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OAVS
TGT
Previous Year Paper
(Maths) 29 Jan, 2021
Shift 1

ODISHA ADARSHA VIDYALAYA SANGATHAN

Participant ID	
Participant Name	
Test Center Name	Balasore College Of Engineering & Technology MAC Center
Test Date	29/01/2021
Test Time	9:00 AM - 12:20 PM
Subject	TGT Maths

Section : **Language Proficiency Test**

Q.1 Choose the option that is the correct passive form of the given sentence.

The manager has kept the files on the table.

Ans ✗ 1. The files were kept on the table by the manager.

✗ 2. The files are being kept on the table by the manager.

✔ 3. The files have been kept on the table by the manager.

✗ 4. The files had been kept on the table by the manager.

Question ID : **6009291793**
Status : **Answered**
Chosen Option : **4**

Q.2 Choose the option that is the correct indirect form of the given sentence.

The children said to the teacher, "We haven't had our lunch yet."

Ans ✗ 1. The children told the teacher that they haven't had their lunch yet.

✗ 2. The children told the teacher that they didn't have their lunch yet.

✗ 3. The children told the teacher that they are not having their lunch yet.

✔ 4. The children told the teacher that they hadn't had their lunch yet.

Question ID : **6009291797**
Status : **Answered**
Chosen Option : **4**

Q.3 The parts of a sentence have been jumbled. These parts have been labelled as P, Q, R and S. Rearrange the jumbled parts to form a meaningful sentence.

(P) measures to improve the revenue
(Q) with the branch managers
(R) during the meeting
(S) the chairman suggested some

Ans

✗ 1. RPQS

✗ 2. SQPR

✔ 3. SPRQ

✗ 4. RSQP

Question ID : 6009291799
Status : Answered
Chosen Option : 3

Q.4 Choose the option that is the correct indirect form of the given sentence.

Raju said to his friend, "I may visit my uncle tomorrow."

Ans

✗ 1. Raju told his friend that he might be visiting his uncle the next day.

✔ 2. Raju told his friend that he might visit his uncle the next day.

✗ 3. Raju told his friend that he may visit his uncle the next day.

✗ 4. Raju told his friend that he visits his uncle the next day.

Question ID : 6009291795
Status : Answered
Chosen Option : 2

Q.5 Choose the correctly spelt word from the following options.

Ans

✗ 1. Previlege

✗ 2. Priviliege

✔ 3. Privilege

✗ 4. Privelege

Question ID : 6009291803
Status : Answered
Chosen Option : 3

Q.6 The parts of a sentence have been jumbled. These parts have been labelled as P, Q, R and S. Rearrange the jumbled parts to form a meaningful sentence.

(P) due to brain injury suggests
(Q) the study of speech disorders
(R) adequate control over their language
(S) that patients can think without having

Ans

✗ 1. PSRQ

✗ 2. QSRP

✗ 3. RSPQ

✔ 4. QPSR

Question ID : 6009291801
Status : Answered
Chosen Option : 4

Q.7 Choose the alternative that will improve the underlined part of the given sentence. In case no improvement is required, select the option 'No improvement required'.

If someone tried to cheat me, <u>I would have informed</u> the police.

Ans   ✗ 1. will inform

     ✗ 2. have informed

     ✗ 3. No improvement required

     ✔ 4. would inform

Q.8 Read the given sentence and identify the part of the sentence that has an error.

I called my friend / to thank her for / inviting me / in her wedding.

Ans   ✗ 1. inviting me

     ✗ 2. I called my friend

     ✗ 3. to thank her for

     ✔ 4. in her wedding.

Q.9 The parts of a sentence have been jumbled. These parts have been labelled as P, Q, R and S. Rearrange the jumbled parts to form a meaningful sentence.

(P) various ailments like
(Q) brings with it
(R) obesity and cardio-vascular diseases
(S) a fast-paced lifestyle

Ans   ✗ 1. SRQP

     ✔ 2. SQPR

     ✗ 3. RSPQ

     ✗ 4. QRSP

Q.10 The parts of a sentence have been jumbled. These parts have been labelled as P, Q, R and S. Rearrange the jumbled parts to form a meaningful sentence.

(P) of educating people about
(Q) has now taken up the responsibility
(R) a section of the media
(S) the importance of good health and hygiene

Ans ✘ 1. RSPQ

✘ 2. SQPR

✔ 3. RQPS

✘ 4. QSRP

Question ID : **6009291800**
Status : **Answered**
Chosen Option : **3**

Q.11 Read the given sentence and identify the part of the sentence that has an error.

I am not knowing / the answer / to any of / your questions.

Ans ✘ 1. your questions.

✔ 2. I am not knowing

✘ 3. the answer

✘ 4. to any of

Question ID : **6009291788**
Status : **Answered**
Chosen Option : **2**

Q.12 Choose the option that is the correct indirect form of the given sentence.

The policeman said to the lady, "Do you know the man in this picture?"

Ans ✘ 1. The policeman asked the lady if she has known the man in that picture.

✘ 2. The policeman asked the lady if she knows the man in that picture.

✔ 3. The policeman asked the lady whether she knew the man in that picture.

✘ 4. The policeman asked the lady whether she would know the man in that picture.

Question ID : **6009291796**
Status : **Answered**
Chosen Option : **3**

Q.13 Choose the correctly spelt word from the following options.

Ans ✔ 1. Conscious

✘ 2. Concsious

✘ 3. Consious

✘ 4. Counsious

Question ID : **6009291802**
Status : **Answered**
Chosen Option : **1**

Q.14 Read the given sentence and identify the part of the sentence that has an error.

This shop stocks / some of the / latest designs / in office furnitures.

Ans   ✗ 1. This shop stocks

      ✗ 2. latest designs

      ✓ 3. in office furnitures.

      ✗ 4. some of the

Q.15 Choose the option that is the correct active form of the given sentence.

By whom was this old picture of my grandmother found?

Ans   ✗ 1. Who is finding this old picture of my grandmother?

      ✓ 2. Who found this old picture of my grandmother?

      ✗ 3. Who did find this old picture of my grandmother?

      ✗ 4. Who has found this old picture of my grandmother?

Q.16 Read the given sentence and identify the part of the sentence that has an error.

I was used to / love reading comics / and magazines / when I was younger.

Ans   ✗ 1. love reading comics

      ✓ 2. I was used to

      ✗ 3. when I was younger.

      ✗ 4. and magazines

Q.17 Choose the alternative that will improve the underlined part of the given sentence. In case no improvement is required, select the option 'No improvement required'.

She is interesting in buying a big house in the city.

Ans   ✗ 1. is interested to

      ✓ 2. is interested in

      ✗ 3. was interesting to

      ✗ 4. No improvement required

Q.18 Choose the word which means the same as the group of words given.

A person's first appearance or performance in a particular capacity or role

Ans ✗ 1. Inception

✗ 2. Graduation

✗ 3. Emergence

✔ 4. Debut

Question ID : **6009291805**
Status : **Answered**
Chosen Option : **4**

Q.19 Choose the word which means the same as the group of words given.

A person who travels to a holy place for religious reasons

Ans ✗ 1. Tourist

✗ 2. Hermit

✔ 3. Pilgrim

✗ 4. Mendicant

Question ID : **6009291804**
Status : **Answered**
Chosen Option : **1**

Q.20 Choose the word which means the same as the group of words given.

An exact copy or model of something, especially on a smaller scale

Ans ✔ 1. Replica

✗ 2. Forgery

✗ 3. Effigy

✗ 4. Substitute

Question ID : **6009291806**
Status : **Answered**
Chosen Option : **1**

Q.21 ଗଙ୍ଗା/ କାବେରୀକୁ/ କୁହନ୍ତି/ ଦକ୍ଷିଣ ଭାରତରେ - ଠିକ୍ କ୍ରମରେ ସଜାଇଲେ ତ୍ରୁଟିଶୂନ୍ୟ ବାକ୍ୟଟି ହେବ-

Ans ✗ 1. ଦକ୍ଷିଣ କାବେରୀକୁ ଭାରତରେ କୁହନ୍ତି ଗଙ୍ଗା

✗ 2. ଭାରତରେ କାବେରୀକୁ ଦକ୍ଷିଣ ଗଙ୍ଗା କୁହନ୍ତି

✔ 3. କାବେରୀକୁ ଦକ୍ଷିଣ ଭାରତରେ ଗଙ୍ଗା କୁହନ୍ତି

✗ 4. ଗଙ୍ଗା କୁହନ୍ତି ଦକ୍ଷିଣ ଭାରତରେ କାବେରୀକୁ

Question ID : **6009291813**
Status : **Answered**
Chosen Option : **3**

Q.22 ଏଥିମଧ୍ୟରୁ କେଉଁ ଶଦଟି ଅଶୁଦ୍ଧ ?

Ans   ✗ 1. ବିଶଣ୍ଶ ବଦନ

     ✗ 2. ପରାକ୍ରମୀ

     ✗ 3. ସତ୍ୟ ବଚନ

     ✔ 4. ଜନତା ମାନଙ୍କର

Question ID : **6009291821**
Status : **Answered**
Chosen Option : **4**

Q.23 "ତାଙ୍କର ଅଚଳାଚଳ ମନୋବୃତ୍ତି ରହିଛି"- ବାକ୍ୟରେ କେଉଁ ଶଦର ପ୍ରୟୋଗରେ ଭୁଲ୍ ରହିଛି ?

Ans   ✗ 1. ତାଙ୍କର

     ✗ 2. ରହିଛି

     ✗ 3. ଅଚଳାଚଳ

     ✔ 4. ମନୋବୃତ୍ତି

Question ID : **6009291820**
Status : **Answered**
Chosen Option : **3**

Q.24 ବିଧ୍ ନିର୍ଦେଶରେ ସମସ୍ତେ _____ ଉପଯୁକ୍ତ ଶଦଟି ଦ୍ୱାରା ଶୂନ୍ୟସ୍ଥାନ ପୂରଣ କର

Ans   ✗ 1. ଉପେକ୍ଷିତ

     ✗ 2. ଆତଙ୍କିତ

     ✔ 3. ପରିଚାଳିତ

     ✗ 4. ସମ୍ଭାନିତ

Question ID : **6009291809**
Status : **Answered**
Chosen Option : **3**

Q.25 'ଦୃତି' ଶଦର ଅର୍ଥ 'ଆବରଣ' ହେଲେ 'ବୃତ୍ତି'ର ଅର୍ଥ ହେବ-

Ans   ✗ 1. ପୁରସ୍କାର

     ✗ 2. ବାଟ

     ✔ 3. ଜୀବିକା

     ✗ 4. ଆଚରଣ

Question ID : **6009291812**
Status : **Answered**
Chosen Option : **3**

Q.26 "କଟା ଘାରେ ଚୂନ ଦେବା" ଏଥିରେ 'ଚୂନଦେବା'- ଶବ୍ଦଟି କେଉଁ ବିଶେଷ ଅର୍ଥ ପ୍ରକାଶ କରିଥାଏ?

Ans ✗ 1. ଆରାମ ଦେବା

✓ 2. ଯନ୍ତ୍ରଣା ଦେବା

✗ 3. ସହଯୋଗ କରିବା

✗ 4. ସାହାଯ୍ୟ କରିବା

Q.27 ଯେ ସତ୍ୟ ପଥରେ ଯାଏ ତାକୁ କୁହାଯାଏ-

Ans ✓ 1. ସତ୍ୟମାର୍ଗୀ

✗ 2. ସତ୍ୟପ୍ରିୟ

✗ 3. ସତ୍ୟବାଦୀ

✗ 4. ସତ୍ୟାନନ୍ଦ

Q.28 'ସର୍ବହରା' କାହାକୁ କୁହାଯାଇଥାଏ?

Ans ✗ 1. ଯେ ଅପହରଣ କରେ

✗ 2. ଯେ ଅନ୍ୟର ସମ୍ପତ୍ତିକୁ ଲୋଭ କରେ

✗ 3. ଯେ ଜୀବନରେ ହାରିଥାଏ

✓ 4. ଯେ ସବୁକିଛି ହରାଇଥାଏ

Q.29 'ଘିଅ ମିଶା ଭାତ'କୁ ଗୋଟିଏ ଶବ୍ଦରେ ପ୍ରକାଶ କଲେ ହେବ-

Ans ✗ 1. ଘିଅର ଭାତ

✗ 2. ଭାତରେ ଘିଅ

✗ 3. ଭାତଘିଅ

✓ 4. ଘିଅଭାତ

Q.30 "ଘୁସୁରୀକି ପାଟିଲା କଦଳୀ" ପ୍ରୟୋଗରେ 'ଘୁସୁରୀ' କାହାକୁ କୁହାଯାଇଥାଏ?

Ans

✓ 1. ଅଯୋଗ୍ୟବ୍ୟକ୍ତିକୁ

✗ 2. ପଶୁକୁ

✗ 3. ଘୁସୁରୀକୁ

✗ 4. ମଣିଷକୁ

Question ID : **6009291823**
Status : **Answered**
Chosen Option : **1**

Q.31 ଅହରହ/ ପ୍ରକୃତି ରାଜ୍ୟରେ/ ଲାଗି ରହିଛି/ ବିଭିନ୍ନ ଲୀଳା- ଉପଯୁକ୍ତ କ୍ରମରେ ରଖିଲେ ବାକ୍ୟଟି ହେବ-

Ans

✗ 1. ପ୍ରକୃତି ରାଜ୍ୟରେ ବିଭିନ୍ନ ଲୀଳା ଲାଗି ରହିଛି ଅହରହ

✗ 2. ବିଭିନ୍ନ ଲୀଳା ପ୍ରକୃତି ରାଜ୍ୟରେ ଲାଗି ରହିଛି ଅହରହ

✗ 3. ଅହରହ ବିଭିନ୍ନ ଲୀଳା ଲାଗି ରହିଛି ପ୍ରକୃତି ରାଜ୍ୟରେ

✓ 4. ପ୍ରକୃତି ରାଜ୍ୟରେ ଅହରହ ବିଭିନ୍ନ ଲୀଳା ଲାଗି ରହିଛି

Question ID : **6009291814**
Status : **Answered**
Chosen Option : **4**

Q.32 ସହଜରେ ନାହିଁ ସ୍ୱଭାବ ବଦଳେ - ବାକ୍ୟଟିକୁ ଯଥାର୍ଥ କ୍ରମରେ ସଜାଅ।

Ans

✗ 1. ନାହିଁ ସ୍ୱଭାବ ସହଜରେ ବଦଳେ

✗ 2. ସ୍ୱଭାବ ବଦଳେ ସହଜରେ ନାହିଁ

✓ 3. ସ୍ୱଭାବ ସହଜରେ ବଦଳେ ନାହିଁ

✗ 4. ସ୍ୱଭାବ ସହଜରେ ନାହିଁ ବଦଳେ

Question ID : **6009291807**
Status : **Answered**
Chosen Option : **3**

Q.33 'ଦୁଷ୍କୃତ' ଶବ୍ଦର ବିପରୀତାର୍ଥ ଶବ୍ଦଟି ହେବ-

Ans

✗ 1. ସୁକର୍ମ

✓ 2. ସୁକୃତ

✗ 3. ସୁକୁମାର

✗ 4. ଦୁରାଚାରୀ

Question ID : **6009291816**
Status : **Answered**
Chosen Option : **2**

Q.34 ଏଥ ମଧ୍ୟରୁ କେଉଁ ଶବ୍ଦଟି ଘୋଡ଼ାକୁ ବୁଝାଏ?

Ans
- ✗ 1. ବାରି
- ✔ 2. ବାଜି
- ✗ 3. ଦ୍ୱିଜ
- ✗ 4. ପକ୍ଷ

Q.35 'ବଧ' ଶବ୍ଦର ଅର୍ଥ କଣ?

Ans
- ✗ 1. ବୋକା
- ✔ 2. ବଧା
- ✗ 3. ହତ୍ୟା
- ✗ 4. ଶାସ୍ତି

Q.36 'ଗଛରୁ ତୋଳା'କୁ ଅନ୍ୟ ଭାବରେ କୁହାଯାଇପାରେ-

Ans
- ✗ 1. ଗଛରୁ ତୋଳିବା
- ✔ 2. ଗଛତୋଳା
- ✗ 3. ବୃକ୍ଷ ରୋପଣ
- ✗ 4. ଫଳ

Q.37 ଜଳରେ ମଗ୍ନ ହେଲେ ହୁଏ-

Ans
- ✗ 1. ବତ୍ତି
- ✗ 2. ବର୍ଷା
- ✔ 3. ଜଳମଗ୍ନ
- ✗ 4. ଜଳଦାନ

Q.38 'ବିଧୁ' ଶବ୍ଦର ଅର୍ଥ କଣ ?

Ans ✗ 1. ପୃଥ୍ବୀ

✔ 2. ଚନ୍ଦ୍ର

✗ 3. ଆକାଶ

✗ 4. ସୂର୍ଯ୍ୟ

Question ID : **6009291826**
Status : **Answered**
Chosen Option : **1**

Q.39 "ତିନି _____ ଛେଳି କୁକୁର"। ଉପଯୁକ୍ତ ଶବ୍ଦଟି ଦ୍ୱାରା ଶୂନ୍ୟସ୍ଥାନ ପୂରଣ କର।

Ans ✗ 1. ସତ୍ୟରେ

✗ 2. ବିଚାରରେ

✔ 3. ତୁଣ୍ଡରେ

✗ 4. ଗହଣରେ

Question ID : **6009291808**
Status : **Answered**
Chosen Option : **3**

Q.40 ଭାଷା ଶିକ୍ଷା ପାଇଁ ବ୍ୟାକରଣ ଧର୍ମ ଆବଶ୍ୟକ - ବାକ୍ୟଟିକୁ ସଜାଡ଼ିବାକୁ ହେଲେ କେଉଁ ଶବ୍ଦର ପରିବର୍ତ୍ତନ କରିବାକୁ ପଡ଼ିବ?

Ans ✗ 1. ଭାଷା ଶିକ୍ଷା

✗ 2. ଆବଶ୍ୟକ

✗ 3. ବ୍ୟାକରଣ

✔ 4. ଧର୍ମ

Question ID : **6009291815**
Status : **Answered**
Chosen Option : **4**

Section : Current Affairs & Reasoning

Q.1 The Prime Minister of India launched Asia's Largest Solar plant (750 MW) on 10 July 2020 in which of the following states?

Ans ✔ 1. Madhya Pradesh

✗ 2. Andhra Pradesh

✗ 3. Uttar Pradesh

✗ 4. Gujarat

Question ID : **6009291854**
Status : **Answered**
Chosen Option : **1**

Q.2 The Nobel Prize in Physiology or Medicine 2020 was awarded jointly to Harvey J Alter, Michael Houghton and Charles M Rice for decisive contribution in:

Ans ✘ 1. blood cancer

✘ 2. cells sense and adapt to oxygen availability

✔ 3. blood-borne hepatitis

✘ 4. cancer therapy

Question ID : **6009291835**
Status : **Answered**
Chosen Option : **4**

Q.3 Which Indian bank asked lending institutions to implement a scheme for grant of ex - gratia payment of difference between compound interest and simple interest for six months ending August 31, 2020?

Ans ✘ 1. ICICI

✘ 2. HDFC

✔ 3. RBI

✘ 4. SBI

Question ID : **6009291829**
Status : **Answered**
Chosen Option : **1**

Q.4 Which state/ union territory was the first one to exempt road tax on its battery operated vehicles?

Ans ✔ 1. Delhi

✘ 2. Tamil Nadu

✘ 3. Kerala

✘ 4. Gujarat

Question ID : **6009291846**
Status : **Answered**
Chosen Option : **1**

Q.5 What is 'OSIRIS - Rex' which was in the news in October 2020?

Ans ✘ 1. Anti-tank missile

✘ 2. Covid-19 vaccine

✘ 3. Submarine

✔ 4. Spacecraft

Question ID : **6009291834**
Status : **Answered**
Chosen Option : **4**

Q.6 Indian Army has built a memorial for its personnel killed during the Galwan clash at _____.

Ans

❌ 1. Siliguri

❌ 2. Shillong

❌ 3. Jammu

✅ 4. Ladakh

Question ID : **6009291849**
Status : **Not Answered**
Chosen Option : **--**

Q.7 In October 2020, the Finance Ministry announced that the Central Government will borrow Rs. 1.10 lakh crore on behalf of the states, to bridge the shortfall for _____.

Ans

❌ 1. state revenue deficit

✅ 2. GST collections

❌ 3. grants for urban local bodies

❌ 4. assistance to SDRF (State Disaster Response Fund)

Question ID : **6009291841**
Status : **Not Answered**
Chosen Option : **--**

Q.8 Who was the recipient of the International Children's Peace Prize 2020?

Ans

❌ 1. Greta Thunberg

✅ 2. Sadat Rahman

❌ 3. Neha Gupta

❌ 4. Mohamad Al Jounde

Question ID : **6009291837**
Status : **Answered**
Chosen Option : **2**

Q.9 The 'Kati Bihu' festival which made news headlines due to a ban by the Government of India is celebrated in the state of _____.

Ans

❌ 1. Odisha

❌ 2. West Bengal

✅ 3. Assam

❌ 4. Karnataka

Question ID : **6009291836**
Status : **Answered**
Chosen Option : **3**

Q.10 'Strategic Arms Reduction Treaty (START II)', which was in the news in 2020 is related to:

i) elimination of heavy intercontinental ballistic missiles
ii) elimination of other multiple-warhead (MIRVed)
iii) China and the US
iv) elimination of submarines in the Indian Ocean

Ans
  ✗ 1. i) and iv)

  ✓ 2. i) and ii)

  ✗ 3. ii) and iii)

  ✗ 4. iii) and iv)

Question ID : **6009291839**
Status : **Not Answered**
Chosen Option : --

Q.11 Which nation targets to achieve Zero Carbon Emissions by 2050?

Ans
  ✗ 1. Italy

  ✗ 2. India

  ✗ 3. China

  ✓ 4. Japan

Question ID : **6009291828**
Status : **Answered**
Chosen Option : **2**

Q.12 Which of the following has recently (year 2020) been declared as a Ramsar site under the International Ramsar Wetland Convention?

Ans
  ✗ 1. Chilika Lake, Odisha

  ✗ 2. Sukhna Lake, Chandigarh

  ✓ 3. Lake Meteor, Maharashtra

  ✗ 4. River Mandovi, Goa

Question ID : **6009291832**
Status : **Not Answered**
Chosen Option : --

Q.13 Which state launched the 'Mission Shakti' department for women self - help groups in 2020?

Ans
  ✗ 1. Rajasthan

  ✗ 2. Uttar Pradesh

  ✗ 3. Madhya Pradesh

  ✓ 4. Odisha

Question ID : **6009291838**
Status : **Answered**
Chosen Option : **4**

Q.14 As per the report released by World Health Organisation, which country had the highest tuberculosis (26%) burden across the globe in 2019?

Ans
- ❌ 1. Indonesia
- ❌ 2. South Africa
- ✅ 3. India
- ❌ 4. Pakistan

Question ID : **6009291840**
Status : **Answered**
Chosen Option : **2**

Q.15 What is the name of the digital repository of academic records of CBSE affiliated students which was launched by Central Board of Secondary Education, India in August 2018?

Ans
- ❌ 1. Shodganga
- ❌ 2. Digilocker
- ✅ 3. Parinam Manjusha
- ❌ 4. National Academic Depository

Question ID : **6009291831**
Status : **Answered**
Chosen Option : **4**

Q.16 The Regional Comprehensive Economic Partnership (RCEP) is a free trade agreement between the Asia - Pacific nations. How many members does it have as of the year 2020?

Ans
- ❌ 1. 21
- ❌ 2. 12
- ✅ 3. 16
- ❌ 4. 7

Question ID : **6009291848**
Status : **Answered**
Chosen Option : **4**

Q.17 Which of the following pacts was signed in the 2 + 2 meeting between India and the US held in October 2020?

Ans
- ✅ 1. Basic Exchange and Cooperation Agreement
- ❌ 2. Compatibility and Security Agreement
- ❌ 3. Malabar Naval Exercise Agreement
- ❌ 4. Logistics Exchange Memorandum of Agreement

Question ID : **6009291827**
Status : **Answered**
Chosen Option : **2**

Q.18 Which iconic Indian superhero becomes the brand ambassador for Namami Gange Project in 2020?

Ans
❌ 1. Nagraj

❌ 2. Devi

❌ 3. Shaktimaan

✅ 4. Chacha Chaudhary

Question ID : **6009291850**
Status : **Not Answered**
Chosen Option : **--**

Q.19 Which city was the venue of the meeting of the foreign ministers of QUAD countries held in October 2020?

Ans
❌ 1. New Delhi

❌ 2. New York

✅ 3. Tokyo

❌ 4. Sydney

Question ID : **6009291847**
Status : **Not Answered**
Chosen Option : **--**

Q.20 Who won the Dadasaheb Phalke Award 2019?'

Ans
❌ 1. Rishi Kapoor

❌ 2. Dharmendra

❌ 3. Shashi Kapoor

✅ 4. Amitabh Bachchan

Question ID : **6009291852**
Status : **Answered**
Chosen Option : **1**

Q.21 Which organisation has released the '2020 State of Climate Services' report?

Ans
✅ 1. World Metrological Organization

❌ 2. World Food Programme

❌ 3. UNICEF

❌ 4. Food and Agricultural Organization

Question ID : **6009291844**
Status : **Answered**
Chosen Option : **1**

Q.22 Padma Shri awardee, Shobha Naidu, who passed away in October 2020, was a _____.

Ans ✗ 1. politician

✗ 2. journalist

✔ 3. dancer

✗ 4. poet

	Question ID : **6009291842** Status : **Answered** Chosen Option : **2**

Q.23 What was the theme of World Health Day 2020?

Ans ✔ 1. Support Nurses and Midwives

✗ 2. Safety and Health at Work Can Save Lives

✗ 3. Sustaining All Life on Earth

✗ 4. Vaccines Work for All

	Question ID : **6009291851** Status : **Answered** Chosen Option : **3**

Q.24 As of October 2020, how many Indian sites are listed under UNESCO World Heritage Sites?

Ans ✗ 1. 26

✗ 2. 52

✗ 3. 45

✔ 4. 38

	Question ID : **6009291856** Status : **Answered** Chosen Option : **4**

Q.25 Who was appointed as the first Lieutenant Governor of the union territory of Jammu and Kashmir?

Ans ✔ 1. Girish Chandra Murmu

✗ 2. Radha Krishna Mathur

✗ 3. Satya Pal Malik

✗ 4. Manoj Sinha

	Question ID : **6009291853** Status : **Answered** Chosen Option : **3**

Q.26 Which player has won 13 French Open Men's Singles titles as of 2020?

Ans ✔ 1. Rafael Nadal

✘ 2. Dominic Thiem

✘ 3. Roger Federer

✘ 4. Novak Djokovic

Question ID : **6009291845**
Status : **Answered**
Chosen Option : **1**

Q.27 Who among the following batsmen is the fastest to score 11,000 runs in One Day International Cricket?

Ans ✘ 1. Shikhar Dhawan

✘ 2. Rohit Sharma

✘ 3. Sachin Tendulkar

✔ 4. Virat Kohli

Question ID : **6009291843**
Status : **Answered**
Chosen Option : **4**

Q.28 Name the Massive Open Online Course (MOOC) platform of India.

Ans ✔ 1. SWAYAM

✘ 2. Udacity

✘ 3. edX

✘ 4. Course era

Question ID : **6009291830**
Status : **Answered**
Chosen Option : **3**

Q.29 United Arab Emirates (UAE) conferred the UAE's highest civilian award named _____ on Indian PM Narendra Modi in 2019.

Ans ✘ 1. Amir Abdulla Khan Award

✘ 2. King Hamad Order of the Renaissance

✘ 3. Grand Collar

✔ 4. Order of Zayed

Question ID : **6009291855**
Status : **Answered**
Chosen Option : **1**

Q.30 Which country will host G20 Summit in 2023?

Ans

✗ 1. Italy

✓ 2. India

✗ 3. Saudi Arabia

✗ 4. Brazil

Q.31 The second figure in the first unit of the given figures bears a certain relationship to the first figure. Similarly, one of the figure from the following options bears the same relationship to the first figure in the second unit of the given figures. You have to select that figure from the options which would replace the question mark (?).

Ans

✗ 1.

✗ 2.

✓ 3.
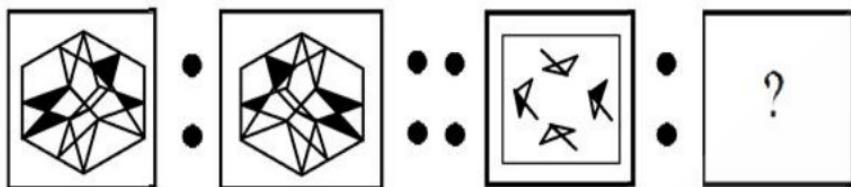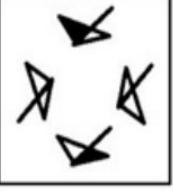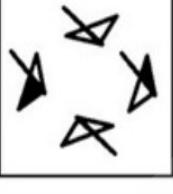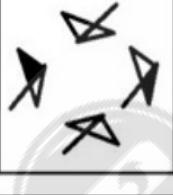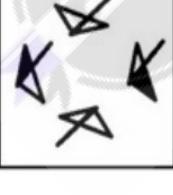
✗ 4.

Q.32 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 potatoes are not tomatoes.
II. Some potatoes are onions.

Conclusions:
I. Some onions are not tomatoes.
II. All tomatoes are not potatoes.

Ans ✔️ 1. Both the conclusions follow

✗ 2. Neither conclusion I nor II follows

✗ 3. Only conclusion II follows

✗ 4. Only conclusion I follows

Q.33 Select the correct mirror image of the given figure from the following options, when the mirror is placed on the right side of the figure.

Ans

✗ 1.

✔️ 2.

✗ 3.

✗ 4.
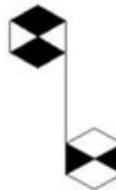
Q.34 Select the option figure in which the given figure is embedded (rotation is NOT allowed).

Ans

✗ 1.

✔ 2.

✗ 3.
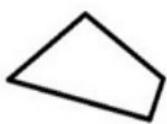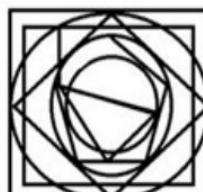
✗ 4.

Q.35 Select the option that can replace the question mark (?) to complete the given letter-pair series.

JZ, FH, BP, XX, ?

Ans ✗ 1. SE

✗ 2. QC

✔ 3. TF

✗ 4. RD

Q.36 Two positions of the same dice are given. Which number will be on the face opposite to the face having the number 5?
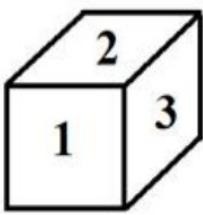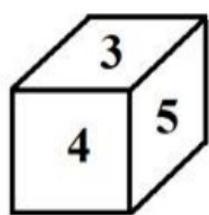
Ans   ✘ 1. 3

      ✘ 2. 4

      ✘ 3. 2

      ✔ 4. 1

Question ID : **6009291861**
Status : **Answered**
Chosen Option : **4**

Q.37 Which of the figures given in the options is the exact water image of the given figure?

Ans

✗ 1.

✗ 2.

✗ 3.
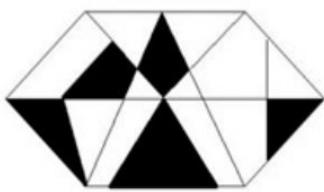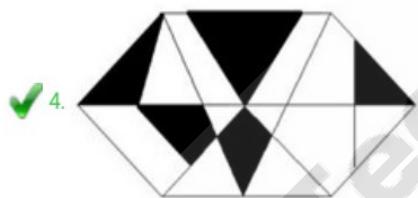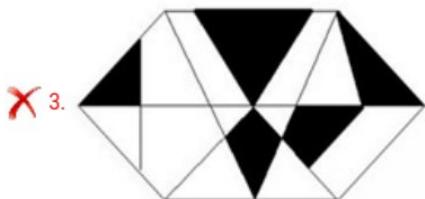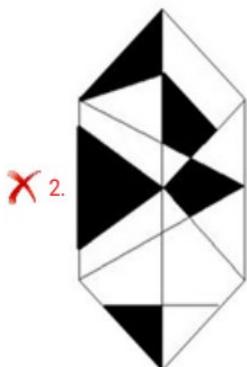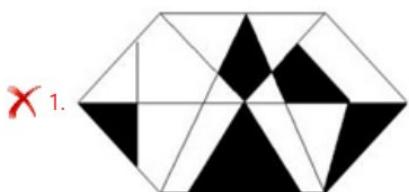
✔ 4.

Q.38 Among 5 members, P, Q, R, S and T, of a certain team, each having different ages, S is only younger than Q. T is younger than P and R. Who is the youngest among them all?

Ans
✔ 1. S

✗ 2. P

✗ 3. R

✗ 4. Q

Q.39 Which of the following options has a similar relationship between the two words of the pair as between the words in the given pair?

Water : Drink

Ans   ✗ 1. Food : Spicy

     ✗ 2. Fork : Knife

     ✔ 3. Ball : Play

     ✗ 4. Rope : Long

Question ID : **6009291879**
Status : **Answered**
Chosen Option : **3**

Q.40 Select the option that can replace the question mark (?) to complete the given letter series.

R, W, T, R, V, M ,?

Ans   ✗ 1. Z

     ✔ 2. X

     ✗ 3. W

     ✗ 4. Y

Question ID : **6009291870**
Status : **Answered**
Chosen Option : **3**

Q.41 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. ✗
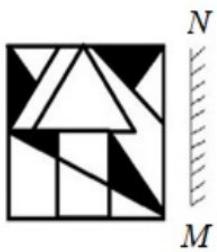
Q.42 Identify the figure that can replace the question mark (?) to complete the given pattern.


Ans

✗ 1.

✔ 2.

✗ 3.

✗ 4.
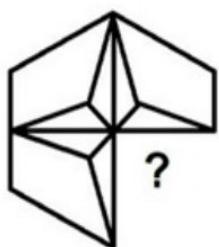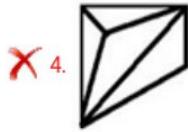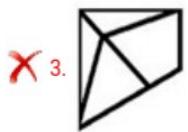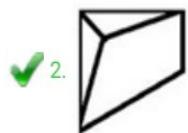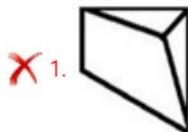
Question ID : 6009291863
Status : **Answered**
Chosen Option : **2**

Q.43 If in a certain coding language, 'ROBOT' is written as '71', then how will 'FEAR' be coded in that language?

Ans ✗ 1. 33

✔ 2. 31

✗ 3. 32

✗ 4. 30

Question ID : 6009291877
Status : **Answered**
Chosen Option : **2**

Q.44 A paper has been folded and cut as shown in the following figures. Figure (X) shows the manner in which the folded paper has been cut. Select the figure that would most closely resemble the unfolded form of Figure (X).

(X)

Ans

✔ 1.

✘ 2.

✘ 3.

✘ 4.
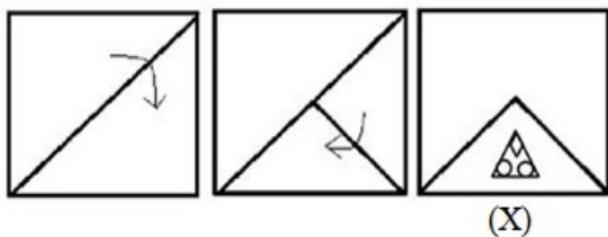
Q.45 If in a certain coding language, 'EARS' is written as 'OQBI', then how will 'NOSE' be written in that language?

Ans

✘ 1. XFIO

✔ 2. XECU

✘ 3. XFDV

✘ 4. YECX

Q.46 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 kites are eagles.
II. Some doves are kites.

Conclusions:
I. Some eagles are kites.
II. Some doves are eagles.

Ans ✅ 1. Only conclusion I follows

❌ 2. Both the conclusions follow

❌ 3. Only conclusion II follows

❌ 4. Neither conclusion I nor II follows

Question ID : 6009291885
Status : Answered
Chosen Option : 2

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. Lion

❌ 2. Tigress

❌ 3. Queen

❌ 4. Sister

Question ID : 6009291881
Status : Answered
Chosen Option : 1

Q.48 Facing towards the north, six women - Emma, Carla, Angela, Alex, Rose and Prestine - are sitting in a row of a judge's panel at a beauty pageant, but not necessarily in the same order. Emma is between Carla and Angela. Alex is at the extreme right end of the row. Prestine is to the immediate left of Alex. What is the position of Rose, if Angela and Prestine are immediate neighbours?

Ans ❌ 1. Between Angela and Alex

❌ 2. Right of Carla

❌ 3. At the centre

✅ 4. At the extreme left

Question ID : 6009291873
Status : Answered
Chosen Option : 2

Q.49 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. Curtains

✘ 2. Jacket

✘ 3. Jeans

✘ 4. Shirt

Question ID : **6009291880**
Status : **Answered**
Chosen Option : **1**

Q.50 What is the maximum number of triangles in the given figure?
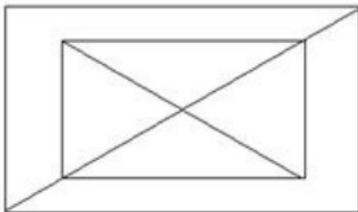
Ans
✘ 1. 8

✘ 2. 14

✘ 3. 12

✔ 4. 10

Question ID : **6009291865**
Status : **Answered**
Chosen Option : **4**

**Q.51** Two positions of the same dice are given. Which letter will be on the face opposite to the face having the letter C?
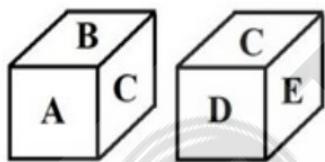
Ans
✔ 1. F

✘ 2. B

✘ 3. D

✘ 4. E

Question ID : **6009291862**
Status : **Answered**
Chosen Option : **1**

Q.52 What is the maximum number of triangles in the given figure?
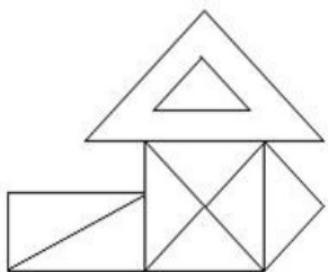
Ans

✅ 1. 13

❌ 2. 16

❌ 3. 15

❌ 4. 14

Q.53 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. Cuba : Havana

✅ 2. Brazil : South America

❌ 3. Norway : Oslo

❌ 4. Denmark : Copenhagen

Q.54 Select the option that can replace the question mark (?) to complete the given letter-cluster series.

DWP, HSR, LOT, PKV, ?

Ans

❌ 1. SGX

❌ 2. TGY

✅ 3. TGX

❌ 4. THX

Q.55 Select the option that is related to the third word in the same way as the second word is related to the first word.

Shoes : Leather :: Furniture : ?

Ans ✔ 1. Wood

✘ 2. Table

✘ 3. Comfort

✘ 4. Room

Question ID : **6009291878**
Status : **Answered**
Chosen Option : **1**

Q.56 If in a certain coding language, 'HYENA' is written as 'OFLUH', then how will 'TURTLE' be written in that language?

Ans ✔ 1. ABYASL

✘ 2. BCYBSL

✘ 3. ABYATM

✘ 4. BCYBTL

Question ID : **6009291875**
Status : **Not Answered**
Chosen Option : **--**

Q.57 Which of the figures given in the options is the exact water image of the given figure?


Ans

✘ 1.

✘ 2.

✘ 3.

✔ 4.
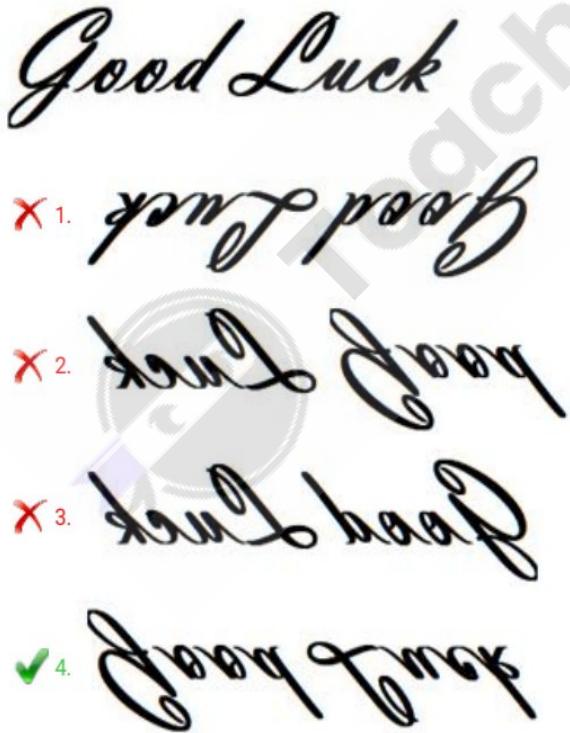
Question ID : **6009291859**
Status : **Answered**
Chosen Option : **3**

Q.58 If South - West becomes North, then what will North - West become?

Ans

✓ 1. East

✗ 2. North - East

✗ 3. North

✗ 4. South - East

Q.59 Identify the figure that can replace the question mark (?) to complete the given pattern.

Ans

✗ 1.

✗ 2.

✗ 3.
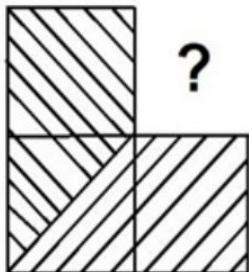
✓ 4.

Q.60 Six friends, A, B, C, D, E and G, are sitting in a row, facing towards you. B is exactly between D and E. C is to the immediate left of G. A is to the immediate right of D. If E is at the extreme left of the row, then who is to the immediate left of C?

Ans
   ✗ 1. B

   ✗ 2. D

   ✗ 3. G

   ✔ 4. A

Section : **Subject Content & Methodology**

Q.1 A △ABC has points D, E, F on the lines BC, CA and AB, respectively. Lines AD, BE and CF intersect each other at P. If AE × BD × CE = 30, then 3FB × DC × AE is:

Ans
   ✔ 1. 90

   ✗ 2. 50

   ✗ 3. 60

   ✗ 4. 30

Q.2 Solve:

$$4\sin^2 x - 1 = 0, 0 < x < \frac{\pi}{2}$$

Ans
   ✗ 1. $\dfrac{\pi}{3}$

   ✗ 2. $\dfrac{\pi}{4}$

   ✔ 3. $\dfrac{\pi}{6}$

   ✗ 4. $\dfrac{\pi}{5}$

Q.3 General solution of linear equation $2y + 0x + 3 = 0$ in two variables is:

Ans

✗ 1. $\left(0, \dfrac{-3}{2}\right)$

✗ 2. $\left(\dfrac{-3}{2}, b\right)$, b is real

✔ 3. $\left(a, \dfrac{-3}{2}\right)$, a is real

✗ 4. $\left(\dfrac{-3}{2}, 0\right)$

Q.4 If a, b, c are in A.P., then which of the following is NOT true?

Ans

✗ 1. $\dfrac{1}{\sqrt{b} + \sqrt{c}}, \dfrac{1}{\sqrt{c} + \sqrt{a}}, \dfrac{1}{\sqrt{a} + \sqrt{b}}$ are in A.P.

✔ 2. $\dfrac{1}{b + c}, \dfrac{1}{c + a}, \dfrac{1}{a + b}$ are in A.P.

✗ 3. $\dfrac{1}{bc}, \dfrac{1}{ca}, \dfrac{1}{ab}$ are in A.P.

✗ 4. $a^2(b + c), b^2(c + a), c^2(a + b)$ are in A.P.

Q.5 If $\log_5 x + \log_5(x - 24) = 2$, then find x.

Ans

✗ 1. 24

✗ 2. 5

✗ 3. 1

✔ 4. 25

Q.6 If $4x^3 + ax^2 - bx + 1 = p(x)$, then find $p(0) + p(1) + p(-1)$.

Ans ✗ 1. $2b + 3$

✗ 2. $2a - 3$

✗ 3. $2b - 3$

✔ 4. $2a + 3$

Question ID : **6009292031**
Status : **Answered**
Chosen Option : **4**

Q.7 Two right triangles with length of sides 3, 4 and 5 are arranged with one common side to a quadrilateral. Find the area of the quadrilateral so formed.

Ans ✗ 1. 15 unit^2

✗ 2. 10 unit^2

✗ 3. 20 unit^2

✔ 4. 12 unit^2

Question ID : **6009291989**
Status : **Answered**
Chosen Option : **4**

Q.8 A room consists of two windows of size 0.5 × 2 units and a door of 0.75 × 4 units. The interior walls of the room of length, width and height 12, 10 and 8 units, respectively, are to be painted at the rate of ₹ 100 per square unit. Find the total cost of painting.

Ans ✗ 1. ₹ 23,500

✗ 2. ₹ 43,700

✔ 3. ₹ 34,700

✗ 4. ₹ 35,200

Question ID : **6009291998**
Status : **Answered**
Chosen Option : **3**

Q.9 If $x^2 + y^2 + z^2 - xy - yz - zx = 0$, then:

Ans ✗ 1. $x \neq y \neq z$

✗ 2. $x \neq y, y = z$

✔ 3. $x = y = z$

✗ 4. $x = 1 = y, z = 0$

Question ID : **6009292028**
Status : **Answered**
Chosen Option : **3**

Q.10 If $X = \begin{bmatrix} 2a & 7 \\ a & 6 \end{bmatrix}$ and $X^{-1} = \begin{bmatrix} 0.6 & -0.7 \\ -0.2 & 0.4 \end{bmatrix}$, then a is:

Ans   ✗ 1. 0

      ✗ 2. 3

      ✗ 3. −1

      ✔ 4. 2

Q.11 An insect is able to go inside a hole 60% time of his trials. What is the probability of his success 2 times out of 5 trials to enter into the hole?

Ans   ✔ 1. $\dfrac{144}{625}$

      ✗ 2. $\dfrac{154}{625}$

      ✗ 3. $\dfrac{625}{144}$

      ✗ 4. $\dfrac{720}{625}$

Q.12 The sum of three distinct natural numbers is 28. What is the maximum value of their product?

Ans   ✗ 1. 784

      ✗ 2. 770

      ✗ 3. 796

      ✔ 4. 792

Q.13 Three fair coins are tossed simultaneously. Let random variable X be defined as X = No. of heads + No. of tails. What is the set of all values of the random variable?

Ans   ✔ 1. {3}

      ✗ 2. {0, 1, 2}

      ✗ 3. {2, 3}

      ✗ 4. {1, 2, 3}

Q.14 If the radius and height of a right circular cone is reduced by $\frac{1}{3}$ times and $\frac{1}{5}$ times respectively, then the volume of the cone is reduced by _____ times.

Ans

✗ 1. $\dfrac{1}{15}$

✗ 2. $\dfrac{1}{75}$

✗ 3. $\dfrac{1}{30}$

✔ 4. $\dfrac{1}{45}$

Question ID : **6009291995**
Status : **Answered**
Chosen Option : **4**

Q.15 A solid cube of side 22 cm long is melted so as to make solid spheres of radius 10 mm. How many such spheres can be made?

Ans

✗ 1. 2514

✗ 2. 5082

✗ 3. 5802

✔ 4. 2541

Question ID : **6009291994**
Status : **Answered**
Chosen Option : **4**

Q.16 If m be the ratio of the roots of the equation $ax^2 + bx + c = 0$, then which of the following relations is true?

Ans

✗ 1. $\dfrac{(m+1)^2}{m} = \dfrac{b^2}{4ac}$

✗ 2. $\dfrac{(m+1)^2}{2m} = \dfrac{b^2}{ac}$

✗ 3. $\dfrac{(m-1)^2}{m} = \dfrac{b^2}{ac}$

✔ 4. $\dfrac{(m+1)^2}{m} = \dfrac{b^2}{ac}$

Question ID : **6009292046**
Status : **Answered**
Chosen Option : **4**

Q.17 If $x = \frac{4}{2-\sqrt{3}}$, then $x^2 - 16x + 66$ is:

Ans
  ✗ 1. 64
  ✓ 2. 50
  ✗ 3. 48
  ✗ 4. 49

Q.18 Match the columns.

(1) x + 2y = 4 2x + 4y = 12	a) Unique solution
(2) x − 2y = 0 3x + 4y = 20	b) Infinitely many solutions
(3) 5x + 2y = 10 10x + 4y = 20	c) No solution

Ans
  ✗ 1. 1- a, 2 - b, 3 - c
  ✓ 2. 1- c, 2 - a, 3 - b
  ✗ 3. 1- a, 2 - c, 3 - b
  ✗ 4. 1- c, 2 - b, 3 - a

Q.19 There are 20 students in a class and they obtained marks as given.

Marks obtained = X	15	18	22	24	28
No. of students = Y	k^2	$2k+1$	3	4	4

How many students got marks less than 20?

Ans ✗ 1. 4

✗ 2. 5

✔ 3. 9

✗ 4. 10

Q.20 If [.] is the greatest integer function, then $[2] + [-1.5] + [-0.3] + [0.5]$ is:

Ans ✔ 1. −1

✗ 2. 1

✗ 3. 0

✗ 4. 2

Q.21 What is the area of the triangle formed by the vertices (3, 1), (6, 4) and (8, 2)?

Ans ✔ 1. 6 sq. units

✗ 2. 12 sq. units

✗ 3. 7 sq. units

✗ 4. 11 sq. units

Q.22 What is the value of $x + y$ in the solution of the given equations?

$$\frac{3}{x-1} + \frac{1}{y-2} = 2 \text{ and } \frac{5}{x-1} - \frac{3}{y-2} = 3, x \neq 1, -2 \neq y$$

Ans

✗ 1. $\dfrac{289}{9}$

✓ 2. $\dfrac{167}{9}$

✗ 3. $\dfrac{176}{9}$

✗ 4. $\dfrac{149}{9}$

Q.23 $2x^4 - 3x^3 - ax^2 + bx - 2$ divided by $(x - 2)$ leaves remainder 6, divided by $(x + 3)$ leaves remainder 196. Find the remainder when it is divided by $x + 2$.

Ans

✗ 1. 18

✗ 2. 9

✓ 3. 30

✗ 4. 23

Q.24 If a and b are the roots of the equation $x^2 - 11x + 30 = 0$, then what is the value of $\left(\frac{1}{a} + \frac{1}{b}\right)$?

Ans

✓ 1. $\dfrac{11}{30}$

✗ 2. $\dfrac{29}{30}$

✗ 3. $\dfrac{19}{30}$

✗ 4. $\dfrac{21}{30}$

Q.25 Find the area covered by the minute hand of a clock having length 7 cm in 10 minutes.

Ans ✗ 1. $\dfrac{75}{3}$ cm²

✓ 2. $\dfrac{77}{3}$ cm²

✗ 3. $\dfrac{3}{77}$ cm²

✗ 4. $\dfrac{70}{3}$ cm²

Q.26 If the point (–4, 6) divides internally the line segment joining the points (–6, 10) and (x, y) in the ratio 2 : 7, then find the value of $x^3 - y^3$.

Ans ✗ 1. 679

✗ 2. 579

✗ 3. 639

✓ 4. 539

Q.27 The value of x and y which satisfies the system of equation $Qx + Ry = 2P + Q$ and

$\left(\dfrac{P}{P-Q} - \dfrac{P}{P+Q}\right)x + \left(\dfrac{R}{Q-P} - \dfrac{R}{Q+P}\right)y = \dfrac{2P(2P-Q)}{P^2-Q^2}$ is:

Ans ✗ 1. $\left(-\dfrac{2P}{Q}, \dfrac{Q}{R}\right)$

✗ 2. $\left(-\dfrac{2P}{Q}, -\dfrac{Q}{R}\right)$

✓ 3. $\left(\dfrac{2P}{Q}, \dfrac{Q}{R}\right)$

✗ 4. $\left(\dfrac{2P}{Q}, -\dfrac{Q}{R}\right)$

Q.28 Three boys A, B and C take 12, 18 and 27 minutes, respectively, to complete one circular round in a race. If they all start together, after how much time will they meet again?

Ans   ✗ 1. 72 minutes

     ✗ 2. 54 minutes

     ✗ 3. 27 minutes

     ✔ 4. 108 minutes

Question ID : **6009292012**
Status : **Answered**
Chosen Option : **4**

Q.29 The cost of 2 pens and 3 pencils is ₹ 46. The cost of 3 pens and 5 pencils is ₹ 74. Find the total cost of one pen and one pencil.

Ans   ✗ 1. ₹ 16

     ✔ 2. ₹ 18

     ✗ 3. ₹ 10

     ✗ 4. ₹ 8

Question ID : **6009292040**
Status : **Answered**
Chosen Option : **2**

Q.30 A car is moving at uniform speed towards a tower. It takes 8 minutes for the angle of depression from the top of tower to the car to change from $30°$ to $45°$. How long after this will the car reach the base of the tower?

Ans   ✗ 1. $\dfrac{2}{(\sqrt{3}-1)}$ minutes

     ✔ 2. $\dfrac{8}{(\sqrt{3}-1)}$ minutes

     ✗ 3. $\dfrac{2}{(\sqrt{3}+1)}$ minutes

     ✗ 4. $\dfrac{8}{(\sqrt{3}+1)}$ minutes

Question ID : **6009292064**
Status : **Answered**
Chosen Option : **2**

Q.31 The quadratic polynomial whose sum of zeroes is 6 and product of zeroes is -16 is:

Ans   ✗ 1. $x^2 - 16x - 6$

     ✗ 2. $x^2 + 6x + 16$

     ✔ 3. $x^2 - 6x - 16$

     ✗ 4. $x^2 + 16x - 6$

Question ID : **6009292026**
Status : **Answered**
Chosen Option : **3**

Q.32

If A $\begin{bmatrix} a_{11} & a_{12} & a_{13} \\ a_{21} & a_{22} & a_{23} \end{bmatrix} = \begin{bmatrix} b_{11} & b_{12} & b_{13} \\ b_{21} & b_{22} & b_{23} \\ b_{31} & b_{32} & b_{33} \end{bmatrix}$, then order of matrix A is:

Ans

✗ 1. 3×3

✗ 2. 2×2

✔ 3. 3×2

✗ 4. 2×3

Q.33

If $a + \frac{1}{a} = 8$, then find $a^4 + \frac{1}{a^4}$

Ans

✗ 1. 3832

✗ 2. 3896

✔ 3. 3842

✗ 4. 3844

Q.34 If the difference between the roots of the equation $x^2 + 2kx + 1 = 0$ is less than $2\sqrt{3}$, then _____ is the set of possible values of k.

Ans

✗ 1. $(-2, \infty)$

✔ 2. $(-2, 2)$

✗ 3. $(2, \infty)$

✗ 4. $(-\infty, -2)$

Q.35 What is the value of $10m^3 + 3m^2 - 5m - 279$, if $(2m, -m)$ is a solution of $15x + 13y = 51$?

Ans

✔ 1. 3

✗ 2. 2

✗ 3. 1

✗ 4. 4

Q.36 What will be the minimum value of the following expression?

$$\left(\frac{q+r+s}{p}+\frac{p+r+s}{q}+\frac{p+q+s}{r}+\frac{p+q+r}{s}\right)$$

Ans ✗ 1. 8

✔ 2. 12

✗ 3. 6

✗ 4. 10

Q.37 If A (6, 4), B (− 5, 4) and C (p, −3) are the vertices of a right angled triangle with AC hypotenuse, then p = _____.

Ans ✗ 1. 5

✗ 2. −3

✔ 3. −5

✗ 4. 3

Q.38 The value of $(1)^{101}+(-1)^{50}+(1)^{25}+(-1)^3$ is:

Ans ✗ 1. 0

✗ 2. 3

✗ 3. 4

✔ 4. 2

Q.39 A cyclic quadrilateral PQRS with opposite sides p and r, q and s and diagonals x and y satisfy:

Ans ✔ 1. pr + qs = xy

✗ 2. xy + qs = pr

✗ 3. pr × qs = xy

✗ 4. pr + xy = qs

Q.40 There are some squirrels and parrots in a zoo. The total number of their heads is 57 and total number of their legs is 164. Find the total number of squirrels.

Ans
✔ 1. 25
✘ 2. 32
✘ 3. 35
✘ 4. 28

Question ID : **6009292042**
Status : **Answered**
Chosen Option : **1**

Q.41 If $y = 5\log x^x$, then $\frac{dy}{dx}$ is:

Ans
✔ 1. $5(1 + \log x)$
✘ 2. $5(1 - \log x)$
✘ 3. $5(1 - 2\log x)$
✘ 4. $5(1 + 2\log x)$

Question ID : **6009292020**
Status : **Answered**
Chosen Option : **1**

Q.42 Two fair dice are rolled simultaneously. What is the probability that the sum on the faces obtained is 6?

Ans
✔ 1. $\frac{5}{36}$
✘ 2. $\frac{1}{6}$
✘ 3. $\frac{1}{9}$
✘ 4. $\frac{1}{12}$

Question ID : **6009292003**
Status : **Answered**
Chosen Option : **1**

Q.43 If mean and median of a data is 28 and 20, respectively, find its mode.

Ans
✔ 1. 4
✘ 2. 5
✘ 3. 6
✘ 4. 3

Question ID : **6009291999**
Status : **Answered**
Chosen Option : **1**

Q.44 The arithmetic mean and geometric mean of 1 and 9 is _____ and _____, respectively.

Ans ✔ 1. 5; 3

✘ 2. 5; 5

✘ 3. 3; 5

✘ 4. 3; 3

Q.45 If $y = e^{2x} + 1$, then find $\frac{d^2 y}{dx^2}$ at $x = 0$.

Ans ✔ 1. 4

✘ 2. 5

✘ 3. 3

✘ 4. 1

Q.46 In a class of 60 students, 30 students passed in Mathematics and 40 passed in Science. At least how many students passed in both Mathematics and Science?

Ans ✔ 1. 10

✘ 2. 9

✘ 3. 11

✘ 4. 0

Q.47 The nth term of an A.P. $-3, -\frac{1}{2}, 2, \dots \dots$ is:

Ans ✘ 1. $\dfrac{(3n - 19)}{2}$

✔ 2. $\dfrac{(5n - 11)}{2}$

✘ 3. $\dfrac{(4n - 17)}{2}$

✘ 4. $\dfrac{(7n - 13)}{2}$

Q.48 Equation of straight line with slope $\frac{2}{3}$ and passing through the point $(0, \frac{5}{3})$ is:

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

Question ID : **6009292034**
Status : **Answered**
Chosen Option : **3**

Q.49 A cow is tied with a rope of length 7 metres, in the centre of a rectangular field with dimensions 15×20 in metres. The cow is free to move with the tied rope to cover maximum area of the field. Find the cost of renovating the part of the field which CANNOT be covered by the cow, at ₹ 50 per square metre.

Ans
- ✗ 1. ₹ 7,700
- ✗ 2. ₹ 7,500
- ✔ 3. ₹ 7,300
- ✗ 4. ₹ 15,000

Question ID : **6009291997**
Status : **Answered**
Chosen Option : **3**

Q.50 Which of the following numbers can be converted to non-terminating decimals?

$$\frac{1}{2}, \frac{1}{3}, \frac{1}{4}, \frac{1}{5}$$

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

Question ID : **6009292008**
Status : **Answered**
Chosen Option : **3**

Q.51 If a random variable increases when other random variable decreases, their correlation coefficient will be:

Ans
✗ 1. 0.5
✗ 2. 0.7
✔ 3. −0.5
✗ 4. 0

Question ID : **6009292007**
Status : **Not Answered**
Chosen Option : **--**

Q.52 Find the area of a triangle having sides 5, 5 and 8 units.

Ans
✗ 1. 10 unit^2
✗ 2. 15 unit^2
✗ 3. 6 unit^2
✔ 4. 12 unit^2

Question ID : **6009291993**
Status : **Answered**
Chosen Option : **4**

Q.53 If P(k) be the statement that "A set with elements has 2^k subsets", then for P(0), the number of subsets are:

Ans
✗ 1. 3
✔ 2. 1
✗ 3. 0
✗ 4. 2

Question ID : **6009292013**
Status : **Answered**
Chosen Option : **2**

Q.54 The number 718948 is divisible by:

Ans
✗ 1. 3
✔ 2. 4
✗ 3. 5
✗ 4. 7

Question ID : **6009292016**
Status : **Answered**
Chosen Option : **2**

Q.55 Let P be a point on the circumcircle of a ΔABC such that Z, Y, X are the closest points to P on the lines AB, AC and BC, respectively. If XZ : ZY = 2 : 5 and XY = 21, then YZ is:

Ans ✔ 1. 15

✗ 2. 6

✗ 3. 18

✗ 4. 12

Q.56 If the points A(1,6), B(3,4) and C(k,1) are collinear, then the value of k is:

Ans ✔ 1. 6

✗ 2. 4

✗ 3. 9

✗ 4. 8

Q.57 The given bar diagram represents the number of persons taking insurance on the Y-axis and year of purchasing the insurance policy on the X-axis.

Y-axis
50
45
42
40 40 41
38
34
30
20
10
0
2001 2002 2003 2004 2005 2006
X-axis.
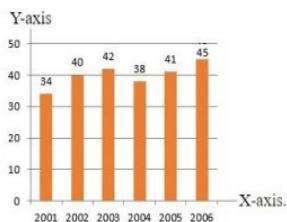
What is the sum of the number of persons taking policies in the years when it is minimum and maximum?

Ans ✗ 1. 76

✗ 2. 83

✗ 3. 75

✔ 4. 79

Q.58 Convert 3.262626 into a rational fraction.

Ans

✗ 1. $\dfrac{325}{99}$

✗ 2. $\dfrac{326}{99}$

✗ 3. $\dfrac{322}{99}$

✓ 4. $\dfrac{323}{99}$

Question ID : **6009292009**
Status : **Answered**
Chosen Option : **4**

Q.59 If random variable and corresponding probability of an experiment are tabulated as given, find the mathematical expectation E(2X).

Random variable (x)	−1	0	1	2
Probability P(x)	$\dfrac{1}{4}$	$\dfrac{1}{2}$	$\dfrac{1}{8}$	$\dfrac{1}{8}$

Ans

✗ 1. $\dfrac{1}{8}$

✗ 2. $\dfrac{1}{6}$

✗ 3. $\dfrac{1}{3}$

✓ 4. $\dfrac{1}{4}$

Question ID : **6009292005**
Status : **Answered**
Chosen Option : **4**

Q.60 Four years ago, a mother was 9 times as old as her son. Four years later her age will be 8 years more than 3 times the age of the son. Find the present ages of mother and son, respectively?

Ans

✗ 1. 42 years, 8 years

✗ 2. 40 years, 9 years

✗ 3. 42 years, 9 years

✓ 4. 40 years, 8 years

Question ID : **6009292044**
Status : **Answered**
Chosen Option : **4**

Q.61 If $10\sin^4 x + 15\cos^4 x = 6$, then the value of $81\csc^8 x + 8\tan^6 x$ is:

Ans
✗ 1. 625
✔ 2. 652
✗ 3. 648
✗ 4. 638

Q.62 The value of $3^{37} \pmod 7$ is:

Ans
✔ 1. $3 \pmod 7$
✗ 2. $2 \pmod 7$
✗ 3. $4 \pmod 7$
✗ 4. $1 \pmod 7$

Q.63 $(\log \csc 1° + \log \csc 2° + \ldots + \log \csc 89°) + (\log \tan 1° + \log \tan 2° + \ldots + \log \tan 89°)$
$- (\log \sec 1° + \log \sec 2° + \ldots + \log \sec 89°) = \underline{\hspace{1cm}}$.

Ans
✔ 1. 0
✗ 2. $\log \sqrt{2}$
✗ 3. 1
✗ 4. $\log 2$

Q.64 _____ is the co-ordinate of a point on x-axis, which is a distance of 4 units from the points $(4, -4)$.

Ans
✗ 1. $(-4, 0)$
✔ 2. $(4, 0)$
✗ 3. $(0, 4)$
✗ 4. $(0, -4)$

Q.65 The value of $\binom{n}{0} + \binom{n}{1} + \binom{n}{n-1} + \binom{n}{n}$; $n > 2$ is:

Ans ✔ 1. $2n + 2$

✗ 2. $2n - 2$

✗ 3. $2n + 1$

✗ 4. $2n$

Q.66 A tall tree and a building are standing opposite to each other at 10 metres. The upper portion of the tree breaks off and falls on top of the building making an angle 45°. Find the length of the broken portion of the tree.

Ans ✗ 1. $10\sqrt{5}$ metres

✔ 2. $10\sqrt{2}$ metres

✗ 3. $10\sqrt{3}$ metres

✗ 4. $5\sqrt{2}$ metres

Q.67 For which value of p, the system of equations $x + py - 4 = 0$ and $2x + 4y - 12 = 0$ has no solution?

Ans ✗ 1. 1

✔ 2. 2

✗ 3. 3

✗ 4. 0

Q.68 The degree of the polynomial $x(x+2)(x^3 - x + x^4 + 3)$ is:

Ans ✗ 1. 3

✔ 2. 6

✗ 3. 4

✗ 4. 5

Q.69 Convert the number 73 to base 5.

Ans ✗ 1. 143

     ✔ 2. 243

     ✗ 3. 241

     ✗ 4. 141

Q.70 Find a relation between x and y such that point (x, y) is equidistant from the points (6, 5) and (–4, 3).

Ans ✗ 1. $5x - y = -9$

     ✔ 2. $5x + y = 9$

     ✗ 3. $5x + y = -9$

     ✗ 4. $5x - y = 9$

Q.71 If $2x^4 - ax^3 - bx^2 + cx - 3$, divided by $x - 2$ leaves a remainder of 5, divided by $x + 2$ leaves remainder 29, what is the value of b?

Ans ✔ 1. 3

     ✗ 2. 2

     ✗ 3. 5

     ✗ 4. 4

Q.72 Solution of the absolute value of inequality $3|3x + 9| < 54$ is:

Ans ✔ 1. $-9 < x < 3$

     ✗ 2. $-3 < x < 9$

     ✗ 3. $-9 < x < -3$

     ✗ 4. $3 < x < 9$

Q.73 The integral $\int 6\sin^2 x\, dx$ is:

Ans

✗ 1. $\dfrac{2}{3}(2x - \sin 2x)$

✗ 2. $\dfrac{3}{2}(2x + \sin 2x)$

✔ 3. $\dfrac{3}{2}(2x - \sin 2x)$

✗ 4. $\dfrac{2}{3}(2x + \sin 2x)$

Question ID : **6009292022**
Status : **Answered**
Chosen Option : **3**

Q.74 $x^2 - 3x + |m| = 0$ has real roots. How many integer values can m take?

Ans

✗ 1. 7

✔ 2. 5

✗ 3. 3

✗ 4. 4

Question ID : **6009292047**
Status : **Answered**
Chosen Option : **2**

Q.75 A boat goes 28 km upstream and 39 km downstream in 7 hours. In 9 hours, it can go 35 km upstream and 52 km downstream. Determine the speed of the boat in still water.

Ans

✔ 1. 10 km/h

✗ 2. 7 km/h

✗ 3. 3 km/h

✗ 4. 13 km/h

Question ID : **6009292043**
Status : **Not Answered**
Chosen Option : **--**

Q.76 Let A be 3×3 matrix satisfying $A \begin{bmatrix} 0 \\ 1 \\ 0 \end{bmatrix} = \begin{bmatrix} 2 \\ 3 \\ 7 \end{bmatrix}, A \begin{bmatrix} 1 \\ -1 \\ 0 \end{bmatrix} = \begin{bmatrix} -2 \\ 1 \\ -2 \end{bmatrix}$ and $A \begin{bmatrix} 1 \\ 1 \\ 1 \end{bmatrix} = \begin{bmatrix} 5 \\ 9 \\ 18 \end{bmatrix}$, then the sum of the

diagonal entries of A is:

Ans ✗ 1. 12

✗ 2. 6

✗ 3. 15

✔ 4. 9

Question ID : **6009292025**
Status : **Not Answered**
Chosen Option : --

Q.77 $\sin 80° - \cos 80° = $ _____ .

Ans ✗ 1. $\sqrt{3} \sin 55°$

✗ 2. $\sqrt{2} \sin 55°$

✔ 3. $\sqrt{2} \sin 35°$

✗ 4. $\sqrt{3} \sin 35°$

Question ID : **6009292060**
Status : **Answered**
Chosen Option : **3**

Q.78 If $(\cos A - \cos B)^2 + (\sin A - \sin B)^2 = \lambda \sin^2 \left(\frac{A-B}{2} \right)$, then what is the value of λ?

Ans ✗ 1. 6

✗ 2. 2

✔ 3. 4

✗ 4. 1

Question ID : **6009292062**
Status : **Answered**
Chosen Option : **3**

Q.79 For the linear equation $x + 2y = 10$, $x -$ intercept is:

Ans ✗ 1. 15

✔ 2. 10

✗ 3. 5

✗ 4. 7

Question ID : **6009292033**
Status : **Answered**
Chosen Option : **2**

Q.80 $12\cos^3 \dfrac{\pi}{6} - 9\cos\dfrac{\pi}{6} = $ _____.

Ans
✗ 1. $\dfrac{1}{2}$

✗ 2. -1

✗ 3. $\dfrac{3}{2}$

✔ 4. 0

Question ID : **6009292061**
Status : **Answered**
Chosen Option : **4**

Q.81 Which statement among the following is NOT true about the Problem -Solving Method for Teaching Mathematics?

Ans
✗ 1. It is useful in collaborative learning.

✗ 2. It promotes analytical and critical thinking in students.

✗ 3. It is a scientific and psychological method.

✔ 4. It is suitable for students of all levels.

Question ID : **6009292067**
Status : **Answered**
Chosen Option : **4**

Q.82 Which of these pairs is NOT a type of assessment?

Ans
✔ 1. Open and Closed assessment

✗ 2. Norm - Reference and Criteria-Reference assessment

✗ 3. Formative and Summative assessment

✗ 4. Diagnostic and I positive assessment

Question ID : **6009292072**
Status : **Answered**
Chosen Option : **2**

Q.83 Which of the following is NOT a characteristic of Constructive Approach?

Ans
✗ 1. Learning is best done through socially interactive process.

✗ 2. Students construct their own knowledge and form meaning based on their experience.

✗ 3. Learning takes place in the personal zone of cognitive development between what is already known and what is desired to be known.

✔ 4. Deliberate behaviours are reinforced through consequences.

Question ID : **6009292071**
Status : **Answered**
Chosen Option : **4**

Q.84 Which of the following is NOT an objective of Mathematics Laboratory?

Ans ✔ 1. To compel learners to spend more time in mathematics

✘ 2. To study mathematical process rather than mathematical facts

✘ 3. To develop exploration and creativity in learners

✘ 4. To develop the habit of inquiry in learners

> Question ID : **6009292069**
> Status : **Answered**
> Chosen Option : **2**

Q.85 What does Discovery Learning NOT promote?

Ans ✘ 1. Curiosity

✘ 2. Active Inquiry

✘ 3. Creativity

✔ 4. Sense of Dependence

> Question ID : **6009292075**
> Status : **Answered**
> Chosen Option : **4**

Q.86 _____ is about breaking a problem into pieces and looking at them individually; _____ is about putting ideas and information together to see an overall pattern of how ideas come together for the solution.

Ans ✘ 1. Observation; conclusion

✘ 2. Inductive; deductive

✘ 3. Concrete; abstract

✔ 4. Analysis; synthesis

> Question ID : **6009292074**
> Status : **Answered**
> Chosen Option : **4**

Q.87 Mathematics Laboratory is NOT a place where one can find a collection of:

Ans ✘ 1. puzzles

✘ 2. games

✔ 3. furniture

✘ 4. other teaching and learning material

> Question ID : **6009292077**
> Status : **Answered**
> Chosen Option : **3**

Q.88 A child measures each and every triangle and concludes that, "Sum of angles of a triangle is equal to 180 degrees". It is an example of which approach of learning mathematics?

Ans ❌ 1. Direct

✅ 2. Inductive

❌ 3. Game-based

❌ 4. Deductive

Question ID : **6009292073**
Status : **Answered**
Chosen Option : **2**

Q.89 Which of the following is NOT true for group work in mathematics?

Ans ✅ 1. Loose self - confidence

❌ 2. Overcome the fear of making mistakes

❌ 3. Learn to respect others' opinions

❌ 4. Learn to help each other

Question ID : **6009292084**
Status : **Answered**
Chosen Option : **1**

Q.90 Which of the following is NOT a supplementary text material in mathematics learning?

Ans ❌ 1. Mathematics laboratory manual

✅ 2. Textbook

❌ 3. Teacher's handbook

❌ 4. Reference book

Question ID : **6009292083**
Status : **Answered**
Chosen Option : **2**

Q.91 Which of the following is NOT a Hands - on Math Activity?

Ans ❌ 1. Tower of Hanoi

✅ 2. Field Trail

❌ 3. L - Game

❌ 4. Soma's Cube

Question ID : **6009292078**
Status : **Not Answered**
Chosen Option : **--**

Q.92 Discovery learning is a method of _____ instruction.

Ans ✗ 1. field

✗ 2. direct

✗ 3. semi - direct

✓ 4. indirect

Question ID : **6009292086**
Status : **Not Answered**
Chosen Option : **--**

Q.93 Which of the following instructional materials is NOT used as a model in mathematics teaching?

Ans ✓ 1. Textbook

✗ 2. Geometrical shapes

✗ 3. Graph

✗ 4. Table

Question ID : **6009292070**
Status : **Answered**
Chosen Option : **1**

Q.94 _____ objective is categorised under cognitive aspect.

Ans ✗ 1. Valuing

✗ 2. Naturalisation

✓ 3. Application

✗ 4. Receiving

Question ID : **6009292081**
Status : **Answered**
Chosen Option : **4**

Q.95 Which of the following is NOT a role of teachers in a constructivist classroom?

Ans ✗ 1. Modelling

✗ 2. Coaching

✓ 3. Imitating

✗ 4. Scaffolding

Question ID : **6009292082**
Status : **Answered**
Chosen Option : **2**

Q.96 Which of the following is NOT a part of 5E Instructional Model?

Ans   ✗ 1. Exploration

      ✗ 2. Engagement

      ✔ 3. Execution

      ✗ 4. Elaboration

Question ID : **6009292068**
Status : **Answered**
Chosen Option : **3**

Q.97 ICON Models are based on:

Ans   ✗ 1. behaviourist approach

      ✗ 2. cognitivist approach

      ✗ 3. idealistic approach

      ✔ 4. constructivist approach

Question ID : **6009292085**
Status : **Answered**
Chosen Option : **4**

Q.98 Which of the following is NOT an element of collaborative learning in mathematics?

Ans   ✗ 1. Positive Interdependence

      ✗ 2. Group Processing

      ✔ 3. Individual Accountability

      ✗ 4. Face - to - Face Promotive Interaction

Question ID : **6009292076**
Status : **Answered**
Chosen Option : **3**

Q.99 Choose the correct sequence of steps in Guided Discovery from the given options.

1- Clean up and care of materials
2- Sharing exploratory work
3- Generating and modelling students' ideas
4- Exploration and experimentation
5- Introduction and naming

Ans   ✔ 1. 5, 3, 4, 2, 1

      ✗ 2. 1, 5, 2, 3, 4

      ✗ 3. 5, 4, 3, 2, 1

      ✗ 4. 1, 2, 3, 4, 5

Question ID : **6009292079**
Status : **Answered**
Chosen Option : **1**

Q.100 _____ is NOT the focus and content of Mathematics Portfolio.

Ans   ✗   1. Problem solving process

  ✓   2. Students' physical growth

  ✗   3. Students' thinking

  ✗   4. Mathematical connections

Question ID : **6009292080**
Status : **Answered**
Chosen Option : **2**

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