଁ ଶବ୍ଦର ପ୍ରୟୋଗରେ ତ୍ରୁଟି ରହିଛି?

- Ans
- 1. ବ୍ୟସ୍ତ
 - 2. ଗବେଷଣା
 - 3. ଆବଶ୍ୟକୀୟ
 - 4. ସଂଗ୍ରହରେ

Question ID : 6009293034
Status : Answered
Chosen Option : 3

Q.25 ସବୁ/ପରିସ୍ଥିତି/ସ୍ଥାନରେ ନଥାଏ/ସମାନ -ଉପଯୁକ୍ତ କ୍ରମରେ ରଖିଲେ ବାକ୍ୟଟି ହେବ-

- Ans
- 1. ସବୁ ସ୍ଥାନରେ ପରିସ୍ଥିତି ସମାନ ନଥାଏ
 - 2. ନଥାଏ ସବୁ ସ୍ଥାନରେ ପରିସ୍ଥିତି ସମାନ
 - 3. ସବୁ ନଥାଏ ସ୍ଥାନରେ ପରିସ୍ଥିତି ସମାନ
 - 4. ସ୍ଥାନରେ ନଥାଏ ସବୁ ପରିସ୍ଥିତି ସମାନ

Question ID : 6009293041

Q.26 ଆସନ୍ତାକାଳି ମୋତେ ସେଠାକୁ ଯିବାକୁ ପଡ଼ିଥିଲା – ବାକ୍ୟଟିକୁ ସଜାଡ଼ିବାକୁ ହେଲେ କେଉଁ ଶବ୍ଦର ପରିବର୍ତ୍ତନ କରିବାକୁ ପଡ଼ିବ?

- Ans
- 1. ମୋତେ
 - 2. ପଡ଼ିଥିଲା
 - 3. ଯିବାକୁ
 - 4. ସେଠାକୁ

Question ID : 6009293040
Status : Answered
Chosen Option : 2

Q.27 'ଯାହା ଦୂର ନୁହେଁ'କୁ ଗୋଟିଏ ଶବ୍ଦରେ ପ୍ରକାଶ କାଲେ ହେବ-

- Ans
- 1. ସମୀପଦୂର
 - 2. ନୀତିଦୂର
 - 3. ବହୁଦୂର
 - 4. ଅତିଦୂର

Question ID : 6009293044
Status : Answered
Chosen Option : 2

Q.28 'ସବଳ' ଶବ୍ଦର ଅର୍ଥ 'ବଳବାନ' ହେଲେ 'ଶବଳ'ର ଅର୍ଥ ହେବ-

- Ans
- 1. କଳତ୍ରର
 - 2. ପବିତ୍ର
 - 3. ଚିକ୍ରିତ
 - 4. ପରାକ୍ରମ

Question ID : 6009293042
Status : Not Answered
Chosen Option : --

Q.29 'ରକ୍ତଚାତଳ' କାହାକୁ କୁହାଯାଏ?

- Ans
- 1. ଅଶ୍ରୀବ୍ୟ ଗାଳି
 - 2. ଲାଲ ରଙ୍ଗର ଚାତଳ
 - 3. ପ୍ରଚଣ୍ଡ ରାଗ
 - 4. ଅସହ୍ୟ ମିଥ୍ୟା

Question ID : 6009293047

Q.30 'ଚଳୁ କରିଦେବା'- କେଉଁ ବିଶେଷ ଅର୍ଥ ପ୍ରକାଶ କରିଥାଏ?

- Ans
- 1. ପ୍ରସାଦ ପାଇବା
 - 2. ପାଣି ପିଇବା
 - 3. ସବୁ ଶେଷ କରିଦେବା
 - 4. ଚୟନ କରିବା

Question ID : 6009293050
Status : Answered
Chosen Option : 3

Q.31 'ଅନିଳ' ଶବ୍ଦର ଅର୍ଥ କଣ?

- Ans
- 1. ସାଗର
 - 2. ନୀଳ
 - 3. ଅଗ୍ନି
 - 4. ପବନ

Question ID : 6009293043
Status : Not Answered
Chosen Option : --

Q.32 କେଉଁ ଶବ୍ଦଟି 'ଇହ' ଶବ୍ଦର ବିପରୀତ ଅର୍ଥ ପ୍ରଦାନ କରେ?

- Ans
- 1. ମୂଳ
 - 2. ଦାହ
 - 3. ସମୂହ
 - 4. ପର

Question ID : 6009293038
Status : Not Answered
Chosen Option : --

Q.33 ଗଣମାଧ୍ୟମ ଯୋଗୁ ଆମେ ବହୁ ଖବର _____ - ଉପଯୁକ୍ତ ଶବ୍ଦଟି ବାଛି ଶୂନ୍ୟସ୍ଥାନ ପୂରଣ କର।

- Ans
- 1. ଚାଖୁଆଡ଼
 - 2. ହରାଇଆଡ଼
 - 3. ଦେଖୁଆଡ଼
 - 4. ପାଇଆଡ଼

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Q.34 'କାନକୁହା' କାହାକୁ କୁହାଯାଇଥାଏ?

- Ans
- 1. ଯେ ଅନ୍ୟ ବିରୁଦ୍ଧରେ ଗୋପନରେ କହେ
 - 2. ଯେ ଅନ୍ୟ ବିଷୟରେ ଆଲୋଚନା କରେ
 - 3. ଯେ ସମସ୍ତଙ୍କର ପ୍ରିୟ ହେବାକୁ ଚାହେଁ
 - 4. ଯେ ଅନ୍ୟର ଶତ୍ରୁ ସାଜେ

Question ID : 6009293031
Status : Not Answered
Chosen Option : --

Q.35 ଏଥିମଧ୍ୟରୁ କେଉଁ ଶବ୍ଦଟି ଅଶୁଦ୍ଧ?

- Ans
- 1. ପାଟବ
 - 2. ସନ୍ଦେହ
 - 3. ସନ୍ଧ୍ୟାସ
 - 4. ପ୍ରତ୍ୟକ

Question ID : 6009293032
Status : Answered
Chosen Option : 4

Q.36 ଦେଶ ତାଙ୍କର ବିଦେଶରେ ବ୍ୟାପିଥିଲା ପ୍ରତିଷ୍ଠା - ବାକ୍ୟଟିକୁ ଯଥାର୍ଥ କର୍ମରେ ସଜ୍ଜାଅ ।

- Ans
- 1. ବିଦେଶରେ ଦେଶ ତାଙ୍କର ପ୍ରତିଷ୍ଠା ବ୍ୟାପିଥିଲା
 - 2. ଦେଶ ବିଦେଶରେ ତାଙ୍କର ବ୍ୟାପିଥିଲା ପ୍ରତିଷ୍ଠା
 - 3. ଦେଶ ବିଦେଶରେ ତାଙ୍କର ପ୍ରତିଷ୍ଠା ବ୍ୟାପିଥିଲା
 - 4. ଦେଶ ବ୍ୟାପିଥିଲା ବିଦେଶରେ ତାଙ୍କର ପ୍ରତିଷ୍ଠା

Question ID : 6009293048
Status : Not Answered
Chosen Option : --

Q.37 'ଆନନ୍ଦ' ଶବ୍ଦର ବିପରୀତାର୍ଥ ଶବ୍ଦଟି ହେବ-

- Ans
- 1. ସତ୍ୟାନନ୍ଦ
 - 2. ମିଥ୍ୟା
 - 3. ସଦାନନ୍ଦ
 - 4. ନିରାନନ୍ଦ

Question ID : 6009293037

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Q.38 ଜଗତର ନାଥଙ୍କୁ କଣ କୁହାଯାଏ?

- Ans
- 1. ଜଗନ୍ନାଥ
 - 2. ନାଥ ଜଗତର
 - 3. ଜଗତ ନାଥ
 - 4. ଜଗା ଠାକୁର

Question ID : 6009293036
Status : Not Answered
Chosen Option : --

Q.39 "ସାତି" କଲ୍ୟାଣ ମାଗି _____ -ଉପଯୁକ୍ତ ଶବ୍ଦଟି ବାଛି ଶୂନ୍ୟସ୍ଥାନ ପୂରଣ କର।

- Ans
- 1. ପୁରସ୍କାର
 - 2. ସମ୍ବଳ
 - 3. ଚିରସ୍କାର
 - 4. ଓଳଗି

Question ID : 6009293046
Status : Not Answered
Chosen Option : --

Q.40 'ଆବୃତ' ଶବ୍ଦର ଅର୍ଥ 'ଆଚ୍ଛାଦିତ' ହେଲେ 'ଆବୃତ୍ତ' ଶବ୍ଦର ଅର୍ଥ ହେବ -

- Ans
- 1. ଅଭ୍ୟାସ
 - 2. ଅମାପ
 - 3. ଅଧିକ
 - 4. ପ୍ରକୋପ

Question ID : 6009293039
Status : Not Answered
Chosen Option : --

Section : Current Affairs & Reasoning

Q.1 In October 2020, Indian and Canadian researchers found evidence of dairy production in which civilization?

- Ans
- 1. Egyptian Civilization
 - 2. Roman Civilization
 - 3. Mesopotamian Civilization
 - 4. Indus Valley Civilization

Q.2 What was the theme of the 66th Wildlife Week celebrated in October 2020?

- Ans
- 1. Wildlife and Nature
 - 2. Life Below Water
 - 3. RoaR (Roar and Revive)
 - 4. Predators Under Threat

Question ID : 60092
Status : Answered
Chosen Option : 3

Q.3 Akkitham Achuthan Namboothiri, selected for Jnanpith Award 2019, was a famous _____ poet.

- Ans
- 1. Malayalam
 - 2. Kannada
 - 3. Tamil
 - 4. Telugu

Question ID : 60092
Status : Not Answered
Chosen Option : --

Q.4 Which of the following countries was NOT a part of the 'Phase 1 - Malabar Naval Exercise' held in November 2020?

- Ans
- 1. India
 - 2. France
 - 3. Australia
 - 4. Japan

Question ID : 60092
Status : Not Answered
Chosen Option : --

Q.5 In 2020, the India-Nepal territorial dispute made news headlines. Which of the following disputed areas is NOT in Uttarakhand?

- Ans
- 1. Kalapani
 - 2. Susta
 - 3. Limpiyadhura
 - 4. Lipulekh

Question ID : 60092

Q.6 Which of the following is the capital of Armenia?

- Ans
- 1. Baku
 - 2. Yerevan
 - 3. Nagorno
 - 4. Karabakh

Question ID :
Status :
Chosen Option :

Q.7 Which organisation has launched the facility to file NIL GST statements through SMS?

- Ans
- 1. CBDT
 - 2. Central Board of Indirect Taxes and Customs
 - 3. GSTN
 - 4. Finance Commission

Question ID :
Status :
Chosen Option :

Q.8 Which bank is NOT a part of three banks being merged into a single entity to form India's second largest bank?

- Ans
- 1. United Bank of India
 - 2. Canara Bank
 - 3. Oriental Bank of Commerce
 - 4. Punjab National Bank

Question ID :
Status :
Chosen Option :

Q.9 How many seats did BJP win in the recently held (2020) Bihar Vidhan Sabha elections?

- Ans
- 1. 76
 - 2. 75
 - 3. 73
 - 4. 74

Question ID :

Q.10 World Trade Organization (WTO) has set up a dispute panel on which country's tariffs on Information and Communication Technology (ICT) goods?

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

Question ID : 60092
Status : Answered
Chosen Option : 4

Q.11 India ranked _____ among 195 countries in the 'Freedom in the World 2020' report released in March 2020 by Freedom House.

- Ans
- 1. 70th
 - 2. 83rd
 - 3. 149th
 - 4. 121st

Question ID : 60092
Status : Not Answered
Chosen Option : --

Q.12 Who was appointed as chairman of National School of Drama (India) in September 2020?

- Ans
- 1. Ratan Thiyam
 - 2. Anupam Kher
 - 3. Paresh Rawal
 - 4. Prasoos Joshi

Question ID : 60092
Status : Answered
Chosen Option : 3

Q.13 Indian Air Force formally inducted Rafale fighter jets in 2020. Which company has manufactured these jets?

- Ans
- 1. Parker Hannifin
 - 2. Lockheed Martin
 - 3. Boeing
 - 4. Dassault

Question ID : 60092

Q.14 Which of the following teams has appeared six times in the finals of IPL as of 2020?

- Ans
- 1. Delhi Capitals
 - 2. Chennai Super Kings
 - 3. Mumbai Indians
 - 4. Sunrisers Hyderabad

Question ID : 6
Status : A
Chosen Option : 3

Q.15 Which country voted for constitutional amendments that let its President to remain in power till 2036?

- Ans
- 1. Turkey
 - 2. China
 - 3. North Korea
 - 4. Russia

Question ID : 6
Status : A
Chosen Option : 4

Q.16 Who was appointed as India's first Chief of Defence Staff (CDS) in 2019?

- Ans
- 1. General Manoj Mukund Naravane
 - 2. General VK Singh
 - 3. General JJ Singh
 - 4. General Bipin Rawat

Question ID : 6
Status : A
Chosen Option : 4

Q.17 Who represented India in the Australia – India - Japan Ministers' meeting on supply chains resilience?

- Ans
- 1. Nirmala Sitharaman
 - 2. Piyush Goyal
 - 3. Prakash Javadekar
 - 4. Nitin Gadkari

Question ID : 6

Q.18 What is the name of the Indian earth observation satellite intended for applications in agriculture, forestry and disaster management that was launched in November 2020?

- Ans
- 1. RISAT 2BR2
 - 2. EOS - 01
 - 3. R2 CubeSat
 - 4. Lemur - 2

Question ID : 600929

Status : Answer

Chosen Option : 2

Q.19 Who was the first 'National Teachers Award' winner from the Eklavya Model Residential Schools (EMRS) established under Ministry of Tribal Affairs?

- Ans
- 1. Kalpana Sharma
 - 2. Sudha Painuli
 - 3. Ashutosh Anand
 - 4. Peter Tabichi

Question ID : 600929

Status : Not Answered

Chosen Option : --

Q.20 Which are the latest emission norms made applicable for L7 (quadricycle) category by the Ministry of Road Transport and Highways, Government of India in 2020?

- Ans
- 1. BS - VI
 - 2. BS - IV
 - 3. BS - V
 - 4. BS - VII

Question ID : 600929

Status : Not Answered

Chosen Option : --

Q.21 As of 2020, who is the coach of Men's senior Indian national football team?

- Ans
- 1. Savio Medeira
 - 2. Syed Abdul Rahim
 - 3. Igor Stimac
 - 4. Amal Dutta

Question ID : 600929

Q.22 Which tennis player announced her retirement in early 2020?

- Ans
- 1. Maria Sharapova
 - 2. Naomi N
 - 3. Ashleigh Barty
 - 4. Serena Williams

Question ID : 600
Status : Ma
Chosen Option : 1

Q.23 Who was the first woman wrestler to win a gold medal at the Asian Games?

- Ans
- 1. Kamaljeet Sandhu
 - 2. Babita Kumari Phogat
 - 3. Geeta Phogat
 - 4. Vinesh Phogat

Question ID : 600
Status : No
Chosen Option : --

Q.24 As of 2019, Lionel Messi has been selected for the 'Best FIFA Men's Player of the Year Award' for the _____ time.

- Ans
- 1. fourth
 - 2. fifth
 - 3. sixth
 - 4. seventh

Question ID : 600
Status : Ans
Chosen Option : 3

Q.25 Which Indian Forest Service officer was selected for the Asia Environmental Enforcement Award given by the United Nations Environment Programme?

- Ans
- 1. Kunal Gosh
 - 2. Praveen Dhobal
 - 3. Suresh Kumar
 - 4. Ramesh Pandey

Q.26 Which Indian organisation has won the '2020 UN Global Climate Action Award' for its efforts to tackle climate change amid the ongoing Covid-19 pandemic?

- Ans
- 1. Indian Environmental Society
 - 2. Centre for Ecology & Rural Development
 - 3. Ministry of Environment Forest and Climate Change
 - 4. Global Himalayan Expedition

Question ID
Status
Chosen Option

Q.27 'SITMEX - 20' was a joint naval exercise held between:

- Ans
- 1. India, Vietnam and Singapore
 - 2. India, Australia and Taiwan
 - 3. India, Thailand and Singapore
 - 4. India, Australia and Hong Kong

Question ID
Status
Chosen Option

Q.28 Joe Biden, who is president elect of the US, belongs to the _____ party.

- Ans
- 1. Libertarian
 - 2. Democratic
 - 3. Green
 - 4. Republican

Question ID
Status
Chosen Option

Q.29 Which financial institution approved a US \$400 million loan to support the Namami Gange Programme of India?

- Ans
- 1. Asian Infrastructure Investment Bank (AIIB)
 - 2. International Monetary Fund (IMF)
 - 3. Asian Development Bank (ADB)
 - 4. The World Bank (WB)

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<https://www.digialm.com//per/g01/pub/1258/touchstone/AssessmentQPHTMLMode1/1258O20315/1258O20315S2D57>

Q.30 Which Assamese movie was selected as India's official entry to the Oscars 2019 (91st Academy Awards)?

- Ans
- 1. Bornodi Bhotiai: Love by the River
 - 2. Kaaneen – A Secret Search
 - 3. Village Rockstars
 - 4. Kanchanjangha

Question ID : 6009293073
Status : Not Answered
Chosen Option : --

Q.31 Select the option that can replace the question mark (?) to complete the given letter-pair series.

FH, JL, NP, RT, VX, ?

- Ans
- 1. ZD
 - 2. YA
 - 3. ZB
 - 4. ZA

Question ID : 6009293081
Status : Answered
Chosen Option : 2

Q.32 Select the option that is related to the third word in the same way as the second word is related to the first word.

Kitten : Cat :: Tadpole : ?

- Ans
- 1. Fish
 - 2. Colt
 - 3. Frog
 - 4. Larva

Question ID : 6009293089
Status : Answered
Chosen Option : 3

Q.33 Select the option that can replace the question mark (?) to complete the given letter series.

Y, G, C, K, G, O, ?

- Ans
- 1. I
 - 2. L
 - 3. K
 - 4. J

Q.34 Which of the following options has a similar relationship between the two words of the pair as between the words in the given pair?

Owl : Barn

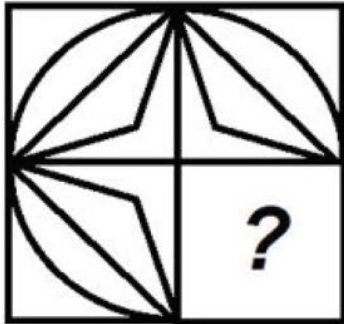
- Ans
- 1. Monk : Monastery
 - 2. Hare : Den
 - 3. Lion : Cub
 - 4. Horse : Neigh

Question ID : 6009293090

Status : Not Answered

Chosen Option : --

Q.35 Identify the figure that can replace the question mark (?) to complete the given pattern (rotation is NOT allowed).



Ans

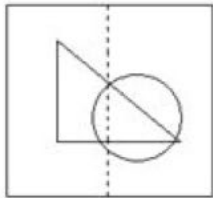
- 1.
- 2.
- 3.
- 4.

Q.36 Three of the given four options are similar in a certain manner and one is different. Select the option that is different from the rest.

- Ans
- 1. Rubber
 - 2. Wood
 - 3. Plastic
 - 4. Copper

Question ID : 600929309
Status : Answered
Chosen Option : 4

Q.37 A square transparent sheet (X) with a pattern is given. Select the option that represents the pattern that would appear when the transparent sheet is folded at the dotted line.



(X)

Ans

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

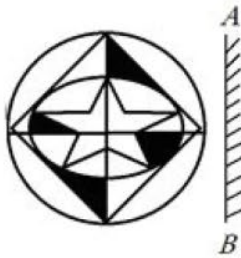
Question ID : 600929310

Q.38 In a group of 5 students, P is the tallest, whereas Q is the shortest. R is shorter than P but taller than S and T. T is the second shortest student in the group. Who is/are taller than T but shorter than R?

- Ans
- 1. S
 - 2. P
 - 3. Q
 - 4. P and Q

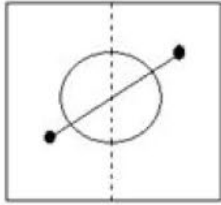
Question ID : 6009293085
 Status : Answered
 Chosen Option : 1

Q.39 Select the correct mirror image of the given figure from the following options, when the mirror is placed on the line AB.



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

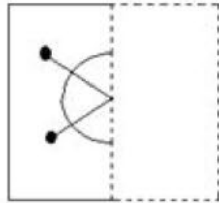
Q.40 A square transparent sheet (X) with a pattern is given. Select the option that represents the pattern that would appear when the transparent sheet is folded at the dotted line.



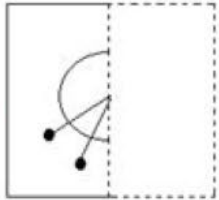
(X)

Ans

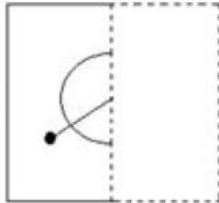
✓ 1.



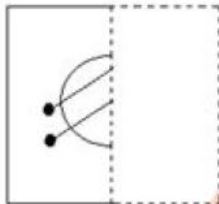
✗ 2.



✗ 3.



✗ 4.



Question ID : 6009293107

Status : Answered

Chosen Option : 1

Q.41 If in a certain coding language, 'GENTLE' is written as 'TVMGOV', then how will 'POLITE' be written in that language?

Ans ✗ 1. KLOIGV

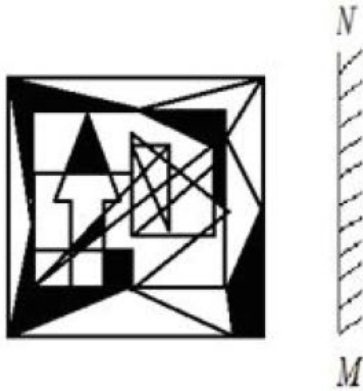
✗ 2. ETILOP

✓ 3. KLORGV

✗ 4. VGROLK

Question ID : 6009293107

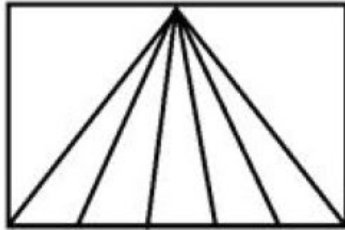
Q.42 Select the correct mirror image of the given figure from the following options, when the mirror is placed on the line MN.



Ans

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

Q.43 How many triangles are there in the following figure?



- Ans
- 1. 14
 - 2. 16
 - 3. 18
 - 4. 17

Question ID :
Status :
Chosen Option :

Q.44 If in a certain coding language, 'TABLE' is written as 'WGKXT', then how will 'CHAIR' be written in that language?

- Ans
- 1. FNJPB
 - 2. FNJUD
 - 3. FNJUG
 - 4. FILOR

Question ID :
Status :
Chosen Option :

Q.45 Select the option that can replace the question mark (?) to complete the given letter series.

B, A, D, E, F, I, H, ?

- Ans
- 1. P
 - 2. X
 - 3. O
 - 4. L

Question ID :

Q.46 The codes for 'FOOT' and 'FIST' in a certain coding language are 'DLKO' and 'DFOO', respectively. How will 'KEEP' be coded using the same language?

- Ans
- 1. IBBL
 - 2. HCBL
 - 3. IBAK
 - 4. HBAK

Question ID : 600929
Status : Not Answered
Chosen Option : --

Q.47 Three of the given four options are similar in a certain manner and one is different. Select the option that is different from the rest.

- Ans
- 1. Neck
 - 2. Ear
 - 3. Brain
 - 4. Nose

Question ID : 600929
Status : Answered
Chosen Option : 3

Q.48 If in a certain coding language, 'MILK' is written as '50', then how will 'CURD' be written in that language?

- Ans
- 1. 51
 - 2. 50
 - 3. 52
 - 4. 46

Question ID : 600929
Status : Answered
Chosen Option : 3

Q.49 Ayesha is elder than Alok, but younger than Ajay. Alok is elder than Anjum. Arun is elder than Ayesha, but younger than Ajay. Who is the youngest among them all?

- Ans
- 1. Alok
 - 2. Ajay
 - 3. Arun
 - 4. Anjum

Question ID : 600929

Q.50 Two statements are given, followed by two conclusions. Take the statements to be true even if they are at variance with commonly known facts, and decide which of the conclusions follow(s) from the given statements.

Statements:

- I. All goats are calcium.
- II. All calcium are clocks.

Conclusions:

- I. All calcium are goats.
- II. All clocks are calcium.

- Ans
- 1. Both the conclusions follow
 - 2. Only conclusion I follows
 - 3. Neither conclusion I nor II follows
 - 4. Only conclusion II follows

Question ID : 6009293098

Status : Answered

Chosen Option : 3

Q.51 Identify the figure that can replace the question mark (?) to complete the given pattern (rotation is NOT allowed).



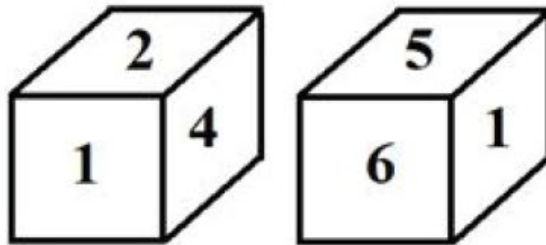
Ans

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

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<https://www.digialm.com///per/g01/pub/1258/touchstone/AssessmentQPHTMLMode1/1258O20>

Q.52 Two positions of the same dice are given. Which digit will be on the face opposite to the face having the digit 1?

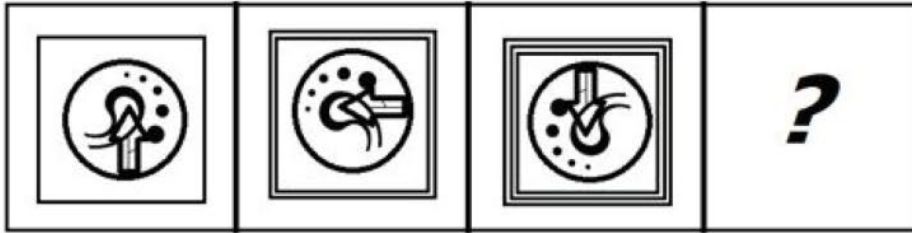


Ans

- 1.3
- 2.2
- 3.4
- 4.5

Question

Q.53 Select a suitable figure from the options that can replace the question mark (?) in the given figure series.



Ans

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

Question ID : 6009293109
 Status : Answered
 Chosen Option : 3

Q.54 In a condominium, five houses, A, B, C, D and E, in a row belong to a person called John. The houses are situated in such a way that house A is to the right of house B, and house E is to the left of house C and to the right of house A. House B is to the right of house D. Which of the following houses is in the middle?

- 1. A
- 2. B
- 3. E
- 4. C

Question ID : 6009293084

Q.55 Which of the figures given in the options is the exact water image of the given figure?

E5n 14t20e5n 18

Ans

1. *81 n2 05tA 1 n2 3*

2. *18 n2 05tA 1 n2 3*

3. *81 n2 05tA 1 n2 3*

4. *81 n2 05tA 1 n2 3*

Question ID : 600929

Status : Not An

Chosen Option : --

Q.56 Two statements are given, followed by two conclusions. Take the statements to be true even if they are at variance with commonly known facts, and decide which of the conclusions follow(s) from the given statements.

Statements:

- I. Some hairs are eyes.
- II. Some eyes are nose.

Conclusions:

- I. Some eyes are hairs.
- II. Some hairs are nose.

Ans 1. Neither conclusion I nor II follows

2. Only conclusion I follows

3. Both the conclusions follow

4. Only conclusion II follows

Q.57 Two statements are given, followed by two conclusions. Take the statements to be true even if they are at variance with commonly known facts, and decide which of the conclusions follow(s) from the given statements.

Statements:

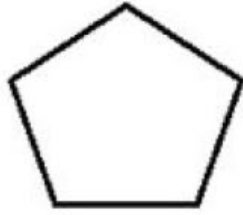
- I. All cats are zebras.
- II. Some zebra are apples.

Conclusions:

- I. All cats are apples.
- II. Some apples are zebras.

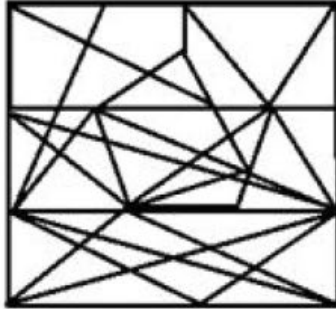
- Ans
- 1. Both the conclusions follow
 - 2. Only conclusion II follows
 - 3. Neither conclusion I nor II follows
 - 4. Only conclusion I follows

Q.58 Select the option figure in which the given figure is embedded (rotation is NOT allowed).

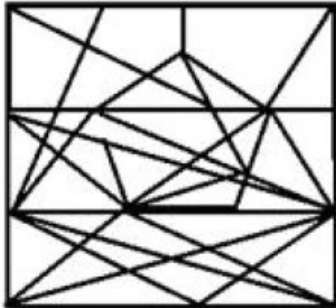


Ans

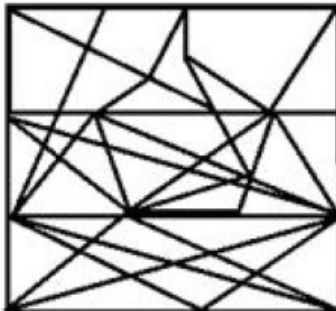
1.



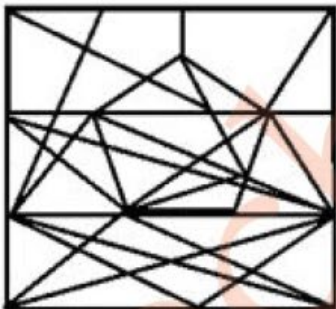
2.



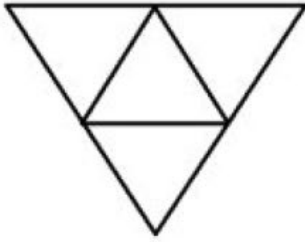
3.



4.



Q.59 How many triangles are there in the following figure?



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

Question ID : 600
Status : Ans
Chosen Option : 2

Q.60 Three of the given four word-pairs are similar in a certain manner and one is different. Select the pair that is different from the rest.

- Ans
- 1. Famous : Renowned
 - 2. Advance : Retreat
 - 3. Error : Blunder
 - 4. Anger : Rage

Question ID : 600
Status : Ans
Chosen Option : 2

Section : Subject Content & Methodology

Q.1 If one root of $3x^2 - (1 + 4h)x + (h^2 + 5) = 0$ may be $\frac{1}{3}$ of the other, then h =?

- Ans
- 1. 79
 - 2. $\frac{81}{8}$
 - 3. $\frac{79}{8}$
 - 4. 10

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<https://www.digialm.com///per/g01/pub/1258/touchstone/AssessmentQPHTMLMode1/1258O20315/1258O20315>

Q.2 If $f(x + y) = f(x) - f(y) \forall x, y \in R$ and $f(x) = x^2 g(x)$, then $f^{-1}(x) = ?$

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

Question ID : 6009293256
Status : Not Answered
Chosen Option : --

Q.3 If $A = \{2, 3, 4, 5\}$, $R = \{(2,3) (2,4) (2,2) (3,3) (3,4) (3,5) (4,4) (5,2) (5,5)\}$, then the relation R is:

- Ans
- 1. transitive
 - 2. symmetry
 - 3. equivalence
 - 4. reflexive

Question ID : 6009293216
Status : Answered
Chosen Option : 4

Q.4 Slope of the tangent to the curve $x^2 + y^2 = 25$ at $(0, 5)$ is:

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

Question ID : 6009293260
Status : Answered
Chosen Option : 1

Q.5 Which of the following is NOT true?

- Ans
- 1. Closed subsets of Compact sets are closed
 - 2.

Suppose $E \subset R^k$, If E is closed and bounded if and only if E is not Compact

- 3. Compact subsets of Metric spaces are closed
- 4. Every finite set is a Compact set

Q.6 If $i - j + k$, $2i + j - k$ and $\lambda i - j + \lambda k$ are coplanar, then $\lambda = ?$

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

Question ID
Status
Chosen Option

Q.7 The difference between two acute angles of a right-angled triangle is $\frac{3\pi}{10}$ radians. The two angles are:

- Ans
- 1. 70° , 20°
 - 2. 72° , 18°
 - 3. 68° , 22°
 - 4. 75° , 15°

Question ID
Status
Chosen Option

Q.8 Domain of $\sin^{-1}\left(\frac{2x+1}{3}\right) = ?$

- Ans
- 1. $(-2, 1)$
 - 2. $[-1, 1]$
 - 3. $[-2, 1]$
 - 4. \mathbb{R}

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<https://www.digialm.com//per/gu1/pub/1258/touchstone/AssessmentQPHIMLMode1/125802031>

Q.9 $\frac{1^3}{1} + \frac{1^3+2^3}{1+3} + \frac{1^3+2^3+3^3}{1+3+5} + \dots$ to n terms =?

Ans 1. $\frac{n(2n^2 + 9n + 13)}{24}$

2. $\frac{4n^2 + 1}{5}$

3. $\frac{n(n+1)(n+2^3)}{24}$

4. $\frac{n(n+1)^3(n+2)}{24}$

Question ID
Status
Chosen Option

Q.10 Find $\int \sec^2 x \csc^2 x dx$.

Ans 1. $\sin x - \cos x + c$

2. $\tan x + \cot x + c$

3. $\tan x - \cot x + c$

4. $\sin x + \cos x + c$

Question ID
Status
Chosen Option

Q.11

The order and degree of the Differential Equation $k \frac{d^2 y}{dx^2} = \left[1 + \left(\frac{dy}{dx} \right)^2 \right]^{\frac{3}{2}}$ is:

Ans 1. 2, 2

2. 3, 2

3. 3, 3

4. 2, 3

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<https://www.digialm.com/per/g01/pub/1258/touchstone/AssessmentQPHTMLMode1/1258O20315/1258O20315S>

Q.12 Which of the following is Wilson's theorem?

- Ans
- 1. $(p + 1)! \cong 1 \pmod{P}$
 - 2. $(p - 1)! \cong 1 \pmod{P}$
 - 3. $(p + 1)! \cong -1 \pmod{P}$
 - 4. $(p - 1)! \cong -1 \pmod{P}$

Question ID : 6009293231
Status : Answered
Chosen Option : 4

Q.13 If a linear transformation $T: R^3 \rightarrow R^3$ is defined by $T(x, y, z) = (2x, y + z, x + y + z)$, then rank of $T = ?$

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

Question ID : 6009293282
Status : Answered
Chosen Option : 3

Q.14 The Geometric mean and Arithmetic mean of two numbers are G and A , respectively and they satisfy the equation $2A + G^2 = 27$. The Harmonic mean of the two numbers is 4. The two numbers are:

- Ans
- 1. 4, 6
 - 2. 6, 3
 - 3. 2, 18
 - 4. 3, 4

Question ID : 6009293226
Status : Answered
Chosen Option : 2

Q.15 The solution of $||x| - 3| > 1 = ?$

- Ans
- 1. $(-\infty, -4]$
 - 2. $[-2, 2]$
 - 3. $[4, \infty)$
 - 4. $(-2, 2)$ or $(-\infty, -4)$ or $(4, \infty)$

Q.16 If W_1, W_2 are two subspaces of a finite dimensional Vector space $V(F)$ and $\dim W_1 = 5, \dim W_2 = 7,$
 $\dim(W_1 \cap W_2) = 2,$ then $\dim(W_1 + W_2) = ?$

- Ans
- 1. 14
 - 2. 10
 - 3. 8
 - 4. 4

Question ID : 6
Status : A
Chosen Option : 2

Q.17 Find the coordinates of the point at which the line joining the points $(4, 3, 1)$ and $(1, -2, 6)$ meet the plane
 $3x - 2y - z + 3 = 0.$

- Ans
- 1. $(-2, 7, 11)$
 - 2. $(2, 7, -11)$
 - 3. $(2, 7, 11)$
 - 4. $(-2, -7, 11)$

Question ID : 6
Status : A
Chosen Option : 4

Q.18 The index and signature of the normal form $y_1^2 + 2y_2^2 + 3y_3^2$ are:

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

Question ID : 6
Status : N
Chosen Option : --

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<https://www.digialm.com//per/g01/pub/1258/touchstone/AssessmentQPHTMLMode1/1258O20315/1258>

Q.19 n students are to be seated around a table. Among them, 2 particular students shall be neighbours. The probability for the event is:

Ans

1. $\frac{1}{(n-1)!}$

2. $\frac{2}{n!}$

3. $\frac{1}{n-1}$

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

Question ID : 60092

Status : Answered

Chosen Option : 4

Q.20 The number of words that can be formed using all the letters of the word "KANPUR" when the vowels are in even places is:

Ans

1. 169

2. 81

3. 144

4. 120

Question ID : 60092

Status : Answered

Chosen Option : 3

Q.21 Angle between the lines $x - 2y + z = 0 = x + 2y - 2z$ and $x + 2y + z = 0 = 3x + 9y + 5z$ is:

Ans

1. $\theta = \cos^{-1}\left(\frac{\sqrt{406}}{7}\right)$

2. $\theta = \cos^{-1}\left(\frac{7}{\sqrt{406}}\right)$

3. $\theta = \cos^{-1}\left(\frac{\sqrt{406}}{8}\right)$

4. $\theta = \cos^{-1}\left(\frac{8}{\sqrt{406}}\right)$



Q.22 The sequence of functions $\{f_n\}$ defined on E converges uniformly on E if and only if for every $\epsilon > 0$ there exists an integer N such that $m \geq N, n \geq N, x \in E$, then:

- Ans
- 1. $|f_n(x) + f_m(x)| \leq \epsilon$
 - 2. $|f_n(x) - f_m(x)| \geq \epsilon$
 - 3. $|f_n(x) + f_m(x)| \geq \epsilon$
 - 4. $|f_n(x) - f_m(x)| \leq \epsilon$

Question
Status
Chosen Op

Q.23

The algebraic multiplicity of the Eigen value 3 of matrix $A = \begin{bmatrix} 3 & 10 & 5 \\ -2 & -3 & -4 \\ 3 & 5 & 7 \end{bmatrix}$ is:

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

Question
Status
Chosen Op

Q.24

If $\begin{bmatrix} x-3 & 2y-8 \\ z+2 & 6 \end{bmatrix} = \begin{bmatrix} 5 & 2 \\ -2 & a-4 \end{bmatrix}$, then $(a, z) = ?$

- Ans
- 1. $(-10, -4)$
 - 2. $(-10, 4)$
 - 3. $(10, 4)$
 - 4. $(10, -4)$

Question
Status
Chosen Op

Q.25 $\tan 5^\circ \tan 25^\circ \tan 45^\circ \tan 65^\circ \tan 85^\circ = ?$

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

Question ID
Status
Chosen Option

Q.26 Find $\int \frac{3x+5}{(x+1)(x+2)} dx$.

- Ans
- 1. $\frac{1}{2} \log|x+1| + \log|x+2| + c$
 - 2. $2 \log|x+1| + \log|x+2| + c$
 - 3. $\log|x+1| + 2 \log|x+2| + c$
 - 4. $\log|x+1| + \log|x+2| + c$

Question ID
Status
Chosen Option

Q.27 The maximum value of $\left(\frac{1}{x}\right)^x$ is:

- Ans
- 1. E
 - 2. 1
 - 3. $e^{\frac{1}{e}}$
 - 4. $\frac{1}{e}$

Q.28

The value of $\sin^{-1}\left(-\frac{\sqrt{3}}{2}\right) + 2\cos^{-1}\left(-\frac{1}{2}\right)$ is:

Ans

1. $\frac{\pi}{2}$

2. π

3. $\frac{\pi}{6}$

4. $\frac{\pi}{4}$

Question
Sta
Chosen Opt

Q.29

Minimum value of $f(x) = x^2 + y^2$ is:

Ans

1. 0

2. 1

3. 3

4. 2

Question
Sta
Chosen Opt

Q.30

In a triangle ABC, \overline{AD} is a median. If $A = (1, -1)$ and $D = (1, 5)$, then the centroid of the triangle is:

Ans

1. (3, 1)

2. (5, 1)

3. (1, 5)

4. (1, 3)



Q.31 The argument of the complex number $\frac{1+2i}{1-3i}$ is:

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

Question ID : 600
Status : Ans
Chosen Option : 4

Q.32 Solve the following.

$$(1 + y^2)dx = (\tan^{-1} y - x)dy$$

- Ans
- 1. $x = \tan^{-1} y - 1 + c(e^{\tan^{-1} y})$
 - 2. $x = \tan^{-1} y + 1 + c(e^{-\tan^{-1} y})$
 - 3. $x = \tan^{-1} y + 1 + c(e^{\tan^{-1} y})$
 - 4. $x = \tan^{-1} y - 1 + c(e^{-\tan^{-1} y})$

Question ID : 600
Status : Ans
Chosen Option : 4

Q.33 If the number of terms in the expansion of $(x + 2y - 3z)^n$ is 45, then n =?

- Ans
- 1. 6
 - 2. 7
 - 3. 9
 - 4. 8

Q.34 If $x = a \cos t, y = b \sin t$, then $\frac{dy}{dx} = ?$

Ans

1. $\frac{b}{a} \tan t$

2. $-\frac{b}{a} \cot t$

3. $\frac{b}{a} \cot t$

4. $-\frac{b}{a} \tan t$

Question ID : 6009293257

Status : Answered

Chosen Option : 2

Q.35 Find Angle between the pair of lines $2(x-1)^2 - 3(x-1)(y-1) - 2(y-1)^2 = 0$

Ans

1. $\frac{\pi}{2}$

2. π

3. $\frac{\pi}{6}$

4. $\frac{\pi}{3}$

Question ID : 6009293244

Status : Answered

Chosen Option : 1

Q.36 For a student, the probability of getting passing marks in Mathematics is 75% and the probability of getting passing marks in Physics is 60%. The probability of the student passing in one subject only is:

Ans

1. $\frac{9}{20}$

2. $\frac{3}{10}$

3. $\frac{11}{20}$

4. $\frac{13}{20}$

Q.37 If $T: R^2 \rightarrow R^2$ is such that $T(1, 0) = (1, 4)$, $T(1, 1) = (2, 5)$, then $T(2, 3) = ?$

- Ans
- 1. (4, 5)
 - 2. (4, 10)
 - 3. (5, 11)
 - 4. (11, 5)

Question ID : 60092932
 Status : Not Answered
 Chosen Option : --

Q.38 Area of the region bounded by $y = \sin x$, $x = 0$ and $x = \frac{\pi}{4}$ is:

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

Question ID : 60092932
 Status : Answered
 Chosen Option : 4

Q.39 Evaluate the following.

$$\int_0^a \int_{\sqrt{ax}}^a \frac{y^2 dy dx}{\sqrt{y^4 - a^2 x^2}}$$

- Ans
- 1. $\frac{a}{6}$
 - 2. $\frac{\pi}{6}$
 - 3. $\frac{\pi a}{6}$
 - 4. $\frac{\pi a^2}{6}$

Q.40 $\frac{c_0}{1} + \frac{c_2}{3} + \frac{c_4}{5} + \dots = ?$

Ans

1. $\frac{2^{n+1} - 1}{n + 1}$

2. $\frac{2^n}{n + 1}$

3. $\frac{2^n + 1}{n + 1}$

4. $\frac{2^n - 1}{n + 1}$

Question ID : 6009
Status : Answered
Chosen Option : 2

Q.41 The direction cosines of a ray \overrightarrow{AB} where $A = (1, -2, 3)$, $B = (2, 3, -4)$ are:

Ans

1. $\frac{1}{\sqrt{75}}, \frac{5}{\sqrt{75}}, \frac{-7}{\sqrt{75}}$

2. $\frac{-1}{\sqrt{75}}, \frac{-5}{\sqrt{75}}, \frac{7}{\sqrt{75}}$

3. $\frac{1}{\sqrt{75}}, \frac{5}{\sqrt{75}}, \frac{7}{\sqrt{75}}$

4. $\frac{1}{\sqrt{75}}, \frac{-5}{\sqrt{75}}, \frac{-7}{\sqrt{75}}$

Question ID : 6009
Status : Answered
Chosen Option : 1

Q.42 The value of c by using Lagrange's mean value theorem on $[-2, 2]$, if $f(x) = x^3$ is:

Ans

1. $\pm \sqrt{\frac{2}{3}}$

2. $\pm \frac{\sqrt{3}}{2}$

3. $\pm \sqrt{\frac{3}{2}}$

4. $\pm \frac{2}{\sqrt{3}}$

Question ID : 600929325
Status : Answered
Chosen Option : 4

Q.43 The area of the triangle ABC formed by the points $(10, 2)$, $(-3, -4)$ and $(x, 1)$ is 5 square units. The value of x is:

Ans

1. $\frac{57}{5}$

2. $\frac{57}{3}$

3. $\frac{57}{6}$

4. $\frac{57}{4}$

Question ID : 600929324
Status : Answered
Chosen Option : 3

Q.44 If $a = 2i - 3j$, $b = 2i + 3k$, then $(a + b) \cdot (a - b) = ?$

Ans

1. -10

2. 0

3. 9

4. -8

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Q.45

The domain of $\sqrt{\frac{(x-1)(x-2)}{(x-3)}}$ is:

- Ans
- 1. $(1, 2] \cup (3, \infty)$
 - 2. $[1, 2] \cup (3, \infty)$
 - 3. $(1, 2) \cup (3, \infty)$
 - 4. $[1, 2) \cup (3, \infty)$

Question ID : 6
Status : A
Chosen Option : 2

Q.46

Find k so that the lines $\frac{x-1}{-3} = \frac{y-2}{2k} = \frac{z-3}{2}$ and $\frac{x-1}{3k} = \frac{y-5}{1} = \frac{z-6}{-5}$ are perpendicular lines.

- Ans
- 1. $\frac{7}{10}$
 - 2. 10
 - 3. 7
 - 4. $-\frac{10}{7}$

Question ID : 6
Status : A
Chosen Option : 4

Q.47

The value of c by using Rolle's theorem on $[0, \pi]$, if $f(x) = \frac{\sin x}{e^x}$ is:

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



Q.48 If $\begin{vmatrix} 15-x & 11 & 10 \\ 11-3x & 17 & 16 \\ 7-x & 14 & 13 \end{vmatrix} = 0$, then $x = ?$

- Ans
- 1. 4
 - 2. 6
 - 3. 5
 - 4. 0

Question ID : 6009293236
Status : Answered
Chosen Option : 2

Q.49 The median of a series of all even terms from 2 to 298 is:

- Ans
- 1. 298
 - 2. 150
 - 3. 300
 - 4. 148

Question ID : 6009293278
Status : Answered
Chosen Option : 2

Q.50 Which of the following is FALSE?

- Ans
- 1. Let $(a, b) = 1$, then for any c , $(ac, b) = (c, b)$
 - 2. If $(a, b) = 1$, then $(a + bq, b) = 1$ for any integer q
 - 3. If $(a + bq, b) = 1$, then $(a, b) = 1$
 - 4.

Let $(a, b) = 1$, if a and b both divide n , then ab does not divide n

Question ID : 6009293229
Status : Answered
Chosen Option : 4

Q.51 The linear span of $s = \{(2, 3, 0), (-3, 2, 0)\}$ is:

- Ans
- 1. YZ-plane
 - 2. ZX-plane
 - 3. XY-plane
 - 4. Z-axis

Q.52

Inverse of the matrix $\begin{bmatrix} 0 & 1 & 2 \\ 1 & 2 & 3 \\ 3 & 1 & 1 \end{bmatrix}$ is:

Ans

1. $\begin{bmatrix} 1/2 & 1/2 & 1/2 \\ -4 & 3 & -1 \\ 5/2 & 3/2 & -1/2 \end{bmatrix}$

2. $\begin{bmatrix} 1/2 & 1/2 & 1/2 \\ -4 & 3 & -1 \\ 5/2 & -3/2 & 1/2 \end{bmatrix}$

3. $\begin{bmatrix} 1/2 & -1/2 & 1/2 \\ -4 & 3 & -1 \\ 5/2 & -3/2 & 1/2 \end{bmatrix}$

4. $\begin{bmatrix} 1/2 & 1/2 & 1/2 \\ -4 & -3 & 1 \\ 5/2 & -3/2 & 1/2 \end{bmatrix}$

Question ID : 600

Status : Ans

Chosen Option : 3

Q.53

Sum of n terms of $0.1 + 0.11 + 0.111 + \dots$ is:

Ans

1. $\frac{n}{3} - \frac{1}{9} \left[\frac{10^{n-1}}{10^n} \right]$

2. $\frac{n}{9} - \frac{1}{81} \left[\frac{10^{n-1}}{10^n} \right]$

3. $\frac{n}{3} - \frac{1}{3} \left[\frac{10^{n-1}}{10^n} \right]$

4. $\frac{n}{9} - \frac{1}{9} \left[\frac{10^{n-1}}{10^n} \right]$

Q.54 If $kxy + 2x + 6y + 3 = 0$ represents a pair of lines, then $k = ?$

Ans

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

Question
Status
Chosen Option

Q.55 If $\cos(2 \sin^{-1} x) = \frac{1}{9}$, then $x = ?$

Ans

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

Question
Status
Chosen Option

Q.56 The value of $\left(\frac{-1+i\sqrt{3}}{2}\right)^{100} + \left(\frac{-1-i\sqrt{3}}{2}\right)^{100}$ is equal to:

Ans

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

Q.57 Find the differential equation of the family of parabola $y^2 = 4ax$, where "a" is a parameter.

- Ans
- 1. $yy^1 = 1$
 - 2. $2xy^1 = y$
 - 3. $xy^1 = y$
 - 4. $xy^1 = 2y$

Question ID : 600929326
Status : Answered
Chosen Option : 2

Q.58 Find the remainder when 5^{11} is divided by 7.

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

Question ID : 600929323
Status : Answered
Chosen Option : 3

Q.59 The system $x_1 + 4x_2 - 2x_3 = 3$, $3x_1 + x_2 + 5x_3 = 7$, $2x_1 + 3x_2 + x_3 = 5$ has:

- Ans
- 1. infinite solutions
 - 2. only one solution
 - 3. no solution
 - 4. two solutions

Question ID : 600929323
Status : Answered
Chosen Option : 3

Q.60 If $A + B + C = 720^\circ$, then $\tan A + \tan B + \tan C = ?$

- Ans
- 1. $\tan A \tan B \tan C$
 - 2. 1
 - 3. 0
 - 4. $\tan A + \tan B + \tan C$

Q.61

$$\text{Find } \int \frac{x^3}{\sqrt{1+x^8}} dx.$$

Ans

1. $\frac{1}{4} \sin^{-1}(x^4) + c$

2. $\frac{1}{4} \sinh^{-1}(x^4) + c$

3. $\sinh^{-1}(x^4) + c$

4. $\sin^{-1}(x^4) + c$

Question ID
Status
Chosen Option

Q.62 The number of all sub-sets of a finite set having 5 elements is:

Ans

1. 5

2. 125

3. 25

4. 32

Question ID
Status
Chosen Option

Q.63 Solve the following.

$$y dx - x dy + 3x^2 y^2 e^{x^3} dx = 0$$

Ans

1. $x + e^{x^3} = c$

2. $\frac{x}{y} + e^{x^3} = c$

3. $y + e^{x^3} = c$

4. $xy + e^{x^3} = c$

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Q.64 If one end of the diameter of a circle $x^2 + y^2 - 2x + 4y = 0$ is $(3, -1)$, then the other end is:

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

Question ID
Status
Chosen Option

Q.65 If α, β are the roots of $x^2 + px + q = 0$, then $\frac{\alpha^2 + \beta^2}{\alpha^{-2} + \beta^{-2}} = ?$

- Ans
- 1. q^2
 - 2. $p^2 + q^2$
 - 3. $p + q$
 - 4. p^2

Question ID
Status
Chosen Option

Q.66 Which of the following functions is analytic at $z = 0$?

- Ans
- 1. $f(z) = z^2$
 - 2. $f(z) = \log(1 + z)$
 - 3. $f(z) = \operatorname{Re}(z)$
 - 4. $f(z) = \sqrt{|xy|}$

Q.67 Find the Laplace transform of $e^{-t} \sin^2 t$.

Ans

1. $\frac{2}{(S+1)(S^2-2S+5)}$

2. $\frac{2}{(S-1)(S^2+2S+5)}$

3. $\frac{2}{(S+1)(S^2-2S-5)}$

4. $\frac{2}{(S+1)(S^2+2S+5)}$

Question ID : 6009293290

Status : Answered

Chosen Option : 4

Q.68 If $A = \{1, 2, 3\}$, $B = \{2, 3, 4\}$, $C = \{4, 5, 6, 7\}$, then $(A - B) \cup (B \cap C) = ?$

Ans

1. $\{1, 2, 3, 4\}$

2. $\{1, 4\}$

3. $\{1\}$

4. $\{4\}$

Question ID : 6009293212

Status : Answered

Chosen Option : 2

Q.69 If the number of common tangents of the circles $x^2 + y^2 - 6x - 8y + a = 0$, $x^2 + y^2 - 9 = 0$ is 3, then $a = ?$

Ans

1. 21

2. 20

3. 19

4. 18

Question ID : 6009293247

Status : Answered

Chosen Option : 1

Q.70 If $x^2 + 3x + 5 = 0$ and $ax^2 + bx + c = 0$ have common root/roots and $a, b, c \in \mathbb{N}$, then minimum value of $a + b + c = ?$

Ans

1. 9

2. 8

3. 12

4. 5

Q.71 If there are 8 Arithmetic means between 2 and 17, then the 5th Arithmetic mean is:

Ans

✓ 1. $\frac{31}{3}$

✗ 2. $\frac{31}{5}$

✗ 3. $\frac{5}{31}$

✗ 4. $\frac{3}{31}$

Question ID : 60

Status : An

Chosen Option : 1

Q.72 A unit vector parallel to the sum of the vectors $2i + 3j - k$ and $4i + 2j + k$ is:

Ans

✗ 1. k

✗ 2. $\frac{5i + 6k}{\sqrt{61}}$

✓ 3. $\frac{6i + 5j}{\sqrt{61}}$

✗ 4. $\frac{5i + 6j}{\sqrt{61}}$

Question ID : 60

Status : An

Chosen Option : 3

Q.73 Find the equation of the sphere whose ends of a diameter are $(2, -3, 4), (-3, 6, -7)$.

Ans

✓ 1. $x^2 + y^2 + z^2 + x - 3y + 3z - 52 = 0$

✗ 2. $x^2 + y^2 + z^2 - x - 3y - 3z - 52 = 0$

✗ 3. $x^2 + y^2 + z^2 + x - 3y - 3z + 52 = 0$

✗ 4. $x^2 + y^2 + z^2 + x + 3y + 3z + 52 = 0$

Q.74 The period of $\frac{5 \sin x + 3 \cos x}{4 \sin 2x - 5 \cos 2x} = ?$

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

Question ID
Status
Chosen Option

Q.75 If $\tan\left(\frac{A}{2}\right) = \frac{1}{3}$, then the value of $\tan A + \sin A = ?$

- Ans
- 1. $\frac{27}{25}$
 - 2. $\frac{25}{27}$
 - 3. $\frac{27}{20}$
 - 4. $\frac{20}{27}$

Question ID
Status
Chosen Option

Q.76 Equation of the line passing through $(-2, 1)$ making equal intercepts on the axis but opposite sign is:

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

Q.77 If l, m, n are real, $l + m \neq 0$, then the roots of the equation $(l + m)x^2 - 3(l - m)x - 2(l + m) = 0$ are:

- Ans
- 1. real and unequal
 - 2. equal
 - 3. complex
 - 4. real and equal

Question ID : 6009293232
Status : Answered
Chosen Option : 1

Q.78 The solution of $x^2 - x - 2 > 0$ is:

- Ans
- 1. $(-\infty, -1) \cup [2, \infty)$
 - 2. $(-\infty, -1) \cup (2, \infty)$
 - 3. $(-\infty, -1] \cup (2, \infty)$
 - 4. $(-\infty, -1] \cup [2, \infty)$

Question ID : 6009293220
Status : Answered
Chosen Option : 2

Q.79 $\lim_{x \rightarrow 0} \left(\frac{1}{x} - \frac{1}{\sin x} \right) = ?$

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

Question ID : 6009293255
Status : Answered
Chosen Option : 2

Q.80 The equation of the line parallel to x-axis and bisecting the join of $(1, 4)$ and $(-2, 6)$ is:

- Ans
- 1. $y - 5 = 0$
 - 2. $x + 5 = 0$
 - 3. $x - 5 = 0$
 - 4. $y + 5 = 0$

Q.81 The 5E approach to constructivist learning was introduced by:

- Ans
- 1. Roger Bybee
 - 2. BO Smith
 - 3. NI Gage
 - 4. Edmund Amidon

Question ID : 600929
Status : Not Answered
Chosen Option : --

Q.82 The correct sequence of the Herbartian lesson plan in Math is:

- Ans
- 1. Introduction > Comparison > Presentation > Organisation > Evaluation
 - 2. Introduction > Organisation > Presentation > Comparison > Evaluation
 - 3. Introduction > Presentation > Organisation > Comparison > Evaluation
 - 4. Introduction > Organisation > Comparison > Presentation > Evaluation

Question ID : 600929
Status : Answered
Chosen Option : 3

Q.83 Which phase of 5E Model challenges students to extend or practice their understandings or skills?

- Ans
- 1. Explain
 - 2. Elaborate
 - 3. Evaluate
 - 4. Explore

Question ID : 600929
Status : Answered
Chosen Option : 4

Q.84 'Zone of Proximal Development' is an important aspect of which collaborative learning theory?

- Ans
- 1. Piaget's theory of cognitive development
 - 2. Vygotsky's theory of social development
 - 3. Bandura's theory of social learning
 - 4. Kegan's developmental theory

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Q.85 The most important characteristic of a Math text book is that:

- Ans
- 1. it has sufficient exercises for practice
 - 2. it is authored by a great scholar
 - 3. its front page is very attractive
 - 4. it is published by a good publisher

Question ID : 600929331
Status : Answered
Chosen Option : 1

Q.86 Which approach emphasises that students' prior knowledge needs to be developed and built on?

- Ans
- 1. Cognitivism
 - 2. Behaviourism
 - 3. Gestaltism
 - 4. Constructivism

Question ID : 600929329
Status : Not Answered
Chosen Option : --

Q.87 A teacher while teaching in the classroom asks, "What is another way of solving this problem?" This is an example of a:

- Ans
- 1. middle order question
 - 2. memory-based question
 - 3. higher order question
 - 4. lower order question

Question ID : 600929330
Status : Not Answered
Chosen Option : --

Q.88 Which of the following is NOT a characteristic of teaching Mathematics through guided discovery?

- Ans
- 1. It encourages learners to explore the content through concrete experiences.
 - 2. It is fundamentally linked with the constructivist school of educational theory.
 - 3. It allows learners to use process skills to generate content information.
 - 4. It can be used for concepts that have already been introduced.

Question ID : 600929328

Q.89 Which principle of ICON model indicates that learners are encouraged to exercise their minds through different brain storming activities by the teacher?

- Ans
- 1. Cognitive apprenticeship
 - 2. Multiple integration
 - 3. Contextualising prior knowledge
 - 4. Collaboration

Question ID : 600929
Status : Not An
Chosen Option : --

Q.90 Which of the following most suitably characterises self - regulated learners?

- Ans
- 1. Learners enter into education with a subject - centred orientation to learning.
 - 2. Learners are essentially dependent personalities.
 - 3. Learners are motivated to learn in response to external rewards and punishments.
 - 4. Learners are actively involved in maximising their opportunities and abilities to learn.

Question ID : 600929
Status : Answer
Chosen Option : 4

Q.91 Select the correct statement.

- Ans
- 1. Formative assessment gives a chance to students to know their weaknesses.
 - 2. Summative assessment is conducted many times in an academic year.
 - 3. Summative assessment gives a chance to students to know their weaknesses.
 - 4. Formative assessment helps in taking a decision on whether to promote the student to the next academic year or not.

Question ID : 600929
Status : Not An
Chosen Option : --

Q.92 A collection of student work representing their mathematical skills, or a place where many types of assignments, projects and writing can be collected is known as:

- Ans
- 1. documents
 - 2. portfolio
 - 3. record
 - 4. directory

Q.93 The correct steps of problem solving in Math is:

1. Carry out the strategy.
2. Read the problem.
3. Check the solution.
4. Choose a strategy.

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

Question ID : 6009293307
Status : Answered
Chosen Option : 3

Q.94 While teaching symmetry in Geometry, the teacher arranges a visit to a nearby garden and instructs the students to observe the pattern in the orchid flowers. This is an example of:

- Ans
- 1. using human resources in teaching Math
 - 2. using visual resources in teaching Math
 - 3. using local resources in teaching Math
 - 4. using optimal resources in teaching Math

Question ID : 6009293309
Status : Answered
Chosen Option : 3

Q.95 Students learning with and from each other as fellow learners without any implied authority to any individual is known as:

- Ans
- 1. self - learning
 - 2. peer learning
 - 3. active learning
 - 4. autonomous learning

Question ID : 6009293294
Status : Not Answered
Chosen Option : --

Q.96 Identify the statement which is most applicable to the analytic method of teaching?

- Ans
- 1. It proceeds from the known to the unknown facts.
 - 2. It has no influence of heuristic approach.
 - 3. It is a method of presentation of discovered facts.
 - 4. It pulls apart or breaks up the statement under solution.

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Q.97 Which of the following statements is most relevant to a Math club?

- Ans
- 1. It is a kind of activity dominated by abstractness
 - 2. It is a kind of activity dominated by theories
 - 3. It is a kind of activity that is conducted inside the classroom
 - 4. It is a kind of activity that is conducted outside the classroom

Question ID : 60
Status : No
Chosen Option : --

Q.98 Math quiz is a type of:

- Ans
- 1. formal activity
 - 2. co-curricular activity
 - 3. curricular activity
 - 4. non - formal activity

Question ID : 60
Status : An
Chosen Option : 1

Q.99 The student solves a problem in the light of conscious knowledge of the parts of the form of thinking. This statement comprises which level of mathematical thinking?

- Ans
- 1. Synthesis
 - 2. Application
 - 3. Evaluation
 - 4. Analysis

Question ID : 60
Status : No
Chosen Option : --

Q.100 The role of a teacher in a constructivist class is:

- Ans
- 1. to view errors as not enough conditioning
 - 2. to provide stimulus material and prompt the correct response
 - 3. to adapt to the learners' needs and give them freedom to get knowledge
 - 4. to be the receiver of the information until behaviour changes

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