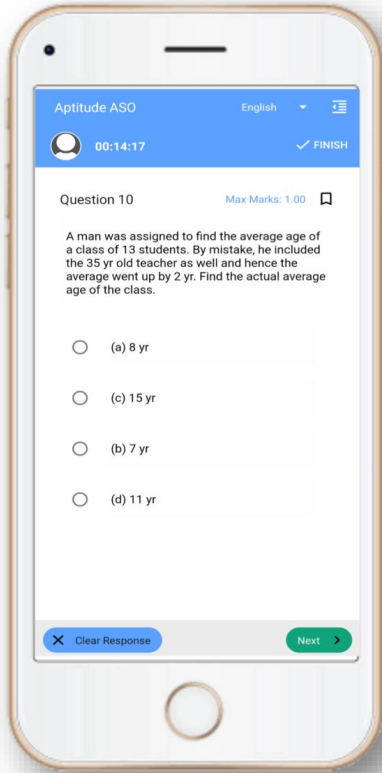


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## ODISHA ADARSHA VIDYALAYA SANGATHAN

Participant ID	Techofworld.In
Participant Name	Techofworld.In
Test Center Name	iON Digital Zone iDZ 1 Patia
Test Date	29/01/2021
Test Time	9:00 AM - 12:20 PM
Subject	PGT CHEMISTRY

## Section : Language Proficiency Test

Q.1 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. Graduation
  - 2. Inception
  - 3. Debut
  - 4. Emergence

Question ID : 6009291805  
Status : Answered  
Chosen Option : 3

Q.2 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.3 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 hadn't had their lunch yet.
  - 2. The children told the teacher that they haven't had their lunch yet.
  - 3. The children told the teacher that they didn't have their lunch yet.
  - 4. The children told the teacher that they are not having their lunch yet.

Question ID : 6009291797  
Status : Marked For Review  
Chosen Option : 1



Q.4 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 have been kept on the table by the manager.  
 2. The files are being kept on the table by the manager.  
 3. The files were kept on the table by the manager.  
 4. The files had been kept on the table by the manager.

Question ID : 6009291793  
Status : Marked For Review  
Chosen Option : 2

Q.5 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. RSPQ  
 2. SQPR  
 3. SRQP  
 4. QRSP

Question ID : 6009291798  
Status : Answered  
Chosen Option : 2

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

- Ans  1. SQPR  
 2. SPRQ  
 3. RPQS  
 4. RSQP

Question ID : 6009291799  
Status : Answered  
Chosen Option : 2

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'.

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

- Ans  1. is interested in  
 2. was interesting to  
 3. No improvement required  
 4. is interested to

Q.8 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 has found this old picture of my grandmother?
  - 2. Who is finding this old picture of my grandmother?
  - 3. Who found this old picture of my grandmother?
  - 4. Who did find this old picture of my grandmother?

Question ID : 6009291794

Status : Answered

Chosen Option : 3

Q.9 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. the answer
  - 2. your questions.
  - 3. I am not knowing
  - 4. to any of

Question ID : 6009291788

Status : Answered

Chosen Option : 3

Q.10 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, I would have informed the police.

- Ans
- 1. No improvement required
  - 2. would inform
  - 3. will inform
  - 4. have informed

Question ID : 6009291792

Status : Not Attempted and Marked For Review

Chosen Option : --

Q.11 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. Pilgrim
  - 3. Mendicant
  - 4. Hermit

Q.12 Choose the correctly spelt word from the following options.

- Ans
- 1. Privelege
  - 2. Privilege
  - 3. Previlege
  - 4. Privilege

Question ID : 60092918  
Status : Answered  
Chosen Option : 2

Q.13 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 visits 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 might be visiting his uncle the next day.

Question ID : 60092917  
Status : Answered  
Chosen Option : 4

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. in office furnitures.
  - 2. This shop stocks
  - 3. latest designs
  - 4. some of the

Question ID : 60092917  
Status : Answered  
Chosen Option : 1

Q.15 Choose the correctly spelt word from the following options.

- Ans
- 1. Concsious
  - 2. Conscious
  - 3. Counsious
  - 4. Consious

Q.16 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. QSRP
  - 2. RQPS
  - 3. SQPR
  - 4. RSPQ

Question ID : 6009291800  
Status : Answered  
Chosen Option : 2

Q.17 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. QPSR
  - 2. QSRP
  - 3. PSRQ
  - 4. RSPQ

Question ID : 6009291801  
Status : Answered  
Chosen Option : 1

Q.18 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. in her wedding.
  - 4. to thank her for

Question ID : 6009291789  
Status : Not Attempted and  
Marked For Review  
Chosen Option : --

Q.19 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. Substitute
  - 2. Replica
  - 3. Forgery
  - 4. Effigy

Question ID : 6009291806  
Status : Answered  
Chosen Option : 2

Q.20 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. when I was younger.
  - 3. I was used to
  - 4. and magazines

Question ID : 6009291790

Status : Not Attempted a  
Marked For Rev

Chosen Option : --

Q.21 ଗଙ୍ଗା/ କାବେରୀକୁ/ କୁହନ୍ତି/ ଦକ୍ଷିଣ ଭାରତରେ - ଠିକ କ୍ରମରେ ସଜ୍ଜାକଲେ ତୁଚ୍ଚିଶୂନ୍ୟ ବାକ୍ୟଟି ହେବ-

- Ans
- 1. କାବେରୀକୁ ଦକ୍ଷିଣ ଭାରତରେ ଗଙ୍ଗା କୁହନ୍ତି
  - 2. ଦକ୍ଷିଣ କାବେରୀକୁ ଭାରତରେ କୁହନ୍ତି ଗଙ୍ଗା
  - 3. ଗଙ୍ଗା କୁହନ୍ତି ଦକ୍ଷିଣ ଭାରତରେ କାବେରୀକୁ
  - 4. ଭାରତରେ କାବେରୀକୁ ଦକ୍ଷିଣ ଗଙ୍ଗା କୁହନ୍ତି

Question ID : 6009291813

Status : Answered

Chosen Option : 1

Q.22 'ବନ୍ଧ' ଶବ୍ଦର ଅର୍ଥ କଣ ?

- Ans
- 1. ଦକ୍ଷା
  - 2. ହତ୍ୟା
  - 3. ଦୋକା
  - 4. ଶାସ୍ତ୍ର

Question ID : 6009291811

Status : Answered

Chosen Option : 2

Q.23 "ତାଙ୍କର ଅଚଳାଚଳ ମନୋବୃତ୍ତି ରହିଛି"- ବାକ୍ୟରେ କେଉଁ ଶବ୍ଦ ପ୍ରୟୋଗରେ ତୁଚ୍ଚି ରହିଛି ?

- Ans
- 1. ମନୋବୃତ୍ତି
  - 2. ତାଙ୍କର
  - 3. ଅଚଳାଚଳ
  - 4. ରହିଛି

Q.24 ଭାଷା ଶିକ୍ଷା ପାଇଁ ବ୍ୟାକରଣ ଧର୍ମ ଆବଶ୍ୟକ - ବାକ୍ୟଟିକୁ ସଜାଡ଼ିବାକୁ ହେଲେ କେଉଁ ଶବ୍ଦର ପରିବର୍ତ୍ତନ କରିବାକୁ ପଡ଼ିବ ?

- Ans
- 1. ବ୍ୟାକରଣ
  - 2. ଭାଷା ଶିକ୍ଷା
  - 3. ଆବଶ୍ୟକ
  - 4. ଧର୍ମ

Question ID : 6009291815  
Status : Answered  
Chosen Option : 4

Q.25 ଅହରହ/ ପ୍ରକୃତି ରାଜ୍ୟରେ/ ଲାଗି ରହିଛି/ ବିଭିନ୍ନ ଲୀଳା- ଉପଯୁକ୍ତ କ୍ରମରେ ରଖିଲେ ବାକ୍ୟଟି ହେବ-

- Ans
- 1. ପ୍ରକୃତି ରାଜ୍ୟରେ ଅହରହ ବିଭିନ୍ନ ଲୀଳା ଲାଗି ରହିଛି
  - 2. ଅହରହ ବିଭିନ୍ନ ଲୀଳା ଲାଗି ରହିଛି ପ୍ରକୃତି ରାଜ୍ୟରେ
  - 3. ବିଭିନ୍ନ ଲୀଳା ପ୍ରକୃତି ରାଜ୍ୟରେ ଲାଗି ରହିଛି ଅହରହ
  - 4. ପ୍ରକୃତି ରାଜ୍ୟରେ ବିଭିନ୍ନ ଲୀଳା ଲାଗି ରହିଛି ଅହରହ

Question ID : 6009291814  
Status : Marked For Review  
Chosen Option : 1

Q.26 ଜଳରେ ମାଘ ହେଲେ ହୁଏ-

- Ans
- 1. ବଢ଼ି
  - 2. ବର୍ଷା
  - 3. ଜଳମାଘ
  - 4. ଜଳଦାନ

Question ID : 6009291818  
Status : Answered  
Chosen Option : 3

Q.27 ଏଥିମଧ୍ୟରୁ କେଉଁ ଶବ୍ଦଟି ଅଶୁଦ୍ଧ ?

- Ans
- 1. ପରାକ୍ରମୀ
  - 2. ଜନତା ମାନଙ୍କର
  - 3. ଦିଗ୍‌ସର୍ତ୍ତ ବଦନ
  - 4. ସତ୍ୟ ବଚନ

Question ID : 6009291821



Q.28 “ତିନି \_\_\_\_\_ ଛେଳି କୁକୁର”। ଉପଯୁକ୍ତ ଶବ୍ଦଟି ବାଛି ଶୂନ୍ୟସ୍ଥାନ ପୂରଣ କର।

- Ans
- 1. ସତ୍ୟରେ
  - 2. ଗହଣରେ
  - 3. ଦୁଷ୍ଟରେ
  - 4. ବିଚାରରେ

Question ID : 6009291808  
Status : Answered  
Chosen Option : 3

Q.29 ‘ଦୁଷ୍ଟତ’ ଶବ୍ଦର ବିପରୀତାର୍ଥ ଶବ୍ଦଟି ହେବ-

- Ans
- 1. ସୁକର୍ମୀ
  - 2. ସୁକୃତ
  - 3. ସୁକୁମାର
  - 4. ଦୁରାଚାରୀ

Question ID : 6009291816  
Status : Marked For Review  
Chosen Option : 2

Q.30 ‘ଗଛରୁ ତୋଳା’କୁ ଅନ୍ୟ ଭାବରେ କୁହାଯାଇପାରେ-

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

Question ID : 6009291819  
Status : Answered  
Chosen Option : 3

Q.31 “ଦୁଷ୍ଟରାଜି ପାଚିଲା କଦଳୀ” ପ୍ରୟୋଗରେ ‘ଦୁଷ୍ଟରୀ’ କାହାକୁ କୁହାଯାଇଥାଏ?

- Ans
- 1. ଅଯୋଗ୍ୟବ୍ୟକ୍ତିକୁ
  - 2. ମଣିଷକୁ
  - 3. ପଶୁକୁ
  - 4. ଦୁଷ୍ଟରୀକୁ

2/3/2021

<https://www.digialm.com//per/g01/pub/1258/touchstone/AssessmentQPHTMLMode1/1258O20312/1258O20312S1D71/161>

Q.32 'ଘିଅ ମିଶା ଭାତ'କୁ ଗୋଟିଏ ଶବ୍ଦରେ ପ୍ରକାଶ କଲେ ହେବ-

- Ans
- 1. ଘିଅଭାତ
  - 2. ଘିଅର ଭାତ
  - 3. ଭାତରେ ଘିଅ
  - 4. ଭାତଘିଅ

Question ID : 6009291810  
Status : Answered  
Chosen Option : 1

Q.33 'ସର୍ବହରା' କାହାକୁ କୁହାଯାଇଥାଏ?

- Ans
- 1. ଯେ ଅନ୍ୟର ସମ୍ପତ୍ତିକୁ ଲୋଭ କରେ
  - 2. ଯେ ଜୀବନରେ ହାରିଥାଏ
  - 3. ଯେ ଅପହରଣ କରେ
  - 4. ଯେ ସବୁକିଛି ହରାଇଥାଏ

Question ID : 6009291822  
Status : Answered  
Chosen Option : 4

Q.34 'ବୃତ୍ତି' ଶବ୍ଦର ଅର୍ଥ 'ଆବରଣ' ହେଲେ 'ବୃତ୍ତି'ର ଅର୍ଥ ହେବ-

- Ans
- 1. ବାଟ
  - 2. ପୁରସ୍କାର
  - 3. ଆଚରଣ
  - 4. ଜୀବିକା

Question ID : 6009291812  
Status : Answered  
Chosen Option : 4

Q.35 ଏଥି ମଧ୍ୟରୁ କେଉଁ ଶବ୍ଦଟି ଘୋଡ଼ାକୁ ବୁଝାଏ?

- Ans
- 1. ବାଜି
  - 2. ଫୁଜ
  - 3. ବାରି
  - 4. ପକ୍ଷ

Question ID : 6009291825  
Status : Marked For Review

Q.36 ସହଜରେ ନାହିଁ ସ୍ୱଭାବ ବଦଳେ - ବାକ୍ୟଟିକୁ ଯଥାର୍ଥ କ୍ରମରେ ସଜାଅ।

- Ans
- 1. ସ୍ୱଭାବ ସହଜରେ ନାହିଁ ବଦଳେ
  - 2. ସ୍ୱଭାବ ବଦଳେ ସହଜରେ ନାହିଁ
  - 3. ସ୍ୱଭାବ ସହଜରେ ବଦଳେ ନାହିଁ
  - 4. ନାହିଁ ସ୍ୱଭାବ ସହଜରେ ବଦଳେ

Question ID : 6009291807  
Status : Answered  
Chosen Option : 3

Q.37 "କଟା ଘାରେ ଚୂନ ଦେବା" ଏଥିରେ 'ଚୂନଦେବା'- ଶବ୍ଦଟି କେଉଁ ବିଶେଷ ଅର୍ଥ ପ୍ରକାଶ କରିଥାଏ ?

- Ans
- 1. ଯତ୍ନଶୀଳ ଦେବା
  - 2. ସହଯୋଗ କରିବା
  - 3. ସାହାଯ୍ୟ କରିବା
  - 4. ଆରାମ ଦେବା

Question ID : 6009291824  
Status : Answered  
Chosen Option : 1

Q.38 ବିଧି ନିର୍ଦ୍ଦେଶରେ ସମସ୍ତେ \_\_\_\_\_ ଉପଯୁକ୍ତ ଶବ୍ଦଟି ବାଛି ଶୂନ୍ୟସ୍ଥାନ ପୂରଣ କର

- Ans
- 1. ପରିଚାଳିତ
  - 2. ସମ୍ମାନିତ
  - 3. ଆତଙ୍କିତ
  - 4. ଉପେକ୍ଷିତ

Question ID : 6009291809  
Status : Answered  
Chosen Option : 1

Q.39 'ବିଧୁ' ଶବ୍ଦର ଅର୍ଥ କଣ ?

- Ans
- 1. ଚନ୍ଦ୍ର
  - 2. ପୃଥିବୀ
  - 3. ଆକାଶ
  - 4. ସୂର୍ଯ୍ୟ

Q.40 ଯେ ସତ୍ୟ ପଥରେ ଯାଏ ତାକୁ କୁହାଯାଏ-

- Ans
- 1. ସତ୍ୟାନନ୍ଦ
  - 2. ସତ୍ୟବ୍ରତ୍ତ
  - 3. ସତ୍ୟବାଦୀ
  - 4. ସତ୍ୟମାର୍ଗୀ

Question ID : 6009291817  
Status : Answered  
Chosen Option : 3

Section : Current Affairs & Reasoning

Q.1 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 : Not Answered  
Chosen Option : --

Q.2 Which iconic Indian superhero becomes the brand ambassador for Namami Gange Project in 2020?

- Ans
- 1. Chacha Chaudhary
  - 2. Devi
  - 3. Nagraj
  - 4. Shaktimaan

Question ID : 6009291855  
Status : Not Answered  
Chosen Option : --

Q.3 Who was the recipient of the International Children's Peace Prize 2020?

- Ans
- 1. Mohamad Al Jounde
  - 2. Greta Thunberg
  - 3. Sadat Rahman
  - 4. Neha Gupta

Q.4 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. Assam
  - 3. West Bengal
  - 4. Karnataka

Question ID : 6009291836  
Status : Answered  
Chosen Option : 2

Q.5 Who was appointed as the first Lieutenant Governor of the union territory of Jammu and Kashmir?

- Ans
- 1. Satya Pal Malik
  - 2. Radha Krishna Mathur
  - 3. Manoj Sinha
  - 4. Girish Chandra Murmu

Question ID : 6009291853  
Status : Marked For Review  
Chosen Option : 4

Q.6 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. assistance to SDRF (State Disaster Response Fund)
  - 3. grants for urban local bodies
  - 4. GST collections

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

Q.7 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. India
  - 3. South Africa
  - 4. Pakistan

Question ID : 6009291840  
Status : Not Answered  
Chosen Option : --

Q.8 Padma Shri awardee, Shobha Naidu, who passed away in October 2020, was a \_\_\_\_\_.

- Ans
- 1. poet
  - 2. politician
  - 3. journalist
  - 4. dancer

Question ID : 6009291842

Q.9 Which of the following has recently (year 2020) been declared as a Ramsar site under the International Ramsar Wetland Convention?

- Ans
- 1. Sukhna Lake, Chandigarh
  - 2. River Mandovi, Goa
  - 3. Chilika Lake, Odisha
  - 4. Lake Meteor, Maharashtra

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

Q.10 Which player has won 13 French Open Men's Singles titles as of 2020?

- Ans
- 1. Dominic Thiem
  - 2. Rafael Nadal
  - 3. Roger Federer
  - 4. Novak Djokovic

Question ID : 6009291845  
Status : Not Answered  
Chosen Option : --

Q.11 Which organisation has released the '2020 State of Climate Services' report?

- Ans
- 1. World Food Programme
  - 2. World Metrological Organization
  - 3. UNICEF
  - 4. Food and Agricultural Organization

Question ID : 6009291844  
Status : Not Answered  
Chosen Option : --

Q.12 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. RBI
  - 2. HDFC
  - 3. ICICI
  - 4. SBI

Question ID : 6009291829  
Status : Marked For Review  
Chosen Option : 1

Q.13 Which of the following pacts was signed in the 2 + 2 meeting between India and the US held in October 2020?

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

Q.14 Indian Army has built a memorial for its personnel killed during the Galwan clash at

- Ans
- 1. Jammu
  - 2. Ladakh
  - 3. Shillong
  - 4. Siliguri

Question ID : 6009291849  
Status : Marked For Review  
Chosen Option : 4

Q.15 Which country will host G20 Summit in 2023?

- Ans
- 1. Italy
  - 2. India
  - 3. Brazil
  - 4. Saudi Arabia

Question ID : 6009291833  
Status : Answered  
Chosen Option : 4

Q.16 What was the theme of World Health Day 2020?

- Ans
- 1. Safety and Health at Work Can Save Lives
  - 2. Vaccines Work for All
  - 3. Support Nurses and Midwives
  - 4. Sustaining All Life on Earth

Question ID : 6009291851  
Status : Not Answered  
Chosen Option : --

Q.17 Which city was the venue of the meeting of the foreign ministers of QUAD countries held in October 2020?

- Ans
- 1. New Delhi
  - 2. Tokyo
  - 3. Sydney
  - 4. New York

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

Q.18 What is 'OSIRIS - Rex' which was in the news in October 2020?

- Ans
- 1. Covid-19 vaccine
  - 2. Anti-tank missile
  - 3. Spacecraft
  - 4. Submarine

Question ID : 6009291834  
Status : Not Answered

Q.19 Name the Massive Open Online Course (MOOC) platform of India.

- Ans
- 1. edX
  - 2. Course era
  - 3. SWAYAM
  - 4. Udacity

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

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

- Ans
- 1. Rishi Kapoor
  - 2. Shashi Kapoor
  - 3. Amitabh Bachchan
  - 4. Dharmendra

Question ID : 60092  
Status : Answ  
Chosen Option : 2

Q.21 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. Uttar Pradesh
  - 2. Madhya Pradesh
  - 3. Andhra Pradesh
  - 4. Gujarat

Question ID : 60092  
Status : Answ  
Chosen Option : 4

Q.22 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-borne hepatitis
  - 2. cancer therapy
  - 3. blood cancer
  - 4. cells sense and adapt to oxygen availability

Question ID : 60092



Q.23 '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. ii) and iii)
  - 2. iii) and iv)
  - 3. i) and ii)
  - 4. i) and iv)

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

Q.24 Which nation targets to achieve Zero Carbon Emissions by 2050?

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

Question ID : 6009291828  
Status : Not Answered  
Chosen Option : --

Q.25 Which state/ union territory was the first one to exempt road tax on its battery operated vehicles?

- Ans
- 1. Tamil Nadu
  - 2. Delhi
  - 3. Gujarat
  - 4. Kerala

Question ID : 6009291846  
Status : Not Answered  
Chosen Option : --

Q.26 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. National Academic Depository
  - 2. Digilocker
  - 3. Shodganga
  - 4. Parinam Manjusha

Q.27 Which state launched the 'Mission Shakti' department for women self - help groups in 2020?

- Ans
- 1. Odisha
  - 2. Rajasthan
  - 3. Madhya Pradesh
  - 4. Uttar Pradesh

Question ID : 6009291838  
Status : Answered  
Chosen Option : 1

Q.28 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. 16
  - 3. 12
  - 4. 7

Question ID : 6009291848  
Status : Not Answered  
Chosen Option : --

Q.29 As of October 2020, how many Indian sites are listed under UNESCO World Heritage Sites?

- Ans
- 1. 52
  - 2. 26
  - 3. 45
  - 4. 38

Question ID : 6009291856  
Status : Not Answered  
Chosen Option : --

Q.30 Who among the following batsmen is the fastest to score 11,000 runs in One Day International Cricket?

- Ans
- 1. Virat Kohli
  - 2. Sachin Tendulkar
  - 3. Rohit Sharma
  - 4. Shikhar Dhawan

Question ID : 6009291843  
Status : Marked For

2/3/2021

<https://www.digialm.com//per/g01/pub/1258/touchstone/AssessmentQPHTMLMode1/1258O20312/1258O20312S1D71/1612166>

Q.31 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

Question ID : 6009291886  
Status : Marked For Review  
Chosen Option : 2

Q.32 If in a certain coding language, 'HYENA' is written as 'OFLUH', then how will 'TURTLE' be written in that language?

- Ans
- 1. BCYBSL
  - 2. BCYBTL
  - 3. ABYATM
  - 4. ABYASL

Question ID : 6009291875  
Status : Answered  
Chosen Option : 4

Q.33 If in a certain coding language, 'ROBOT' is written as '71', then how will 'FEAR' be coded in that language?

- Ans
- 1. 30
  - 2. 32
  - 3. 33
  - 4. 31

Question ID : 6009291877  
Status : Answered  
Chosen Option : 4

Q.34 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 : ?

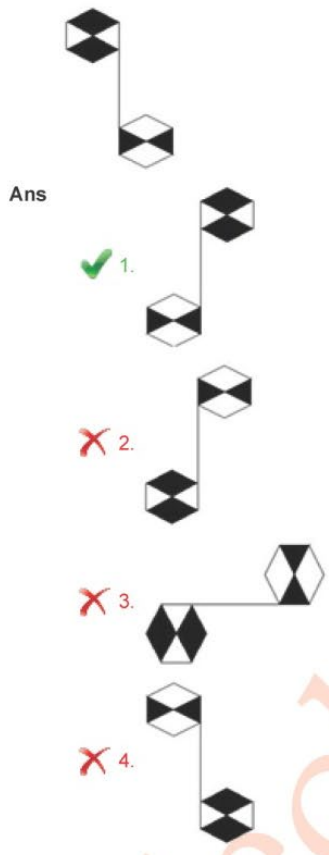
- Ans
- 1. Table
  - 2. Room
  - 3. Comfort
  - 4. Wood

Q.35 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. A
  - 2. G
  - 3. D
  - 4. B

Question ID : 6009291874  
 Status : Answered  
 Chosen Option : 1

Q.36 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.



Question ID : 6009291858  
 Status : Answered  
 Chosen Option : 1

Q.37 Select the option that can replace the question mark (?) to complete the given letter-cluster series.

DWP, HSR, LOT, PKV, ?

- Ans
- 1. THX
  - 2. TGX
  - 3. TGY
  - 4. SGX

Q.38 Which of the figures given in the options is the exact water image of the given figure?

*Good Luck*

Ans

- ✓ 1.
- ✗ 2.
- ✗ 3.
- ✗ 4.

Question ID : 6009291859  
 Status : Answered  
 Chosen Option : 1

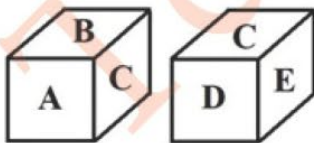
Q.39 Select the option that can replace the question mark (?) to complete the given letter-pair series.

JZ, FH, BP, XX, ?

- ✗ 1. RD
- ✗ 2. QC
- ✗ 3. SE
- ✓ 4. TF

Question ID : 6009291872  
 Status : Answered  
 Chosen Option : 4

Q.40 Two positions of the same dice are given. Which letter will be on the face opposite to the face having the letter C?



- ✗ 1. B
- ✓ 2. F
- ✗ 3. D
- ✗ 4. E

Q.41 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. Shirt
  - 2. Jeans
  - 3. Jacket
  - 4. Curtains

Question ID : 6009291880  
Status : Answered  
Chosen Option : 4

Q.42 If South - West becomes North, then what will North - West become?

- Ans
- 1. South - East
  - 2. North
  - 3. East
  - 4. North - East

Question ID : 6009291884  
Status : Answered  
Chosen Option : 3

Q.43 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. R
  - 3. P
  - 4. Q

Question ID : 6009291883  
Status : Not Answered  
Chosen Option : --

Q.44 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. Rope : Long
  - 2. Ball : Play
  - 3. Fork : Knife
  - 4. Food : Spicy

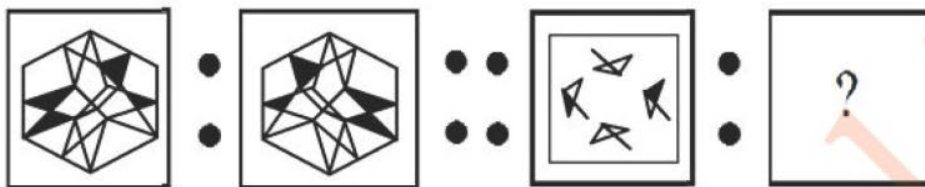
Question ID : 6009291879

Q.45 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. At the centre
  - 2. At the extreme left
  - 3. Between Angela and Alex
  - 4. Right of Carla

Question ID : 6009291873  
 Status : Answered  
 Chosen Option : 2

Q.46 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 (?).

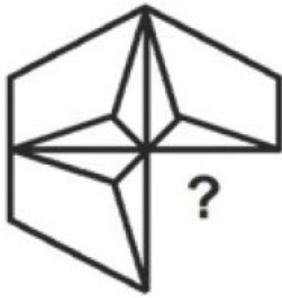


Ans

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

Question ID : 6009291888

Q.47 Identify the figure that can replace the question mark (?) to complete the given pattern.



Ans

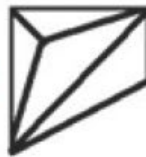
✓ 1.



✗ 2.



✗ 3.



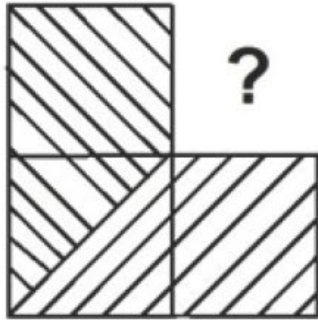
✗ 4.



Question ID  
Status  
Chosen Option

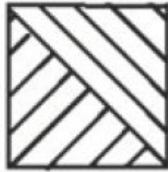


Q.48 Identify the figure that can replace the question mark (?) to complete the given pattern.

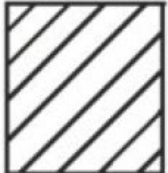


Ans

~~1.~~



~~2.~~



~~3.~~

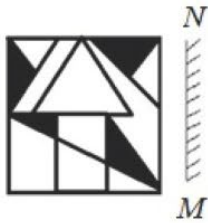


4.



Question ID  
Status  
Chosen Option

Q.49 Select the correct mirror image of the given figure from the following options, when the mirror is placed on the line MN.

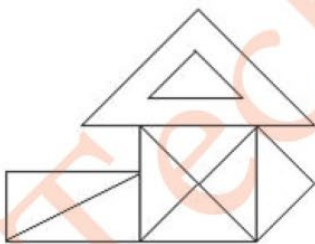


Ans

- ✓ 1.
- ✗ 2.
- ✗ 3.
- ✗ 4.

Question ID : 6009291857  
 Status : Answered  
 Chosen Option : 1

Q.50 What is the maximum number of triangles in the given figure?



- ✗ 1. 16
- ✗ 2. 15
- ✗ 3. 14
- ✓ 4. 13

Question ID : 6009291866  
 Status : Answered

Q.51 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.

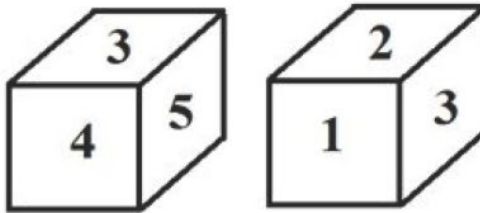
- Ans
- 1. Only conclusion II follows
  - 2. Neither conclusion I nor II follows
  - 3. Both the conclusions follow
  - 4. Only conclusion I follows

Question ID : 6009291885

Status : Marked For Review

Chosen Option : 3

Q.52 Two positions of the same dice are given. Which number will be on the face opposite to the face having the number 5?



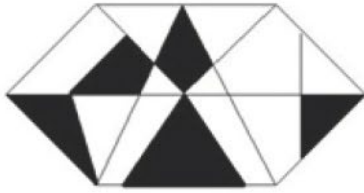
- Ans
- 1. 1
  - 2. 2
  - 3. 3
  - 4. 4

Question ID : 6009291861

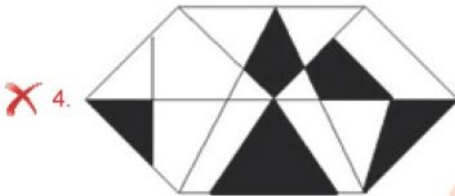
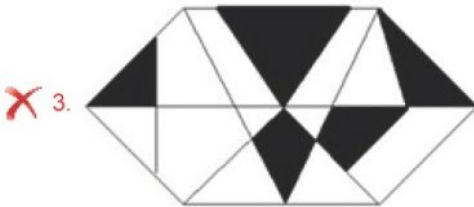
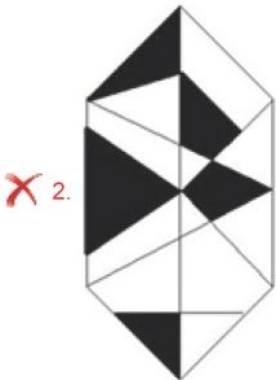
Status : Answered

Chosen Option : 1

Q.53 Which of the figures given in the options is the exact water image of the given figure?

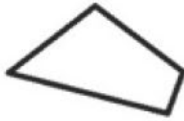


Ans



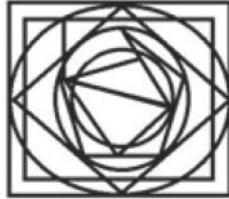
Question ID : 6009291860  
Status : Answered  
Chosen Option : 1

Q.54 Select the option figure in which the given figure is embedded (rotation is NOT allowed).

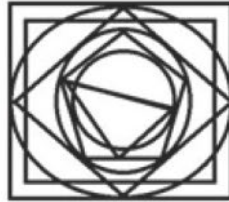


Ans

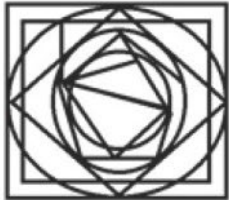
✗ 1.



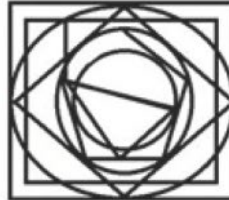
✓ 2.



✗ 3.

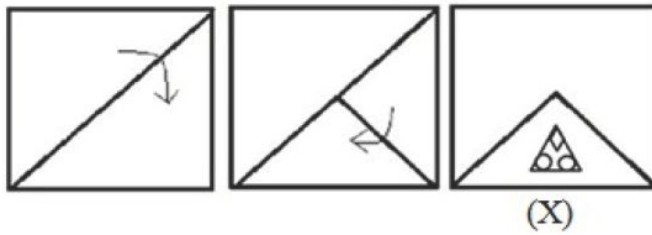


✗ 4.



Question ID : 6009291869  
Status : Answered  
Chosen Option : 2

Q.55 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).



Ans

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

Question ID : 6009291867

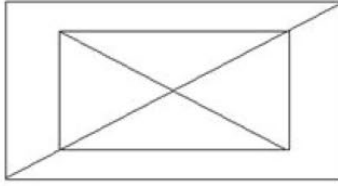
Status : Answered

Chosen Option : 3

Q.56 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.

- 1. Queen
- 2. Sister
- 3. Tigress
- 4. Lion

Q.57 What is the maximum number of triangles in the given figure?



- Ans
- 1. 8
  - 2. 14
  - 3. 10
  - 4. 12

Question ID : 6009291865  
Status : Answered  
Chosen Option : 3

Q.58 If in a certain coding language, 'EARS' is written as 'OQBI', then how will 'NOSE' be written in that language?

- Ans
- 1. XFDV
  - 2. XECU
  - 3. YECX
  - 4. XFIO

Question ID : 6009291876  
Status : Answered  
Chosen Option : 2

Q.59 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. W
  - 3. X
  - 4. Y

Question ID : 6009291870  
Status : Not Answered  
Chosen Option : --

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. Denmark : Copenhagen
  - 2. Brazil : South America
  - 3. Cuba : Havana
  - 4. Norway : Oslo

Question ID : 6009291882

Q.1 More recent considerations have shown that the double layer is made of:

- (1) A compact layer of positive and negative charges which are fixed firmly on the particle surface.  
 (2) A diffuse layer of counter ions (negative ions) diffused into the medium containing positive ions.

Which of the given statement(s) is/are correct?

- Ans  1. Only (2)  
 2. Both (1) and (2)  
 3. Only (1)  
 4. Either (1) or (2)

Question ID : 6009292104  
 Status : Not Answered  
 Chosen Option : --

Q.2 A recent development is that of the zinc-air battery for use in electrically powered vehicles. Which of the following is correct?

- Ans  1. At the anode:  $Zn + 4[OH]^- \rightarrow [Zn(OH)_4]^{2-} + 2e^-$   
 $[Zn(OH)_4]^{2-} \rightarrow ZnO + 2[OH]^- + H_2O$   
 2. At the cathode:  $O_2 + 2[OH]^- + 2e^- \rightarrow H_2O + (O)$   
 3. At the cathode:  $[Zn(OH)_4]^{2-} + 2e^- \rightarrow Zn + 4[OH]^-$   
 $ZnO + 2[OH]^- + H_2O \rightarrow [Zn(OH)_4]^{2-}$   
 4. At the anode:  $4[OH]^- \rightarrow O_2 + H_2O + 4e^-$

Question ID : 6009292128  
 Status : Not Attempted and Marked For Review  
 Chosen Option : --

Q.3 Which of the following options produces a significant amount of acetylide ion on reaction with acetylene?

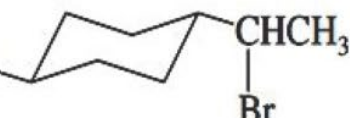
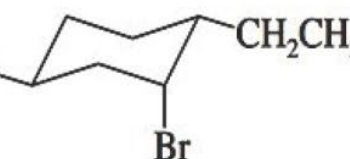
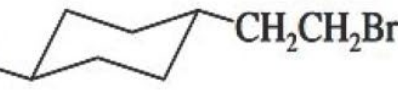
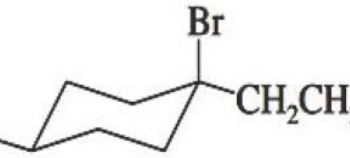
- Ans  1. Conjugate base of  $H_2O$  ( $pK_a=16$ )  
 2. Conjugate base of  $CH_3OH$  ( $pK_a=16$ )  
 3.  
 Both conjugate base of  $CH_3OH$  ( $pK_a=16$ ) and conjugate base of  $H_2O$  ( $pK_a=16$ )  
 4. Conjugate base of  $H_2$  ( $pK_a=35$ )

Question ID : 6009292153  
 Status : Not Answered  
 Chosen Option : --



Q.4 Which of the following alkyl halides would be expected to give the highest substitution-to-elimination ratio (most substitution, least elimination) on treatment with sodium ethoxide in ethanol?

Ans

1. 
2. 
3. 
4. 

Question ID : 6009292166

Status : Not Answered

Chosen Option : --

Q.5 The reaction enthalpy for the production of  $SF_6(g)$  from  $SF_4(g)$  given that the mean bond enthalpies of  $F_2$ ,  $SF_4$  and  $SF_6$  are 158, 343 and  $327 \text{ kJ mol}^{-1}$ , respectively, at  $25^\circ\text{C}$  is:

Ans

1.  $-324 \text{ kJ}$
2.  $+324 \text{ kJ}$
3.  $-432 \text{ kJ}$
4.  $+432 \text{ kJ}$

Question ID : 6009292116

Status : Not Answered

Chosen Option : --

Q.6 Which of the following products is major when tetra-butyl bromide reacts with  $\text{NaOC}_2\text{H}_5$  in the presence of  $25^\circ\text{C}$ ?

Ans

1. 1,1-dimethyl ethene
2. 2-methyl-1-propene
3. 1-butene
4. 2-butene

Question ID : 6009292102

Status : Marked For Review

Chosen Option : 3

**Q.7** The specific optical rotations of pure  $\alpha$  - and  $\beta$  - *D* mannopyranose are  $29.3^\circ$  and  $17.0^\circ$ , respectively. When either form is dissolved in water, mutarotation occurs, and the observed rotation of the solution changes until a final rotation of  $14.2^\circ$  is observed. Assuming that only  $\alpha$  - and  $\beta$  - pyranose forms are present, and then the percent of each isomer at equilibrium is:

Ans  1.

Percent isomer  $\alpha$  - is 18% and Percent isomer is  $\beta$  - is 82%

2.

Percent isomer  $\alpha$  - is 82% and Percent isomer is  $\beta$  - is 18%

3.

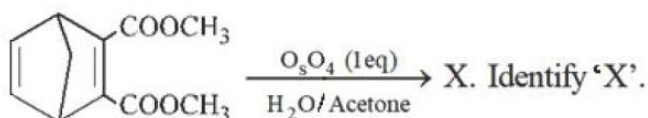
Percent isomer  $\alpha$  - is 67% and Percent isomer is  $\beta$  - is 33%

4.

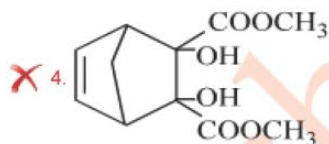
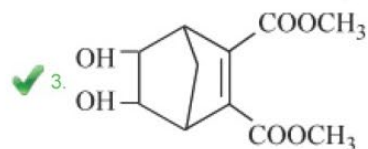
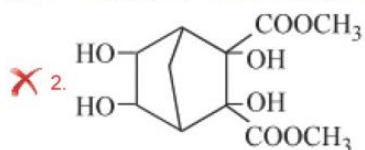
Percent isomer  $\alpha$  - is 33% and Percent isomer is  $\beta$  - is 67%

Question ID : 6009292162  
Status : Not Answered  
Chosen Option : --

**Q.8**



Ans  1. Reaction will not occur



Question ID : 6009292145  
Status : Not Answered  
Chosen Option : --

**Q.9** When gaseous iodine is heated, dissociation occurs as  $\text{I}_2 \rightleftharpoons 2\text{I}$ . It was found that when 0.0061 mol of iodine was placed in a volume of  $0.5 \text{ dm}^3$  at 900 K, the degree of dissociation (the fraction of the iodine that is dissociated) was 0.0274. Find the  $K_c$ .

Ans  1.  $K_c = 5.47 \times 10^{-4} \text{ mol} \cdot \text{dm}^{-3}$

2.  $K_c = 1.82 \times 10^{-3} \text{ mol} \cdot \text{dm}^{-3}$

3.  $K_c = 7.43 \times 10^{-2} \text{ mol} \cdot \text{dm}^{-3}$

4.  $K_c = 3.77 \times 10^{-5} \text{ mol} \cdot \text{dm}^{-3}$

Question ID : 6009292099

**Q.10** At 25°C and pH = 7, a solution containing compound A and its reduced form  $AH_2$  has a standard electrode potential of  $-0.60$  V. A solution containing B and  $BH_2$  has a standard potential of  $-0.16$  V. If a cell were constructed with these systems as half-cells, what would be the reversible EMF of the cell?

- Ans
- 1.  $E = 1.72$  V
  - 2.  $E = -1.66$  V
  - 3.  $E = 0.44$  V
  - 4.  $E = -0.72$  V

Question ID : 6009292109  
Status : Answered  
Chosen Option : 3

**Q.11** The equilibrium constant of the reaction  $2 SO_2(g) + O_2(g) \leftrightarrow 2 SO_3(g)$  is  $4.0 \times 10^{24}$  at 300 K,  $2.5 \times 10^{10}$  at 500 K, and  $3.0 \times 10^4$  at 700 K. Calculate the reaction enthalpy at 500 K.

- Ans
- 1.  $-80 \text{ kJ mol}^{-1}$
  - 2.  $+200 \text{ kJ mol}^{-1}$
  - 3.  $+80 \text{ kJ mol}^{-1}$
  - 4.  $-200 \text{ kJ mol}^{-1}$

Question ID : 6009292113  
Status : Not Answered  
Chosen Option : --

**Q.12** Which of the following compounds is formed when acetic acid reacts with  $SOCl_2$  and sodium azide in the presence of heat?

- Ans
- 1. Acetamide
  - 2. Methanamine
  - 3. Ethanamine
  - 4. Ethanenitrile

Question ID : 6009292089  
Status : Not Answered  
Chosen Option : --

**Q.13** Heat capacity at constant volume is the change in:

- Ans
- 1. enthalpy with temperature at constant pressure
  - 2. enthalpy with temperature at constant volume
  - 3. internal energy with temperature at constant volume
  - 4. internal energy with temperature at constant pressure

Question ID : 6009292123

2/3/2021

https://www.digialm.com//per/g01/pub/1258/touchstone/AssessmentQPHTMLMode1/1258O20312/1258O20312S1D71/16121660

Q.14 Which type of characterisation is present in  $\text{SiH}_4$ ?

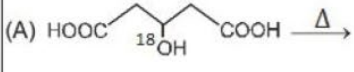
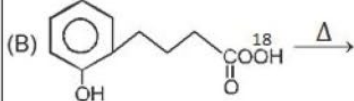
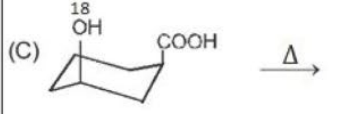
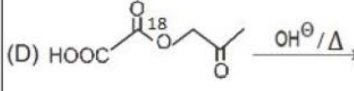
- Ans  1.  $2c - 2e^-$   
 2.  $4c - 2e^-$   
 3.  $3c - 2e^-$   
 4.  $2c - 4e^-$

Question ID : 6009292096

Status : Not Answered

Chosen Option : --

Q.15 Match the products in column II with the reactions in column I.

Column I	Column II
(A) 	(p) ester with $\text{O}^{18}$
(B) 	(q) A $\beta$ -diketone with $^{-18}\text{OH}$ group
(C) 	(r) A cyclic anhydride with $^{-18}\text{OH}$ group
(D) 	(s) A cyclic ester without $\text{O}^{18}$

- Ans  1. (A) - s; (B) - q; (C) - p; (D) - r  
 2. (A) - s; (B) - r; (C) - q; (D) - p  
 3. (A) - r; (B) - s; (C) - p; (D) - q  
 4. (A) - q; (B) - p; (C) - s; (D) - r

Question ID : 6009292148

Status : Marked For Review

Chosen Option : 3

Q.16 The stoichiometric equation for the oxidation of bromide ions by hydrogen peroxide in acid solution is:

$2\text{Br}^- + \text{H}_2\text{O}_2 + 2\text{H}^+ \rightarrow \text{Br}_2 + 2\text{H}_2\text{O}$ . Since the reaction does not occur in one stage, the rate equation does not correspond to this stoichiometric equation but is  $v = k[\text{H}_2\text{O}_2][\text{H}^+][\text{Br}^-]$ . If the rate of consumption of  $\text{Br}^-$  ions is  $7.2 \times 10^{-3} \text{ mol dm}^{-3} \text{ s}^{-1}$ , what is the rate of formation of bromine?

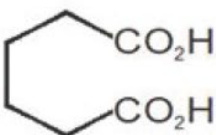
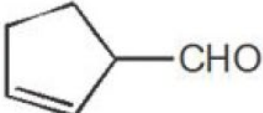
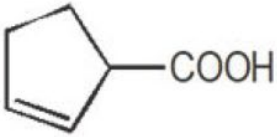
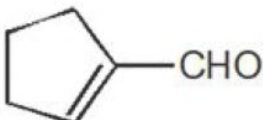
- Ans  1.  $6.4 \times 10^{-2} \text{ mol. dm}^{-3} \cdot \text{s}^{-1}$   
 2.  $3.6 \times 10^{-3} \text{ mol. dm}^{-3} \cdot \text{s}^{-1}$   
 3.  $9.2 \times 10^{-4} \text{ mol. dm}^{-3} \cdot \text{s}^{-1}$   
 4.  $5.4 \times 10^{-2} \text{ mol. dm}^{-3} \cdot \text{s}^{-1}$

Q.17 Calculate the density of silver in  $\text{g/cm}^3$  if the Ag atoms crystallise in a face-centered cubic and have a metallic radius of 144 pm.

- Ans
- 1.  $1.06\text{g/cm}^3$
  - 2.  $8.17\text{g/cm}^3$
  - 3.  $7.16\text{g/cm}^3$
  - 4.  $10.6\text{g/cm}^3$

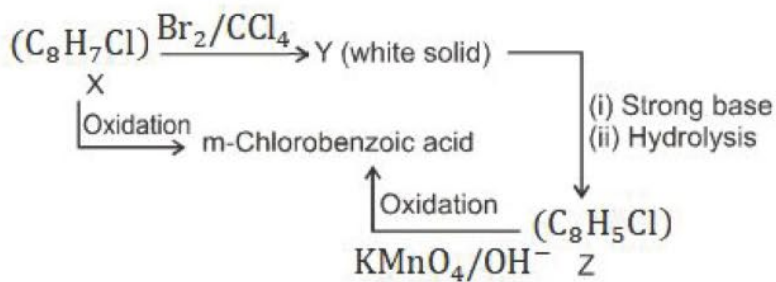
Question ID : 6009292093  
Status : Not Answered  
Chosen Option : --

Q.18 Cyclohexene on ozonolysis followed by reaction with zinc dust and water gives compound 'A'. Compound 'A' on further treatment with aqueous KOH yields compound 'B'. Compound 'B' is:

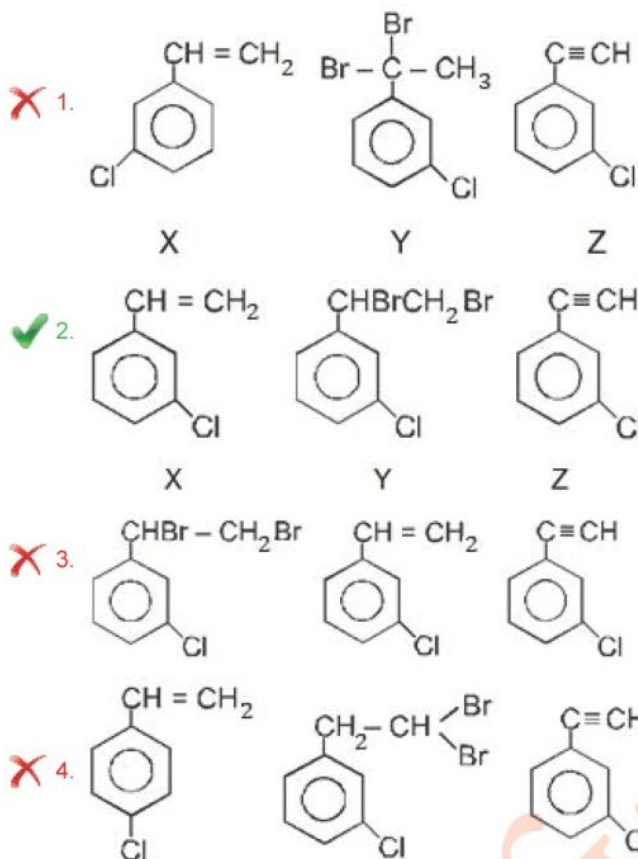
- Ans
- 1. 
  - 2. 
  - 3. 
  - 4. 

Question ID : 6009292149  
Status : Answered  
Chosen Option : 4

Q.19



Ans



Question ID : 6009292154

Status : Not Answered

Chosen Option : --

Q.20

The correct increasing order of metallic radii is:

Ans

- ~~1.~~ C < B < Al < Si  
~~2.~~ B < C < Si < Al  
~~3.~~ B < C < Al < Si

Question ID : 6009292101

Status : Not Answered

Chosen Option : --



Product [C] is:

- Ans
- 1. nitro ethane
  - 2. nitrolic acid
  - 3. pseudo nitrolic acid
  - 4. ether

Question ID : 6009292155  
Status : Not Answered  
Chosen Option : --

Q.22 The radius of first orbit in a hydrogen atom according to Bohr's Model is given by the relation:

- Ans
- 1.  $r = \frac{h^2}{4\pi^2 m e^2}$
  - 2.  $r = \frac{h^2}{4\pi m e^2}$
  - 3.  $r = \frac{h}{4\pi^2 m e^2}$
  - 4.  $r = \frac{h^2}{4\pi m e^4}$

Question ID : 6009292094  
Status : Not Answered  
Chosen Option : --

Q.23 Which of the following statements is INCORRECT?

- Ans
- 1. Second I.P. of 'B' atom is greater than that of 'C' atom
  - 2. The E.A. of 'F' atom is more than 'Cl' atom
  - 3. I.E. of  $O^-$  is less than that of 'O' atom.
  - 4. Ionic mobility of  $Na^+ (aq)$  is greater than  $Mg^{2+} (aq)$

Question ID : 6009292126  
Status : Answered  
Chosen Option : 2

Q.24 Which of the following relations is applicable to adiabatic expansion of an ideal gas?

- Ans
- 1.  $T_1 V_1^{(\gamma-1)} = T_2 V_2^{(\gamma-1)}$
  - 2.  $T_2 V_1^{(1/\gamma-1)} = T_1 V_2^{(1/\gamma-1)}$
  - 3.  $T_2 V_1^{(\gamma-1)} = T_1 V_2^{(\gamma-1)}$
  - 4.  $T_1 V_2^{(\gamma-1)} = T_2 V_1^{(\gamma-1)}$

Q.25 Which of the following is the correct statement?

Ans  1.

The halogen oxoanions are thermodynamically strong reducing agents; perchlorates of oxidisable cations are unstable.

2.

The halogen oxoanions are thermodynamically strong oxidising agents; perchlorates of oxidisable cations are highly stable.

3.

The halogen oxoanions are thermodynamically strong oxidising agents; perchlorates of oxidisable cations are unstable.

4.

The halogen oxoanions are thermodynamically strong reducing agents; perchlorates of oxidisable cations are highly stable.

Question ID : 6009292119

Status : Not Answered

Chosen Option : --

Q.26 Which of the following statements is INCORRECT?

Ans  1.

$N_2O < NO < N_2O_3 < N_2O_5$  (oxidation state on nitrogen atom)

2.  $SbH_3 > NH_3 > AsH_3 > PH_3$  (boiling point)

3.  $H_3PO_4 > H_3PO_3 > H_3PO_2$  (reducing character)

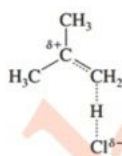
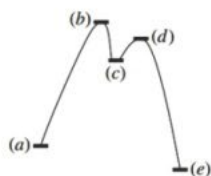
4.  $NH_3 > PH_3 > AsH_3 > SbH_3 \geq BiH_3$  (basicity)

Question ID : 6009292131

Status : Answered

Chosen Option : 3

Q.27 To which point on the potential energy diagram for the reaction of 2-methylpropene with hydrogen chloride, does the figure shown at the right correspond?



Ans  1. Point (d)

2. Point (a)

3. Point (b)

4. Point (c)



**Q.28** For the reaction,  $3H_2(g, 1 \text{ atm}) + Sb_2O_3(s, \text{cubic}) \rightarrow 2Sb(s) + 3H_2O(l)$ ,  $\Delta G^\circ = -83.7 \text{ kJ}$ . Calculate the potential developed by the cell,  $Pt|H_2(g, 1 \text{ atm})||H^+|Sb_2O_3(s, \text{cubic})|Sb(s)$

- Ans
- 1.  $\Delta E^\circ = 0.413 \text{ V}$
  - 2.  $\Delta E^\circ = 0.342 \text{ V}$
  - 3.  $\Delta E^\circ = 0.145 \text{ V}$
  - 4.  $\Delta E^\circ = 0.246 \text{ V}$

Question ID : 6009292110  
Status : Not Answered  
Chosen Option : --

**Q.29** The first ( $IE_1$ ) and second ( $IE_2$ ) ionisation energies ( $\text{kJ mol}^{-1}$ ) of a few elements are as shown in the table:

	$IE_1$	$IE_2$
(a)	2372	5251
(b)	520	7300
(c)	900	1760
(d)	1680	3380

Which of the given elements is likely to be a noble gas?

- Ans
- 1. (d)
  - 2. (a)
  - 3. (c)
  - 4. (b)

Question ID : 6009292125  
Status : Answered  
Chosen Option : 2

**Q.30** Specific conductance is the conductance of:

- Ans
- 1. one gram of a solid electrolyte
  - 2. one gram of solution of an electrolyte
  - 3. one centimetre cube of solution of an electrolyte
  - 4. one centimetre cube of a solid electrolyte

Question ID : 6009292112  
Status : Answered  
Chosen Option : 3

**Q.31** The hydrolysis of *cis*- and *trans*- $[CoAX(en)_2]^+$  where X is the leaving group (either  $Cl^-$  or  $Br^-$ ) and A is  $OH^-$ ,  $NCS^-$ , or  $Cl^-$ . The *cis* complexes do not undergo isomerization when substitution occurs, whereas the *trans* forms show a tendency to isomerize in the order 'A' is:

- Ans
- 1.  $NO_2^- > Cl^- > NCS^- > OH^-$
  - 2.  $NO_2^- < Cl^- < NCS^- < OH^-$
  - 3.  $NO_2^- < Cl^- < NCS^- < OH^-$
  - 4.  $NO_2^- > Cl^- < NCS^- > OH^-$

Q.32 Which of the following statements is correct?

Ans  1.

The species  $[\text{OCNCO}]^+$ ,  $[\text{NCNCN}]$  and  $[\text{N}_5]^+$  are quasi-linear and  $\text{C}_3\text{O}_2$  is non-linear.

2.

The species  $[\text{OCNCO}]^+$ ,  $[\text{NCNCN}]$  and  $[\text{N}_5]^+$  are isoelectronic with  $\text{C}_3\text{O}_2$ , but they are not isostructural.

3.

The species  $[\text{OCNCO}]^+$ ,  $[\text{NCNCN}]$  and  $[\text{N}_5]^+$  are isoelectronic with  $\text{C}_3\text{O}_2$ , and they are isostructural.

4.

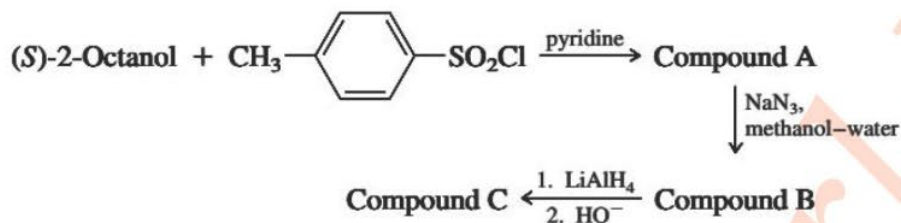
The species  $[\text{OCNCO}]^+$ ,  $[\text{NCNCN}]$  and  $[\text{N}_5]^+$  and  $\text{C}_3\text{O}_2$  are quasi-linear.

Question ID : 6009292132

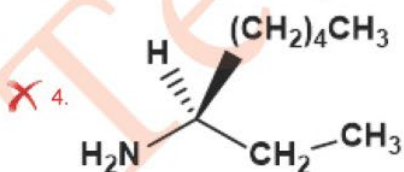
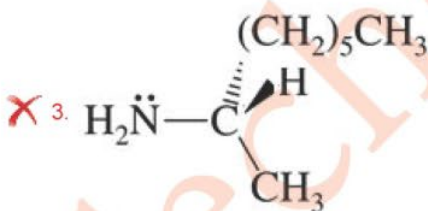
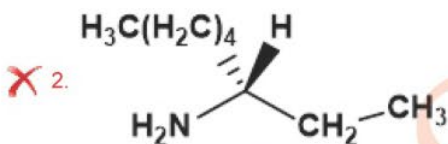
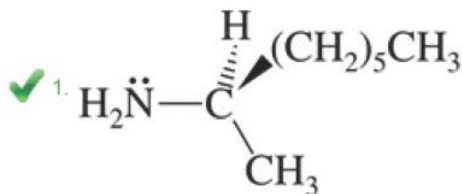
Status : Not Answered

Chosen Option : --

Q.33 Identify the compound 'C' in the given sequential reaction.

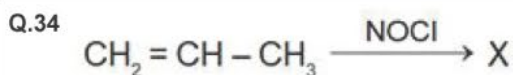


Ans



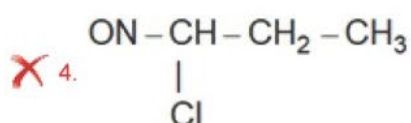
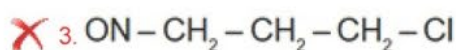
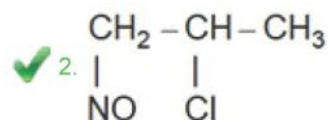
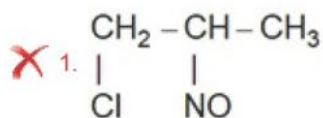
Question ID : 6009292158

Status : Not Answered



X is:

Ans



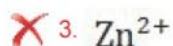
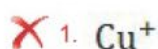
Question ID : 6009292152

Status : Not Answered

Chosen Option : --

Q.35 Which of the following transition metal ions is coloured in aqueous solutions?

Ans



Question ID : 6009292136

Status : Answered

Chosen Option : 1

Q.36 The dimensions in which coefficient of viscosity is expressed are:

Ans

1.  $\text{mass} \times \text{length} \times \text{time}^{-1}$

2.  $\text{mass} \times \text{length}^{-1} \times \text{time}$

3.  $\text{mass}^{-1} \times \text{length}^{-1} \times \text{time}^{-1}$

4.  $\text{mass} \times \text{length}^{-1} \times \text{time}^{-1}$

Question ID : 6009292103

Status : Not Answered

Chosen Option : --



Q.37 Which of the following statements is FALSE?

Ans  1.

$\text{H}_3\text{PO}_2$ ,  $\text{H}_3\text{PO}_3$  and  $\text{H}_3\text{PO}_4$  all are tribasic and reducing in nature.

2.

Amongst anions  $\text{SO}_3^{2-}$ ,  $\text{SO}_4^{2-}$ ,  $\text{S}_2\text{O}_4^{2-}$  and  $\text{HSO}_4^-$ ,  $\text{SO}_3^{2-}$  is basic and reducing in nature.

3.

Number of lone pair(s) of electrons on  $\text{X}_3$  atoms in  $\text{XeF}_2$ ,  $\text{XeF}_4$  and  $\text{XeF}_6$  are 3, 2 and 1, respectively.

4.

Amongst anions  $\text{NO}_3^-$ ,  $\text{SO}_3^{2-}$ ,  $\text{CO}_3^{2-}$  and  $\text{BO}_3^{3-}$ , only  $\text{SO}_3^{2-}$  have  $p\pi - \pi d$  bonding.

Question ID : 600925

Status : Not Answered

Chosen Option : --

Q.38 In the case of Be,  $[\text{Be}(\text{H}_2\text{O})_4]^{2+}$  is formed and attempted dehydration of  $[\text{Be}(\text{H}_2\text{O})_4]\text{Cl}_2$  yields:

Ans  1. BeO

2.  $\text{BeCl}_2$

3.  $\text{Cl}_2$

4.  $\text{Be}(\text{OH})_2$

Question ID : 600925

Status : Not Answered

Chosen Option : --

Q.39 Relative rates of acid-catalyzed hydration of some representative alkenes in water  $25^\circ\text{C}$ , will be in which order?

1. Ethylene

2. Propene

3. 2-Methylpropene

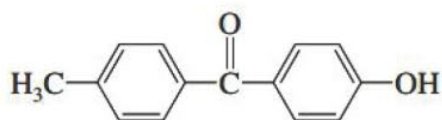
Ans  1.  $1 > 2 > 3$

2.  $1 < 2 > 3$

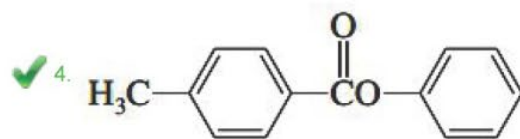
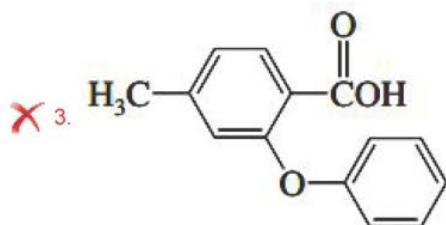
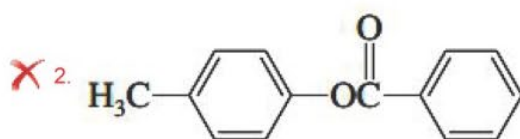
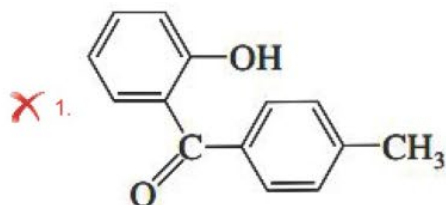
3.  $1 < 2 < 3$

4.  $1 > 2 < 3$

Q.40 What reactant gives the product shown on heating with aluminum chloride?



Ans



Question ID : 6009292161

Status : Not Answered

Chosen Option : --

Q.41 Which of the following statements is INCORRECT?

Ans ✗ 1.

In less acidic solution,  $K_2Cr_2O_7$  and  $H_2O_2$  gives violet coloured diamagnetic  $[CrO(O_2)(OH)]^-$  ion

✓ 2.  $CrO_4^{2-}$  changes to  $Cr_2O_7^{2-}$  by oxidation

✗ 3.

In ammonical solution of  $H_2O_2$ ,  $(NH_3)_3CrO_4$  is formed with  $K_2Cr_2O_7$

✗ 4.

In alkaline  $H_2O_2$ ,  $K_2CrO_8$  (with tetraperoxo species  $[Cr(O_2)_4]^{3-}$ ) is formed with  $K_2Cr_2O_7$

Question ID : 6009292134

Status : Answered

Chosen Option : 1

Q.42 One mole of an ideal gas, with  $C_{v,m} = \frac{3}{2}R$ , is heated at constant volume, from 298 K to 353 K. Find the  $\Delta S$  for the system.

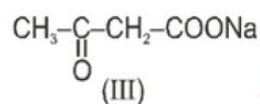
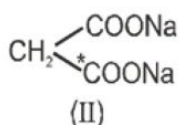
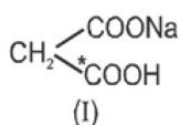
- Ans
- 1.  $\Delta S_m = 3.52JK^{-1}mol^{-1}$
  - 2.  $\Delta S_m = 7.25JK^{-1}mol^{-1}$
  - 3.  $\Delta S_m = 2.11JK^{-1}mol^{-1}$
  - 4.  $\Delta S_m = 5.22JK^{-1}mol^{-1}$

Question ID : 6009292121

Status : Not Answered

Chosen Option : --

Q.43 Select the correct statement about the following compounds I, II, III.



- Ans
- 1. (I) decarboxylates faster than (II) on heating.
  - 2. Only  $^*\text{CO}_2$  is eliminated on heating of compound (I).
  - 3. Compound (I) eliminates a mixture of  $\text{CO}_2$  and  $^*\text{CO}_2$  on heating.
  - 4. The rate of decarboxylation of (II) is faster than (III).

Question ID : 6009292147

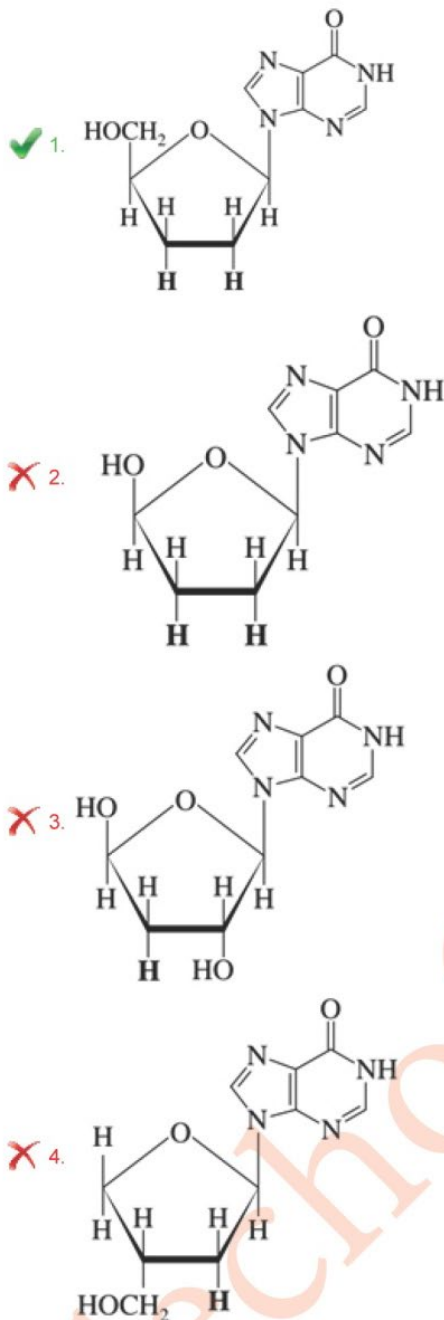
Status : Marked For Review

Chosen Option : 4



**Q.44** The compound 2',3' - dideoxyinosine (DDI) holds promise as a drug for the treatment of AIDS. What is the structure of DDI?

Ans

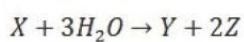
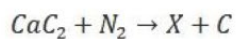


Question ID : 6009292163

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Q.45 Identify X, Y and Z, respectively, from the following chemical equations.



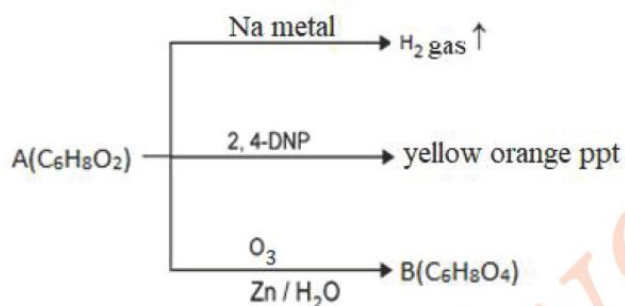
- Ans
- 1.  $\text{Ca}(\text{CN})_2, \text{NH}_3, \text{CaCO}_3$
  - 2.  $\text{CaNCN}, \text{NH}_3, \text{CaCO}_3$
  - 3.  $\text{Ca}(\text{CN})_2, \text{CaCO}_3, \text{NH}_3$
  - 4.  $\text{CaNCN}, \text{CaCO}_3, \text{NH}_3$

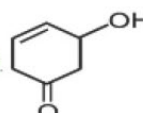
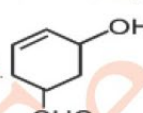
Question ID : 6009292118

Status : Answered

Chosen Option : 3

Q.46 The compound A gives the following reactions:

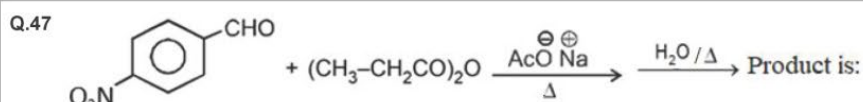


- Ans
- 1.  $\text{CH}_2 = \text{CH} - (\text{CH}_2)_2 - \underset{\text{O}}{\underset{\parallel}{\text{C}}} - \text{CH}_2\text{OH}$
  - 2. 
  - 3.  $\text{OHC} - (\text{CH}_2)_2 - \text{CH} = \text{CH} - \text{COOH}$
  - 4. 

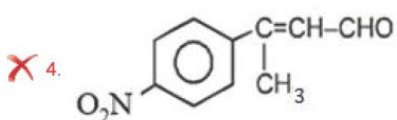
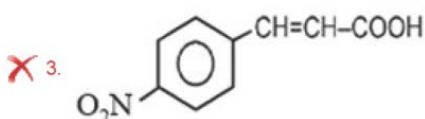
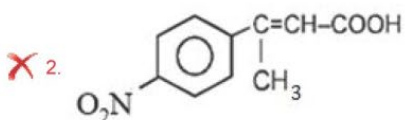
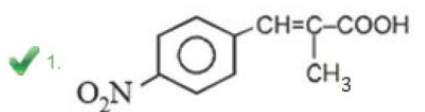


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Ans



Question ID : 6009292151

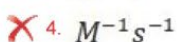
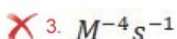
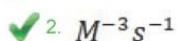
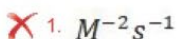
Status : Not Answered

Chosen Option : --

Q.48 What must the units on  $k$  be for the following rate law?

$$\text{rate} = k.[A]^2[B]^2$$

Ans



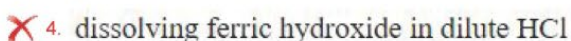
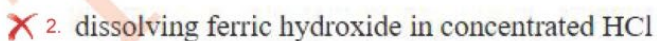
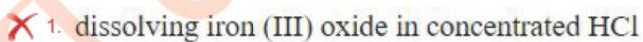
Question ID : 6009292108

Status : Answered

Chosen Option : 2

Q.49 Anhydrous ferric chloride is prepared by:

Ans



Q.50 Match the columns:

Column - I	Column - II
(A) Bakelite	(p) Butadiene and styrene
(B) Dacron	(q) Phenol and methanal
(C) Nylon- 6,6	(r) 1,2- dihydroxyethane and dimethyl terephthalate
(D) Buna-S	(s) 1,6 hexanedioic acid and 1,6-diamine hexane

- Ans
- ✓ 1. (A – q); (B – r); (C – s); (D – p)
  - ✗ 2. (A – q); (B – s); (C – r); (D – p)
  - ✗ 3. (A – s); (B – r); (C – q); (D – p)
  - ✗ 4. (A – r); (B – p); (C – s); (D – q)

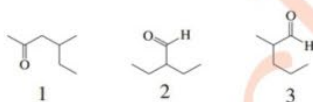
Question ID : 6009292160  
Status : Answered  
Chosen Option : 1

Q.51 The value of  $\Delta H^\circ$  for the reaction  $2CO(g) + \frac{1}{2}O_2(g) \rightarrow Co_2$  is  $-282.97 \text{ kJ mol}^{-1}$  at 298 K. Calculate  $\Delta U^\circ$  for the reaction.

- Ans
- ✓ 1.  $-281.73 \text{ kJ mol}^{-1}$
  - ✗ 2.  $-278.29 \text{ kJ mol}^{-1}$
  - ✗ 3.  $-292.87 \text{ kJ mol}^{-1}$
  - ✗ 4.  $-272.98 \text{ kJ mol}^{-1}$

Question ID : 6009292120  
Status : Answered  
Chosen Option : 1

Q.52 Which of the compounds shown is/are correctly named as pentane derivatives, either as pentanal or pentanone?



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

Question ID : 6009292150  
Status : Answered

Q.53 What is the formal name of  $[\text{Ir}(\text{Br})_2(\text{CH}_3)(\text{CO})(\text{PPh}_3)_2]$ ?

Ans  1.

dibromine carbonyl methylbis (triphenyl phosphine) iridium(II)

2.

dibromide carbonyl methylbis (triphenyl phosphine) iridium(II)

3.

dibromide carbonyl methylbis (triphenyl phosphine) iridium(III)

4.

dibromine carbonyl methylbis (triphenyl phosphine) iridium(III)

Question ID : 6009292141

Status : Not Answered

Chosen Option : --

Q.54 Which of the following statements is INCORRECT?

Ans

1.  $\text{SiO}_4^{4-}$  gets hydrolysed by acid or water and forms  $\text{Si}_2\text{O}_7^{6-}$

2. Diborane on reaction with chlorine (g) forms  $\text{B}_2\text{H}_5\text{Cl}$ .

3.

Borides and silicide are hydrolysed by water forming boranes and silanes, respectively.

4.

$\text{B}_2\text{O}_3$  and  $\text{SiO}_2$  are acidic in nature and are important constituents of glass.

Question ID : 6009292130

Status : Not Answered

Chosen Option : --

Q.55 The conductance of 0.1N  $\text{AgNO}_3$  solution taken in a cell with cell constant  $0.9555 \text{ cm}^{-1}$  is  $0.0099 \text{ ohm}^{-1}$ . Calculate the equivalent conductance.

Ans

1.  $9.459 \text{ mhos cm}^2 \text{ eqvt}^{-1}$

2.  $94.59 \text{ mhos cm}^2 \text{ eqvt}^{-1}$

3.  $0.9459 \text{ mhos cm}^2 \text{ eqvt}^{-1}$

4.  $0.09459 \text{ mhos cm}^2 \text{ eqvt}^{-1}$

Question ID : 6009292111

Status : Not Answered

Chosen Option : --

Q.56 A substance decomposes at 600 K with a rate constant of  $3.72 \times 10^{-5} \text{ s}^{-1}$ . The half-life of the reaction will be:

Ans

1. 3.52 hours

2. 6.74 hours

3. 5.18 hours

4. 4.12 hours

Question ID : 6009292106

Q.57 What is the energy of one quantum of light that has a wavelength of 11,592 Å?

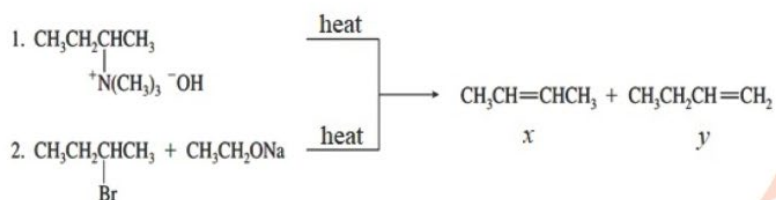
- Ans
- 1.  $0.171 \times 10^{-15} J$
  - 2.  $17.1 \times 10^{-12} J$
  - 3.  $1.71 \times 10^{-13} J$
  - 4.  $1.71 \times 10^{-19} J$

Question ID : 6009292097

Status : Not Attempted and Marked For Review

Chosen Option : --

Q.58 What will be the major product, respectively, of each of the two reactions shown?



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

Question ID : 6009292159

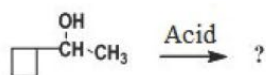
Status : Not Answered

Chosen Option : --

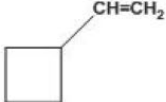

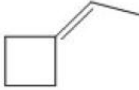
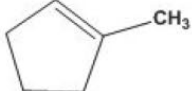
Q.59 Which of the following is correct for radius ratio ( $R_r$ )?

- Ans
- 1.  $r_{\text{C}^+} + r_{\text{A}^-}$
  - 2.  $r_{\text{C}^+} \times r_{\text{A}^-}$
  - 3.  $r_{\text{A}^-} / r_{\text{C}^+}$
  - 4.  $r_{\text{C}^+} / r_{\text{A}^-}$

Q.60



Ans

1. 
2. 
3. 
4. 

Question ID : 6009292095

Status : Not Answered

Chosen Option : --

Q.61

Identify the correct statements for the molecules  $[\text{CO}_3]^{2-}$  and  $[\text{BO}_3]^{3-}$ .

Ans

1.  $\text{B}^+$  isoelectronic with C; both tetrahedral
2.  $\text{B}^-$  isoelectronic with  $\text{C}^+$ ; both tetrahedral
3. B isoelectronic with  $\text{C}^-$ ; both trigonal planar
4.  $\text{B}^-$  isoelectronic with C; both trigonal planar

Question ID : 6009292117

Status : Answered

Chosen Option : 4

Q.62

A researcher determined the rate law,  $\text{rate} = k[\text{A}]^2$  for a simple chemical reaction. If the rate was  $2.44 \times 10^{-4} \text{ M/s}$  when  $[\text{A}]$  was 0.167 M, what would  $[\text{A}]$  be when the rate of the reaction is  $1.55 \times 10^{-6} \text{ M/s}$ ?

Ans

1.  $1.55 \times 10^{-6} \text{ M}$
2.  $3.31 \times 10^{-4} \text{ M}$
3.  $2.44 \times 10^{-4} \text{ M}$
4.  $1.33 \times 10^{-2} \text{ M}$

Question ID : 6009292107

Status : Not Answered

Chosen Option : --

Q.63

Vitamin C or ascorbic acid prevents \_\_\_\_\_.

Ans

1. beriberi
2. scurvy
3. pellagra
4. rickets

Question ID : 6009292157

Q.64 The hybridization of  $[\text{NiCl}_2(\text{PPh}_3)_2]$  and  $[\text{NiCl}_2(\text{PMe}_3)_2]$  are, respectively, (consider  $\text{PPh}_3$  a bulkier ligand than  $\text{PMe}_3$ ):

- Ans
- 1.  $\text{sp}^3$  and  $\text{dsp}^2$
  - 2.  $\text{sp}^3$  and  $\text{sp}^3$
  - 3.  $\text{dsp}^2$  and  $\text{dsp}^2$
  - 4.  $\text{dsp}^2$  and  $\text{sp}^3$

Question ID : 6009292139

Status : Not Answered

Chosen Option : --

Q.65 Identify an expression for the ratio of masses of the materials distilled in a steam distillation in terms of the molar masses and the partial pressures of the two components  $A$  and  $B$ .

- Ans
- 1.  $\frac{m_A}{m_B} = \frac{P_B M_A}{P_A M_B}$
  - 2.  $\frac{m_A}{m_B} = \frac{P_A M_B}{P_B M_A}$
  - 3.  $\frac{m_A}{m_B} = \frac{P_A M_A}{P_B M_B}$
  - 4.  $\frac{m_A}{m_B} = \frac{P_B M_B}{P_A M_A}$

Question ID : 6009292114

Status : Not Answered

Chosen Option : --

Q.66 The first five ionisation energies of an element are 9.1, 16.2, 24.5, 35 and 205.7 eV, respectively. The number of valence electrons in the atom is:

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

Question ID : 6009292127

Status : Not Answered

Chosen Option : --

Q.67 Match the items in List - I with those in List - II.

List- I	List- II
(I) Iodoform	(A) Antibiotic
(II) Novestrol	(B) Antiseptic
(III) Chloroquine	(C) Antimalarial
(IV) Aminoglycosides	(D) Antifertility

- Ans
- 1. I - C, II - A, III - D, IV - B
  - 2. I - B, II - D, III - A, IV - C
  - 3. I - D, II - B, III - A, IV - C
  - 4. I - B, II - D, III - C, IV - A

Question ID : 6009292165  
Status : Answered  
Chosen Option : 4

Q.68 Which of the following statements is INCORRECT?

- Ans  1.  
The size of molecules is appreciable, in the sense that their diameters are much smaller than the average distance travelled between collisions.
2.  
Molecules interact only through brief, infrequent, and elastic collisions.
3.  
The size of molecules is negligible, in the sense that their diameters are much smaller than the average distance travelled between collisions.
4.  
Gas consists of molecules and moves in ceaseless random motion.

Question ID : 6009292090  
Status : Answered  
Chosen Option : 1

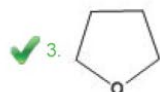
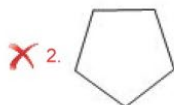
Q.69 A supercritical fluid is one whose temperature T and pressure P satisfy:

- Ans
- 1.  $T < T_C$  and  $P > P_C$
  - 2.  $T > T_C$  and  $P < P_C$
  - 3.  $T > T_C$  and  $P > P_C$
  - 4.  $T < T_C$  and  $P < P_C$

Question ID : 6009292092  
Status : Not Answered  
Chosen Option : --

Q.70 Which of the following compounds has a high boiling point?

Ans  1.  $\text{CH}_3\text{OCH}_3$



4.  $\text{CH}_3\text{CH}_2\text{CH}_3$

Question ID : 6009292087  
Status : Not Answered  
Chosen Option : --

Q.71 Which of the following statements is INCORRECT?

Ans  1.

The vapour pressure increases with the rise in temperature.

2.

The pressure exerted by the vapour in equilibrium with the liquid at a fixed temperature is called vapour pressure.

3. At equilibrium, liquid  $\rightleftharpoons$  vapour .

4.

At equilibrium, the rate of evaporation is not equal to the rate of condensation.

Question ID : 6009292115  
Status : Answered  
Chosen Option : 4

Q.72 The equilibrium constant for a reaction  $A + B \rightleftharpoons Y + Z$  is 0.1 What amount of A must be mixed with 3 mol of B to yield, at equilibrium, 2 mol of Y?

Ans  1. 54 mol

2. 25 mol

3. 37 mol

4. 42 mol

Question ID : 6009292100  
Status : Not Answered  
Chosen Option : --

Q.73 What is the coordination number of  $[\text{La}(\text{acac})_3(\text{OH})_2]$  complex?

Ans  1. 7

2. 11

3. 8

4. 5

Question ID : 6009292088  
Status : Not Answered  
Chosen Option : --



Q.74 Which of the following statements is INCORRECT?

Ans  1. Soap forms insoluble salt with  $Ca^{+2}$  ions.

2.

The  $COO^-$  group in soaps acts as hydrophilic and alkyl chain as hydrophobic.

3.

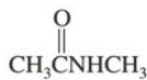
Soaps act by lowering surface tension between water and oil/insoluble material.

4.

Soaps work more efficiently in hard water than in soft water.

Question ID : 6009292164  
Status : Answered  
Chosen Option : 4

Q.75 Rank the following in order of increasing reactivity (least A most) toward acid hydrolysis.



Ans  1.  $3 < 1 < 2$

2.  $1 < 2 < 3$

3.  $1 < 3 < 2$

4.  $2 < 1 < 3$

Question ID : 6009292156  
Status : Not Answered  
Chosen Option : --

Q.76 German silver is an alloy of copper and:

Ans  1. Al + Ag

2. Sn + Zn

3. Zn + Ni

4. Zn + Ag

Question ID : 6009292137  
Status : Not Answered

Q.77 Which of the following options is FALSE?

Ans  1.

Potassium permanganate in excess on treatment with conc.  $H_2SO_4$  forms manganese heptoxide

2.

Phosphine, arsine and stibine all precipitates silver from silver nitrate

3.

From Kipp's apparatus, waste ferric sulphate and ferrous sulphate mixture is obtained when air or oxygen is passed for longer time

4.

$Na_2Cr_2O_7$  is used as a primary standard in volumetric analysis

Question ID : 6009292135

Status : Not Answered

Chosen Option : --

Q.78 Identify the INCORRECT feature of the van der Waals equation among the following options.

Ans  1.

Perfect gas isotherms are obtained at low temperatures and high molar volumes.

2.

Liquids and gases coexist when the attractive and repulsive effects are in balance.

3.

Perfect gas isotherms are obtained at high temperatures and large molar volumes.

4.

The critical constants are related to the van der Waals coefficients.

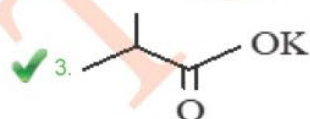
Question ID : 6009292091

Status : Marked For Review

Chosen Option : 3

Q.79  $Me-CH=CH_2 + CHCl_3 \xrightarrow[\text{excess, } \Delta]{\text{aq.KOH}}$  A (Major products) is:

Ans



Q.80 Five moles of water at 50°C are placed in a refrigerator maintained at 3°C. Calculate  $\Delta S$  for the system (taking  $C_p$  for water =  $75.3 \text{ J K}^{-1} \text{ mol}^{-1}$  and independent of temperature).

- Ans
- 1.  $\Delta S_{\text{sys}} = 74.25 \text{ J K}^{-1}$
  - 2.  $\Delta S_{\text{sys}} = 59.18 \text{ J K}^{-1}$
  - 3.  $\Delta S_{\text{sys}} = 95.15 \text{ J K}^{-1}$
  - 4.  $\Delta S_{\text{sys}} = 65.22 \text{ J K}^{-1}$

Question ID : 6009292122  
Status : Not Answered  
Chosen Option : --

Q.81 What is the purpose of assessment in science?

- Ans
- 1. Plan teaching-learning situations in a more suitable way
  - 2. To motivate children to study under threat
  - 3. To identify children who need remediation
  - 4. To give feedback to the teachers about their performance

Question ID : 6009292183  
Status : Answered  
Chosen Option : 3

Q.82 Which basic element of psychological intervention is tailored to information regarding progress with learning or change?

- Ans
- 1. Individualisation
  - 2. Facilitation
  - 3. Feedback
  - 4. Reinforcement

Question ID : 6009292177  
Status : Answered  
Chosen Option : 3

Q.83 While teaching a correct method of doing an experiment on effect of change of temperature, the teacher tells the students to follow some steps. Select the correct sequence of steps.

- A. Take about 150 g of ice in a beaker and suspend a laboratory thermometer so that its bulb is in contact with the ice.
- B. Keep a careful eye on the thermometer reading till most of the water has vapourised.
- C. Start heating the beaker on a low flame.
- D. Note the temperature when all the ice has converted into water.
- E. Record your observations for this conversion of solid to liquid state.
- F. Note the temperature when the ice starts melting.
- G. Now, put a glass rod in the beaker and heat while stirring till the water starts boiling.
- H. Record your observations for the conversion of water from the liquid state to the gaseous state.

- Ans
- 1. A, C, F, G, D, E, B, H
  - 2. A, C, F, E, D, B, G, H
  - 3. A, C, F, D, E, G, B, H
  - 4. A, F, C, D, B, E, G, H

Question ID : 6009292175

Q.84 Choose the correct options about the Heuristic method in science.

- I. This method was propounded by Prof. Armstrong in the 19th century.
- II. It appears as deductive method.
- III. Principle of activity and logical thinking is the major feature of this method.
- IV. This method is based on self-thinking and self-study.

- Ans
- 1. Only II and III
  - 2. Only I, II and III
  - 3. Only I, III and IV
  - 4. Only II, III and IV

Question ID : 6009292174  
Status : Answered  
Chosen Option : 4

Q.85 Consider the following statements and select the appropriate option.

- i. NCF-2005 recommends hands-on, inquiry-based science curriculum and also addresses the issues of curriculum load, rote memorisation and rigid examination system.
- ii. NCF-2005 recognises learner as constructor of knowledge and suggests that learners be provided with learning experiences which enable them to inquire, solve problems and develop their own concepts.

- Ans
- 1. Only statement ii is true
  - 2. Neither statement i nor ii is true
  - 3. Only statement i is true
  - 4. Both statements i and ii are true

Question ID : 6009292169  
Status : Answered  
Chosen Option : 4

Q.86 Choose the right option amongst basic criteria of validity of a science curriculum which helps the student in 'learning to learn' science.

- Ans
- 1. Content validity
  - 2. Ethical validity
  - 3. Process validity
  - 4. Cognitive validity

Question ID : 6009292167  
Status : Not Answered  
Chosen Option : --

Q.87 Performance-based assessment consists of:

- Ans
- 1. a task that is close-ended
  - 2. flexibility in syllabus when examinations are taken
  - 3. a set of learning indicators (LI) for assessment
  - 4. assessment of single attribute

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<https://www.digialm.com//per/g01/pub/1258/touchstone/AssessmentQPHTMLMode1/1258O20312/1258O20312S1D71/161216604>

Q.88 Which of the following is one of the main principles of the project method of teaching science?

- Ans
- 1. It provides chances for critical thinking and reasoning through observation.
  - 2. It avoids false imagination among students.
  - 3. A teacher can handle many students at a time.
  - 4. Children learn better through association, cooperation and activity.

Question ID : 6009292172  
Status : Answered  
Chosen Option : 4

Q.89 What is an example of first-hand study of things?

- Ans
- 1. Study about nature of soil through ICT.
  - 2. Model presentation of operation of fire extinguisher in classroom.
  - 3. Poster explanation about parts of a flower.
  - 4. Students are taken to zoos, planetariums, museums, botanical gardens.

Question ID : 6009292176  
Status : Answered  
Chosen Option : 4

Q.90 A scientist is conducting a scientific investigation. Which step is he likely to perform first?

- Ans
- 1. Make a prediction
  - 2. Identify a problem
  - 3. Form a hypothesis, or testable explanation
  - 4. Gather the evidence

Question ID : 6009292168  
Status : Answered  
Chosen Option : 2

Q.91 Choose the correct statement(s) amongst the following.

- I. While planning a unit, the unit should be analysed for the purpose of identification and organisation of concepts and sub-concepts.
- II. A unit can be planned in a different manner and there should be flexibility in the way of its planning.
- III. The unitary approach gives importance to teacher's dominance and child's supremacy.
- IV. In a unitary approach, a topic is presented by integrating it with linked concepts from other topics/subjects which helps in providing a holistic picture to the learner and makes learning effective and long-lasting.

- Ans
- 1. Only I, II and IV
  - 2. Only I, II and III
  - 3. Only II, III and IV
  - 4. Only I, III and IV

Question ID : 6009292185

Q.92 Match the following in List-I with that of List-II in the correct order.

List- I (Types of Learning Indicators)	List- II (Activities)
a. Classification and experimentation	i. Reading tables, graphs, pictures, maps with gradually increasing complexity.
b. Collection and presentation of data/recording and reporting	ii. Distinguishing between opinion, facts and hypothesis.
c. Drawing conclusions/inference	iii. Identifying similarities and differences in groups of objects.
d. Communication skill	iv. Changing ideas when a different one makes better sense of evidence.

- Ans
- 1. a – iv, b – iii, c – i, d – ii
  - 2. a – iii, b – i, c – iv, d – ii
  - 3. a – i, b – iii, c – iv, d – ii
  - 4. a – i, b – iv, c – iii, d – ii

Question ID : 6009292186

Status : Not Answered

Chosen Option : --

Q.93 Which of the following observations can be made on a colour of the flame and hottest zone of the burning candle?

- Ans
- 1. Qualitative observation
  - 2. Quantitative observation
  - 3. Layman observation
  - 4. Staged observation

Question ID : 6009292173

Status : Answered

Chosen Option : 1

Q.94 A teacher at secondary stage facilitated students to collect the samples from the science laboratory and discuss the concepts of acids, bases and indicators on the basis of observations and data recorded by students. Name the approach used in this laboratory work.

- Ans
- 1. Enquiry laboratory work
  - 2. Deductive laboratory work
  - 3. Demonstration laboratory work
  - 4. Inductive laboratory work

Question ID : 6009292184

Status : Answered

Chosen Option : 1

Q.95 Which of the following tools is used to discover or verify theoretical principles at secondary stage?

- Ans
- 1. Analysis
  - 2. Systematic experimentation
  - 3. Science corner
  - 4. Concept mapping

Question ID : 6009292179

Q.96 Match the following in List-I with that of List-II in the correct order.

List- I	List- II
a. Projected Aid	i. Magnet board
b. Experiential Aid	ii. Epidiascope
c. Non-Projected Aid	iii. Observing experiments
d. Audio-visual Aid	iv. Edusat
	v. Broadcast talks

- Ans
- 1. a - i, b - ii, c - v, d - iii
  - 2. a - v, b - ii, c - iv, d - i
  - 3. a - ii, b - iii, c - i, d - iv
  - 4. a - ii, b - iv, c - iii, d - v

Question ID : 6009292

Status : Answered

Chosen Option : 4

Q.97 If a small group of students expresses their ideas and find the solution for an identified problem, then which type of collaborative learning approach is used by this group?

- Ans
- 1. Task
  - 2. Brainstorming
  - 3. Inquiry
  - 4. Evaluation

Question ID : 6009292

Status : Answered

Chosen Option : 3

Q.98 Choose the correct options for major activities that may be undertaken in a science fair, an exhibition and a talk on science.

- I. Debates, declamation and paper reading contests
- II. Film shows and plays on scientific concepts
- III. Lectures and talks of science teachers or scientists
- IV. Group discussions, seminars and workshops

- Ans
- 1. Only III
  - 2. Only II and IV
  - 3. Only II and III
  - 4. I, II, III and IV

Q.99 Which phase of 5E's Learning Model provides a common base of hands-on activities for students?

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

Question  
Status  
Chosen Op

Q.100 Which of the following is NOT a component of a unit plan?

- Ans
- 1. Content analysis and identification of objectives
  - 2. Recapitulation
  - 3. Assessment plans and techniques
  - 4. Planning activities

Question  
Status  
Chosen Op