

# TS SET

<b>Question Paper Name :</b>	CHEMICAL SCIENCES 6th July 2019 Shift2 Set1
<b>Subject Name :</b>	CHEMICAL SCIENCES
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## Teaching and Research Aptitude

<b>Group Number :</b>	1
<b>Group Id :</b>	552131191
<b>Group Maximum Duration :</b>	60
<b>Group Minimum Duration :</b>	60
<b>Show Attended Group? :</b>	No
<b>Edit Attended Group? :</b>	No
<b>Break time :</b>	0
<b>Group Marks :</b>	100
<b>Is this Group for Examiner? :</b>	No
<b>Examiner permission :</b>	Cant View
<b>Show Progress Bar? :</b>	No

## Teaching and Research Aptitude

<b>Section Id :</b>	552131191
<b>Section Number :</b>	1

<b>Section type :</b>	Online
<b>Mandatory or Optional :</b>	Mandatory
<b>Number of Questions :</b>	42
<b>Number of Questions to be attempted :</b>	42
<b>Section Marks :</b>	100
<b>Enable Mark as Answered Mark for Review and Clear Response :</b>	Yes
<b>Maximum Instruction Time :</b>	0
<b>Sub-Section Number :</b>	1
<b>Sub-Section Id :</b>	5521311275
<b>Question Shuffling Allowed :</b>	Yes

**Question Number : 1 Question Id : 55213114514 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0**

Main purpose of giving home work is that the students

విద్యార్థులకు ఇంటిపని ఇవ్వడం యొక్క ముఖ్యోద్దేశ్యం

**Options :**

Remain busy at home.

55213157001. ఇంటి వద్దే పనిలో నిమగ్నమై ఉండడానికి

Study at home.

55213157002. ఇంటి వద్దే చదువుకోవడానికి

Their progress can be enhanced.

55213157003. ప్రగతిని పెంపొందించవచ్చును

Develop the habit of self study.

స్వీయ అధ్యయన అలవాటును పెంపొందించడానికి

55213157004.

Question Number : 2 Question Id : 55213114515 Question Type : MCQ Option Shuffling : Yes Is

Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum

Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No

Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes

Correct Marks : 2 Wrong Marks : 0

From the list given below identify the learner characteristics which would least facilitate teaching-learning system to become effective.

క్రింది వానిలో అభ్యాసకుని లక్షణాలకు సంబంధించి బోధనాభ్యసన ప్రక్రియను మెరుగుపరచడంలో అతి తక్కువ ప్రాధాన్యత గల అంశం

Options :

Prior experience of learner

అభ్యాసకుని గత అనుభవం

55213157005.

Learner's family lineage

అభ్యాసకుని కుటుంబ వారసత్వ నేపథ్యం

55213157006.

Aptitude of the learner

అభ్యాసకుని సహజ సామర్థ్యం

55213157007.

Learner's stage of development

అభ్యాసకుని వికాస దశ

55213157008.

**Question Number : 3 Question Id : 55213114516 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0**

On the basis of summative tests, a teacher is interpreting students, performance in terms of their wellness life style evident in behaviour. This will be called:

సమాకలన మూల్యాంకన పరీక్షల ఫలితాల ఆధారంగా ఒక ఉపాధ్యాయుడు విద్యార్థుల యొక్క ప్రవర్తనలో కనిపించే ఆరోగ్యకరమైన జీవన విధానం నిష్పాదనను వ్యాఖ్యానించడాన్ని ఇలా పేర్కొనవచ్చును.

**Options :**

Continuous and comprehensive evaluation

నిరంతర సమగ్ర మూల్యాంకనం

55213157009.

Norm - referenced testing

ప్రమాణ ఆధారిత పరీక్ష

55213157010.

Criterion - referenced testing

క్రైటీరియన్ - రిఫెరెన్స్ డ్ టెస్టింగ్

55213157011.

Formative testing

రూపణ పరీక్ష

55213157012.

**Question Number : 4 Question Id : 55213114517 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0**

A teacher shall inculcate social and moral values among students effectively by

విద్యార్థులలో సామాజిక మరియు నైతిక విలువలను పెంపొందించుటకు ఉపాధ్యాయులు క్రింది విధంగా ప్రభావితం చేయవచ్చు.

**Options :**

Delivering lectures on values

విలువలపై ఉపన్యాసం ఇవ్వడం

55213157013.

Showing TV programmes

టీ.వి. కార్యక్రమాలు చూపించడం

55213157014.

Involving students actively in co-curricular activities

విద్యార్థులను సహపాఠ్య కార్యక్రమాల్లో భాగస్వాములను చేయడం

55213157015.

Observing religious festivals

మతపరమైన పండుగలు జరుపడం

55213157016.

**Question Number : 5 Question Id : 55213114518 Question Type : MCQ Option Shuffling : Yes Is**

**Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum**

**Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No**

**Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes**

**Correct Marks : 2 Wrong Marks : 0**

Which of the following doesn't belong to key behaviour in effective teaching?

క్రిందివానిలో ప్రభావవంతమైన బోధనకు సంబంధించి మూల ప్రవర్తనకు చెందనిది.

**Options :**

55213157017.

Instructing students to copy from black board

విద్యార్థులను నల్లబల్ల చూపి రాసుకోమనడం

Instructional variety

బోధనలో వైవిధ్యం

55213157018.

Questioning

ప్రశ్నించడం

55213157019.

Using student ideas and contribution

విద్యార్థుల ఆలోచనల్ని వారి సహకారాన్ని వినియోగించడం

55213157020.

**Question Number : 6 Question Id : 55213114519 Question Type : MCQ Option Shuffling : Yes Is**

**Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum**

**Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No**

**Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes**

**Correct Marks : 2 Wrong Marks : 0**

Which of the following research types focuses on addressing an immediate problematic situation?

ఈ క్రింది ఏ పరిశోధనా రకం అప్పటికప్పుడే సమస్య పరిష్కారానికి దోహదపడును.

**Options :**

Applied Research

అనువర్తిత పరిశోధన

55213157021.

Action Reserach

చర్యాత్మక పరిశోధన

55213157022.



Experimental Research

ప్రయోగాత్మక పరిశోధన

55213157023.

Fundamental Research

ప్రాథమిక పరిశోధన

55213157024.

**Sub-Section Number :**

2

**Sub-Section Id :**

5521311276

**Question Shuffling Allowed :**

Yes

**Question Number : 7 Question Id : 55213114520 Question Type : MCQ Option Shuffling : No Is**

**Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum**

**Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No**

**Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes**

**Correct Marks : 2 Wrong Marks : 0**

Which of the following doesn't affect research ethics?

క్రింది వానిలో ఏది పరిశోధనలో నైతికతపై ప్రభావం చూపదు

**Options :**

Faulty research design

లోపభూయిష్టమైన పరిశోధనా నమూనా

55213157025.

Choice of sampling technique

ప్రతిచయన పద్ధతి ఎంపిక

55213157026.

55213157027.

Reporting of research findings

పరిశోధనా ఫలితాలను నివేదించడం

Inaccurate application of statistical techniques

సాంఖ్యిక శాస్త్రపద్ధతులను సరియైన పద్ధతిలో ఉపయోగించకపోవుట

55213157028.

**Sub-Section Number :**

3

**Sub-Section Id :**

5521311277

**Question Shuffling Allowed :**

Yes

**Question Number : 8 Question Id : 55213114521 Question Type : MCQ Option Shuffling : Yes Is**

**Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum**

**Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No**

**Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes**

**Correct Marks : 2 Wrong Marks : 0**

Which of the following reporting format is formally prescribed?

క్రింది వానిలో ఏ నివేదన నమూనా (Reporting Format) ను అధికారికంగా సూచించెదరు?

**Options :**

Doctoral level thesis

పరిశోధనస్థాయి (డాక్టరేట్ లెవల్) సిద్ధాంత గ్రంథం

55213157029.

Master level thesis

మాస్టర్ లెవల్ సిద్ధాంత గ్రంథం

55213157030.

Post-graduate level dissertation

పి.జి.స్థాయి డిసర్టేషన్

55213157031.



All the above

పైవన్నీ

55213157032.

**Question Number : 9 Question Id : 55213114522 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0**

Which of the following is an initial mandatory requirement to begin research?

పరిశోధనను ప్రారంభించడానికి తప్పనిసరిగా ముందుగా కావలసినది ఏది?

**Options :**

Developing a research design

పరిశోధన నమూనాని రూపొందించడం

55213157033.

Formulating a research question

పరిశోధనా ప్రశ్నను రూపొందించడం

55213157034.

Deciding about the data analysis procedure

దత్తాంశ విశ్లేషణా ప్రక్రియను రూపొందించడం

55213157035.

Formulating a research hypothesis

పరిశోధన పరికల్పనలను నిర్ధారించడము

55213157036.

**Question Number : 10 Question Id : 55213114523 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No**

**Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes**

**Correct Marks : 2 Wrong Marks : 0**

Which of the following statements is true in the context of the testing of a hypothesis?

పరికల్పనలను పరీక్షించడానికి క్రింది వానిలో ఏ ప్రతిపాధన సరియైనది

**Options :**

Only the alternative hypothesis can be tested.

అల్టర్నేటివ్ పరికల్పనలను మాత్రమే పరీక్షించవచ్చు

55213157037.

Only the null hypothesis can be tested.

శూన్య పరికల్పనలను మాత్రమే పరీక్షించవచ్చు

55213157038.

Both, the alternative and the null hypotheses can be tested.

అల్టర్ నేటివ్ మరియు శూన్య పరికల్పనలను పరీక్షించవచ్చు

55213157039.

Both, the alternative and the null hypotheses cannot be tested.

అల్టర్నేటివ్ మరియు శూన్య పరికల్పనలను పరీక్షించలేము.

55213157040.

**Sub-Section Number :**

4

**Sub-Section Id :**

5521311278

**Question Shuffling Allowed :**

No

**Question Id : 55213114524 Question Type : COMPREHENSION Sub Question Shuffling Allowed**

**: No Group Comprehension Questions : No Question Pattern Type : NonMatrix Calculator :**

**None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression :**

**Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes**

**Question Numbers : (11 to 15)**

**Question Label : Comprehension**

This episode took place in August 1950. The Cold War was in its early stages, with the two superpowers in eyeball-to-eyeball confrontation that threatened nuclear catastrophe. The People's Republic of China, which had just emerged from a bloody civil war and was seen at the time as the Soviets' closest ally, was prevented from taking its permanent seat in the UNSC because of American opposition premised on Cold War logic. Furthermore, war was raging in the Korean peninsula, with U.S. and allied troops locked in fierce combat with North Korean forces supported by China and the Soviet Union.

Nehru was trying to carve a policy that ensured India's security, strategic autonomy and state-led industrialization in these very dangerous times. He was well aware of the fact that pushing China out, as the U.S. wished to do, was a recipe for perpetual conflict that could engulf all of Asia. To him, the Korean War appeared a forerunner to more such conflagrations in Asia that could even turn nuclear. The U.S. had dropped nuclear bombs on Japan only five years ago and many observers believed it would not hesitate to do so again in an Asian conflict, especially since nuclear deterrence had not yet become a recognized reality. Nehru did not want India to get embroiled in hazardous Cold War conflicts and become a pawn in the superpowers' great game risking its own security. Nehru's approach to China was dictated by real politics and not wishful thinking. He understood that peace could not be assured in Asia without accommodating a potential great power like China and providing it with its proper place in the international system. Moreover, China was India's next-door neighbour and it was essential for New Delhi to keep relations with China on an even keel and not fall prey to the urgings of outside powers, the U.S. foremost among them, which were following their own agendas that had nothing to do with Indian security interests.

11 నుంచి 15 వరకు గల ప్రశ్నలకు సంబంధించిన పాఠ్యభాగము ఈ క్రింద ఇవ్వబడినది. దానితోపాటు 5 బహుళ బచ్చిక ప్రశ్నలు ఇవ్వబడినవి. సరైన జవాబును ఎంచుకొని రాయండి.

1950 ఆగస్టులో ఈ సంఘటన జరిగింది. ప్రచ్ఛన్న యుద్ధం ప్రారంభ దశలో ఉన్న కాలం అది. అణు సంక్షోభం బెదిరించే ఎదురుదాడులతో రెండు అగ్ర రాజ్యాలు పోటీ పడుతున్నాయి. చైనా అప్పుడే తన రక్తపాతంతో కూడిన అంతర్యుద్ధం నుండి అవిచ్ఛిన్నంగా సోవియట్ యూనియన్ యొక్క సన్నిహిత మిత్ర రాజ్యాల సరసన నిలిచింది. ఈ కారణంగా చైనాకు UNSC లో శాశ్వత సభ్యత్వం లభించలేదు. ఎందుకంటే అమెరికా ప్రతిఘటన వలన. ఇంకా యుద్ధ భయానక వాతావరణం కోరియా ద్వీపకల్పంలో, అమెరికా సేనలు సోవియట్ యూనియన్ మద్దతు ఇచ్చే ఉత్తర కోరియా దళాలతో తీవ్ర పోరాటంలో నిమగ్నమైన స్థితి కొనసాగుతుంది.

ఈ ప్రమాదకర పరిస్థితులలో నెహ్రూ ఒక ప్రత్యేకమైన అంతర్జాతీయ సంబంధాల విధానం గురించి ఆలోచించి భారతదేశ సమగ్రత మరియు వ్యూహాత్మకత స్వయం ప్రతిపత్తిలతో కూడిన అంతర్జాతీయ విదేశీ వ్యవహారాల విధానాన్ని అనుసరించే పారిశ్రామికీకరణలను రూపొందించడానికి ప్రయత్నించాడు. చైనాను ప్రక్కన పెట్టడం వలన అన్ని ఆసియా దేశాలలో నిరంతరం జరిగే ఒక శాశ్వత వివాదానికి మందులా పనిచేస్తుందని ఆయనకి బాగా తెలుసు. కోరియా యుద్ధం అటువంటి ఆసియా దేశాలలో కూడా ఇలాంటి సంఘటనలకు దారితీసినట్లు ఆయనకి కనపడింది. U.S. ఐదు సంవత్సరాల క్రితం జపాన్ పై అణ్వయుధ బాంబును ప్రయోగించింది మరియు అణునిరోధకంలో కూడా ఇంకా గుర్తించ దగ్గ వాస్తవం కానందున, ఆసియా సంఘర్షణ వచ్చినట్లయితే U.S. అణుబాంబులు వేయవచ్చు అని పలువురు పరిశీలికులు భావిస్తున్నారు. ప్రమాదకరమైన ప్రచ్ఛన్న యుద్ధాలు లాంటి వివాదంలోకి భారతదేశం దిగడం మరియు నూపర్ ఫవర్స్ చేతిలో కీలుబొమ్మగా మారి దేశ భద్రతను ప్రమాద స్థితిలోకి నెట్టివేయటం ఆయనకి ఇష్టం లేదు. చైనా విషయంలో నెహ్రూ అనుసరించిన విదేశీ విధానం నిజమైన రాజకీయ చతురతతో కూడినదే గాని ఇచ్చానుసారంగా తీసుకున్న నిర్ణయం కాదు. చైనా వంటి శక్తివంతమైన దేశానికి గొప్ప అధికారాన్ని కల్పించకుండా, అంతర్జాతీయ వ్యవస్థలో దానికి సరైన స్థానాన్ని అందించకుండా ఆసియా ఖండంలో శాంతి భద్రతలు కల్పించలేమని ఆయన అర్థం చేసుకున్నారు. అంతేకాక చైనా భారతదేశం యొక్క పొరుగు దేశం. చైనాతో సంబంధాలను కొనసాగించడానికి న్యూఢిల్లీకి కూడా ఇది అవసరం. ఇలాంటి పరిస్థితులలో అమెరికా ఇతర రాజ్యాల అధికారాలు పరిగణనలోకి తీసుకోకుండా భారతదేశ భద్రతకు సంబంధించిన విషయాలతో సంబంధం లేకుండా తన సొంత ఆజెండాను పాటిస్తుంది.

**Sub questions**

**Question Number : 11 Question Id : 55213114525 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A**

**Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On**

**Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control :**

**Yes**

**Correct Marks : 2 Wrong Marks : 0**

According to the above passage, which one of the following lines is correct?

పైన ఇచ్చిన పాఠ్యభాగం ప్రకారం ఈ క్రింది వాటిలో ఏది సరైనది?

**Options :**



Nehru tried to elude the Cold War clash to show his identity and become a pawn in the political supremacy game.

తన గుర్తింపును ప్రదర్శించేందుకు మరియు రాజకీయ అధిపత్యం కోసం ఒక కీలుబొమ్మగా మారడం అనే కోల్డ్ వార్ ను నెహ్రూ ఎప్పుడూ సమర్థించలేదు.

55213157041.

Nehru never tried India to get involved in treacherous Cold War fight because of fear of War.

యుద్ధ భయం వలన నెహ్రూ ఎప్పుడూ భారత్ ను కోల్డ్ వార్ లో పాల్గొనడాన్ని సమర్థించలేదు.

55213157042.

Nehru's endeavor is to become closer with US as it is the superpower in the World and he did not want to disturb the big counties in Cold War clash.

అమెరికా ప్రపంచంలో ఒక అగ్రరాజ్యంగా ఎదగడం వలన దానికి సన్నిహితంగా ఉండి మరియు కోల్డ్ వార్ సంఘర్షణలో అగ్రరాజ్యాల మధ్య శాంతిని భంగపరచడం నెహ్రూకి ఇష్టపడలేదు.

55213157043.

Nehru never desired India to get in risky Cold War clash and become a puppet among the counties who fight for a supremacy position.

భారతదేశం ప్రమాదకరమైన కోల్డ్ వార్ సంఘర్షణలో చిక్కుకోవడం మరియు ఒక అధిపత్య స్థానం కోసం పోరాడే దేశాల చేతిలో కీలుబొమ్మగా మారడం నెహ్రూకు ఇష్టం లేదు.

55213157044.

**Question Number : 12 Question Id : 55213114526 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes**

**Correct Marks : 2 Wrong Marks : 0**

The paragraph suggests that Jawaharlal Nahru was a \_\_\_\_\_

పై పాఠ్య భాగాన్ని అనుసరించి జవహర్ లాల్ నెహ్రూ ఒక \_\_\_\_\_

**Options :**

55213157045.

Sinner

పాపి

Great politician

ఒక గొప్ప రాజకీయవేత్త

55213157046.

Cowardice

పిరికివాడు

55213157047.

Good policy maker

మంచి విధానాల రూపకర్త

55213157048.

**Question Number : 13 Question Id : 55213114527 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes**

**Correct Marks : 2 Wrong Marks : 0**

The Cold War was a period of geopolitical tension between \_\_\_\_\_

కోల్డ్వార్ యొక్క భౌగోళిక ఉద్రిక్తత కాలం \_\_\_\_\_

**Options :**

The Soviet Union with its satellite states and London after World War II

రెండవ ప్రపంచ యుద్ధం తర్వాత లండన్ పరిస్థితి మరియు సోవియట్ యూనియన్ దాని ఉపగ్రహ రాష్ట్రాల పరిస్థితి

55213157049.

The People's Republic of China with its satellite states and the United States after the First World War

మొదటి ప్రపంచ యుద్ధం తర్వాత చైనా దాని ఉపగ్రహ రాష్ట్రాలు మరియు అమెరికా పరిస్థితి

55213157050.

55213157051.

The Soviet Union with its satellite states and the United States after World War II

రెండవ ప్రపంచ యుద్ధం తర్వాత అమెరికా పరిస్థితి మరియు సోవియట్ యూనియన్ దాని ఉపగ్రహ రాష్ట్రాల పరిస్థితి

The People's Republic of China and Japan with other countries and Soviet Union after World War II

రెండవ ప్రపంచ యుద్ధం తర్వాత చైనా పరిస్థితి, జపాన్ మరియు ఇతర దేశాలతో కూడిన సోవియట్ యూనియన్

పరిస్థితి

55213157052.

**Question Number : 14 Question Id : 55213114528 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes**

**Correct Marks : 2 Wrong Marks : 0**

The United States detonated two nuclear weapons over the Japanese cities of Hiroshima and Nagasaki in \_\_\_\_\_.

అమెరికా జపాన్ నగరాలైన హిరోషిమా మరియు నాగసాకీలపై రెండు అణ్వాయుధాలను \_\_\_\_\_ ప్రయోగించింది.

**Options :**

55213157053. 1943

55213157054. 1944

55213157055. 1945

55213157056. 1946

**Question Number : 15 Question Id : 55213114529 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A**



Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes

Correct Marks : 2 Wrong Marks : 0

Nehru favoured \_\_\_\_\_ over India for permanent membership in the UN Security Council.

UN భద్రతా మండలిలో శాశ్వత సభ్యత్వం కోసం భారతదేశాన్ని కాకుండా నెహ్రూ \_\_\_\_\_ దేశాన్ని సమర్థించారు.

Options :

U.S.

అమెరికా సంయుక్త రాష్ట్రాలు

55213157057.

China

చైనా

55213157058.

Soviet Union

సోవియట్ యూనియన్

55213157059.

Korea

కొరియా

55213157060.

Sub-Section Number : 5

Sub-Section Id : 5521311279

Question Shuffling Allowed : Yes

Question Number : 16 Question Id : 55213114530 Question Type : MCQ Option Shuffling : Yes

Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum

Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No

Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes

Correct Marks : 2 Wrong Marks : 0

Communication always takes place within \_\_\_\_\_

కమ్యూనికేషన్ ఎల్లప్పుడూ \_\_\_\_\_ జరుగుతుంది.

**Options :**

Two persons

ఇద్దరు వ్యక్తుల మధ్య

55213157061.

A context

ఒక సందర్భంలో

55213157062.

External only

బాహ్యంగా మాత్రమే

55213157063.

Internal only

అంతర్గతంగానే

55213157064.

**Question Number : 17 Question Id : 55213114531 Question Type : MCQ Option Shuffling : Yes**

**Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum**

**Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No**

**Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes**

**Correct Marks : 2 Wrong Marks : 0**

Any effective classroom communication must be \_\_\_\_\_

తరగతిగదిలో ఏ సమర్థవంతమైన కమ్యూనికేషన్ \_\_\_\_\_ ఉండాలి.

**Options :**

Syllabus centric

సిలబస్ కేంద్రంగా

55213157065.

Student centric

స్టూడెంట్ కేంద్రంగా

55213157066.

Classroom centric

క్లాస్రూమ్ కేంద్రంగా

55213157067.

Culture centric

సంస్కృతి కేంద్రంగా

55213157068.

**Question Number : 18 Question Id : 55213114532 Question Type : MCQ Option Shuffling : Yes  
Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum  
Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No  
Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes  
Correct Marks : 2 Wrong Marks : 0**

Which of these is not mandatory for effective communication?

సమర్థవంతమైన సమాచార మార్పిడికి ఈ క్రింది వాటిలో ఏది తప్పనిసరికాదు?

**Options :**

Understanding

అర్థం చేసుకోవడం

55213157069.

Politeness

మర్యాదపూర్వకమైన

55213157070.

Listening

వినడం

55213157071.

Ambiguity

సంధిదృత

55213157072.

**Question Number : 19 Question Id : 55213114533 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0**

Which of the following is correct?

కింది వాటిలో ఏది సరైనది?

**Options :**

All gestures can have same meanings in same cultures.

55213157073.

సంజ్ఞలు అన్ని సంస్కృతులలో ఒకే అర్థాన్ని కలిగి ఉంటాయి.

All the gestures can't have different meanings in different cultures.

55213157074.

సంజ్ఞలు అన్ని సంస్కృతులలో ఒకే అర్థాన్ని కలిగి ఉండవు.

Some gestures can have different meanings in different cultures.

55213157075.

కొన్ని సంజ్ఞలు విభిన్న సంస్కృతులలో వేర్వేరు అర్థాలను కలిగి ఉంటాయి.

Some gestures can have same meanings in different cultures.

55213157076.

కొన్ని సంజ్ఞలు విభిన్న సంస్కృతులలో అదే అర్థాలను కలిగి ఉంటాయి.

**Question Number : 20 Question Id : 55213114534 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No**

Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes

Correct Marks : 2 Wrong Marks : 0

Match the following :

ఈ క్రింది వాటిని జతపరచండి :

**List-I**  
**జాబితా-I**

1. WhatsApp  
వాట్సాప్
2. Google  
గుగూల్
3. Twitter  
ట్విట్టర్
4. Facebook  
ఫేస్బుక్

**List-II**  
**జాబితా-II**

- a. Mark Zuckerberg  
మార్క్ జుకర్బర్గ్
- b. Sundar Pichai  
సుందర్ పిఛాయ్
- c. Jan Koum  
జాన్ కామ్
- d. Jack Patrick Dorsey  
జాక్ పాట్రిక్ డోర్సీ

**Codes:**

కోడ్స్:

**Options :**

55213157077. 1-d, 2-b, 3-a, 4-c

55213157078. 1-a, 2-b, 3-d, 4-c

55213157079. 1-c, 2-b, 3-d, 4-a

55213157080. 1.b, 2-a, 3-c, 4-d

**Sub-Section Number :**

6

**Sub-Section Id :**

5521311280

**Question Shuffling Allowed :**

Yes

**Question Number : 21 Question Id : 55213114535 Question Type : MCQ Option Shuffling : Yes**

**Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0**

Two taps 'A' and 'B' can fill a tank in 20 and 30 minutes respectively. There is an outlet 'C'. If all the 3 pipes are opened, the tank will be filled in 24 minutes. The time taken for 'C' alone to empty the full tank is ( in minutes)

రెండు కుళాయిలు 'A' మరియు 'B' వరుసగా 20 మరియు 30 నిమిషాలలో తొట్టిని నింపగలవు. బయటకు వదిలే ఒక కుళాయి 'C' వుంది. మూడు కుళాయిలను ఒకేసారి తెరిస్తే తొట్టి 24 నిమిషాలలో నిండగలదు. 'C' ఒక్కటే నిండుగా నున్న తొట్టిని ఖాళీ చేయడానికి పట్టు సమయము (నిమిషాలలో)

**Options :**

55213157081. 22

55213157082. 24

55213157083. 25

55213157084. 28

**Question Number : 22 Question Id : 55213114536 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes**



**Correct Marks : 2 Wrong Marks : 0**

Geetha will reach her office 15 minutes late by walking at 4 km per hour from her house. The next day she increases her speed by 2 kmph and reaches in time. Then the distance from her house to office is ( in km)

గీత ఆమె ఇంటి నుంచి గంటకు 4 కి.మీ. వేగంతో నడుస్తూ 15 నిమిషాల ఆలస్యంగా తన కార్యాలయానికి చేరుకుంటుంది. మరుసటి రోజు ఆమె 2 కి.మీ. వేగాన్ని పెంచటంవల్ల సరియైన సమయానికి చేరుకుంటుంది. అప్పుడు ఆమె ఇంటి నుంచి కార్యాలయం వరకు దూరం (కిలోమీటర్లు)

**Options :**

55213157085. 3

55213157086. 4

55213157087. 5

55213157088. 6

**Question Number : 23 Question Id : 55213114537 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes**

**Correct Marks : 2 Wrong Marks : 0**

23. The price of 60 articles is Rs. 20 each. 20 articles were sold at Rs. 24 each. To get an overall profit of Rs. 5 per article, the price of the remaining articles be sold is.

60 వస్తువుల ధర ప్రతి ఒకటి రూ. 20 . 20 వస్తువులు ప్రతి ఒకటి రూ. 24 చొప్పున విక్రయించినచో, ప్రతి ఒకదానిపై రూ. 5, లాభం పొందడానికి మిగిలిన వస్తువులు ఒక్కొక్క దానిని అమ్మవలసిన ధర

**Options :**

55213157089.

22.5

55213157090. 24.5

55213157091. 25.5

55213157092. 28.5

**Question Number : 24 Question Id : 55213114538 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0**

The average weight of 40 items is 15 gm. When the weight of the basket is added to the weight of balls, the average increased by 0.5 gm. Then the weight (in gm) of the basket is

40 వస్తువుల సగటు బరువు 15 గ్రాములు. బుట్ట యొక్క బరువు బంతుల బరువుకు జోడించినప్పుడు సగటు 0.5 గ్రాము పెరుగుతుంది. అప్పుడు బుట్ట యొక్క బరువు (గ్రాములలో)

**Options :**

55213157093. 15

55213157094. 20

25

55213157095.

40

55213157096.

**Question Number : 25 Question Id : 55213114539 Question Type : MCQ Option Shuffling : Yes  
Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum  
Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No  
Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes  
Correct Marks : 2 Wrong Marks : 0**

Missing group of letters in the following sequence is

కింది క్రమంలో లోపించిన అక్షరాల సమూహం  
QYCD, PXEF, \_\_\_\_\_, NVIJ, MUKL

**Options :**

JPRI

55213157097.

QBBJ

55213157098.

RRMY

55213157099.

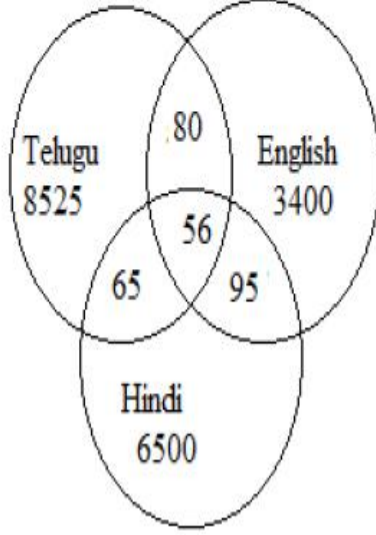
OVBH

55213157100.

**Question Number : 26 Question Id : 55213114540 Question Type : MCQ Option Shuffling : Yes  
Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum  
Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No  
Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes  
Correct Marks : 2 Wrong Marks : 0**

The following venn diagram represents the number of persons who know different languages. Then the total number of persons is

కింది వెన్ రేఖాచిత్రం, వివిధ భాషలు తెలిసిన వ్యక్తుల సంఖ్యను సూచిస్తుంది. అప్పుడు మొత్తం వ్యక్తుల సంఖ్య



Options :

55213157101. 18425

55213157102. 18481

55213157103. 18721

55213157104. 18656

Question Number : 27 Question Id : 55213114541 Question Type : MCQ Option Shuffling : Yes  
Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum  
Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No  
Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes  
Correct Marks : 2 Wrong Marks : 0

The missing number in the sequence: 36, 31, 29, 24, 22, 17, 15, \_\_\_\_\_

అనుక్రమంలో లోపించిన సంఖ్య: 36, 31, 29, 24, 22, 17, 15, \_\_\_\_\_

**Options :**

55213157105. 13

55213157106. 12

55213157107. 11

55213157108. 10

**Question Number : 28 Question Id : 55213114542 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0**

If 'P + Q' means 'P is the father of Q', 'P × Q' means 'P is the brother of Q'; 'P - Q' means 'P is the mother of Q', then which of the following is true about  $A \times B - C + D$

'P+Q' అనగా 'P' 'Q' కి తండ్రి ; 'P×Q' అంటే 'P' 'Q' యొక్క సోదరుడు; 'P-Q' అనగా 'P' 'Q' యొక్క తల్లి'. అప్పుడు  $A \times B - C + D$  కి క్రింది వాటిలో ఏది నిజం

**Options :**

55213157109. B is the son of A  
B, A యొక్క కొడుకు

55213157110. A is the uncle of C  
A, C యొక్క బాబాయి / మామ

B is the father of A

B, A యొక్క తండ్రి

55213157111.

C is the mother of B

C, B యొక్క తల్లి

55213157112.

**Question Number : 29 Question Id : 55213114543 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0**

Statements: The average number of persons per household is 5 in urban areas whereas it is 7 in rural areas. The national average is 6.

వాక్యములు: గ్రామీణ ప్రాంతాల్లో సగటున ఒక ఇంట్లో 7 మంది, పట్టణ ప్రాంతాలలో సగటున 5 మంది ఉన్నారు. జాతీయ సగటు 6.

Conclusions: I. The population per unit area in the rural areas is higher than in the urban areas.

ముగింపు: I. పట్టణ ప్రాంతాల కంటే గ్రామీణ ప్రాంతాల్లో 1 యూనిట్ జనాభా ఎక్కువగా ఉంది

II. The average number of persons per household in the rural areas is less than the urban areas.

II. గ్రామీణ ప్రాంతాల గృహం యొక్క వ్యక్తుల సగటు సంఖ్య పట్టణ ప్రాంతాల కన్నా తక్కువగా ఉంది

**Options :**

both I and II are true

I మరియు II ఒప్పు

55213157113.

I is true and II is false

I ఒప్పు మరియు II తప్పు

55213157114.



I is false and II is true

I తప్పు మరియు II ఒప్పు

55213157115.

both I and II are false

I మరియు II తప్పు

55213157116.

**Question Number : 30 Question Id : 55213114544 Question Type : MCQ Option Shuffling : Yes**

**Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum**

**Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No**

**Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes**

**Correct Marks : 2 Wrong Marks : 0**

M is brother of N, O is the father of M, P is brother of Q, and Q is daughter of N. the relation from M to Q is

M, N యొక్క సోదరుడు; O, M యొక్క తండ్రి, P, Q యొక్క సోదరుడు మరియు Q N యొక్క కుమార్తె. M నుండి Q కు సంబంధం

**Options :**

Mother

తల్లి

55213157117.

Father

తండ్రి

55213157118.

Uncle

బాబాయి / మామ

55213157119.

Grandson

మనవడు

55213157120.

**Sub-Section Number :** 7  
**Sub-Section Id :** 5521311281  
**Question Shuffling Allowed :** No

**Question Id : 55213114545 Question Type : COMPREHENSION Sub Question Shuffling Allowed : No Group Comprehension Questions : No Question Pattern Type : NonMatrix Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes**

**Question Numbers : (31 to 35)**

**Question Label : Comprehension**

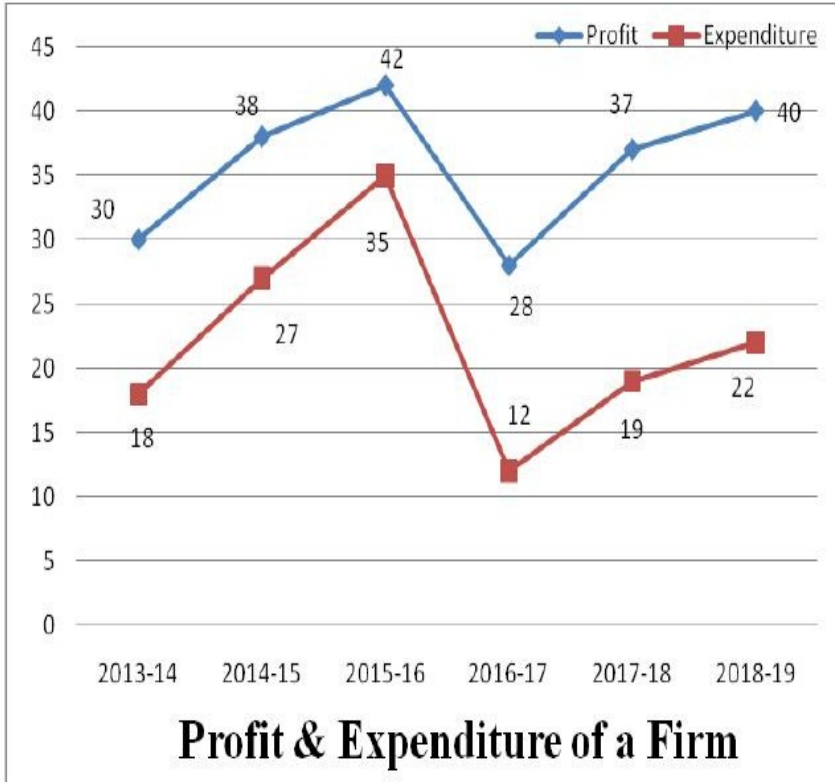
**Note:** The questions Q. 31 to Q. 35 are based on the following information.

గమనిక: ప్రశ్నలు Q.31 నుండి Q.35 వరకు, కింది సమాచారం ఆధారంగా ఉన్నాయి.

The total Profit and Expenditure incurred (in lakhs) by a company during the financial years 2013-19 is presented in the following graph. Assume that in each financial year,

$$\text{Income} = \text{Profit} + \text{Expenditure}$$

2013-19 ఆర్థిక సంవత్సరాలలో కంపెనీ మొత్తం లాభాలు మరియు ఖర్చులు (లక్షలలో) ఈ క్రింది రేఖాచిత్రములో ఇవ్వబడింది. ప్రతి ఆర్థిక సంవత్సరంలో, ఆదాయం = లాభం + వ్యయం అనుకోండి.



### Sub questions

**Question Number : 31 Question Id : 55213114546 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes**

**Correct Marks : 2 Wrong Marks : 0**

The total Income in the financial year 2016-17 (in lakhs) is  
2016-17 ఆర్థిక సంవత్సరంలో మొత్తం ఆదాయం (లక్షలలో)

**Options :**

55213157121. 30

55213157122. 40

55213157123. 28

55213157124. 16

**Question Number : 32 Question Id : 55213114547 Question Type : MCQ Option Shuffling : No  
Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A  
Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On  
Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control :  
Yes**

**Correct Marks : 2 Wrong Marks : 0**

In the year 2014-15, the percentage of expenditure incurred over the income is  
2014-15 సంవత్సరానికి, ఆదాయంపై వెచ్చించిన ఖర్చు శాతం\_\_

**Options :**

55213157125. 28.75

55213157126. 36.25

55213157127. 28.64

38.46

55213157128.

**Question Number : 33 Question Id : 55213114548 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes**

**Correct Marks : 2 Wrong Marks : 0**

The percentage of profit increased in 2015-16 when compared with 2013-14 is  
2013-14 తో పోలిస్తే, 2015-16 లో లాభం \_\_\_\_\_ శాతం పెరిగింది.

**Options :**

12.0

55213157129.

28.57

55213157130.

40.0

55213157131.

32.35

55213157132.

**Question Number : 34 Question Id : 55213114549 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes**

**Correct Marks : 2 Wrong Marks : 0**

In the six financial years, total percentage of expenditure in the income is  
ఆరు ఆర్థిక సంవత్సరాల్లో, మొత్తం ఆదాయంపై వెచ్చించిన ఖర్చు శాతం

**Options :**

55213157133. 38.22

55213157134. 61.78

55213157135. 61.86

55213157136. 28.75

**Question Number : 35 Question Id : 55213114550 Question Type : MCQ Option Shuffling : No  
Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A  
Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On  
Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control :  
Yes**

**Correct Marks : 2 Wrong Marks : 0**

In 2017-18, the total profit (in lakhs) is  
2017-18లో మొత్తం లాభం (లక్షలలో)

**Options :**

55213157137. 20

55213157138. 37

55213157139. 19



55213157140.

**Sub-Section Number :** 8  
**Sub-Section Id :** 5521311282  
**Question Shuffling Allowed :** Yes

**Question Number : 36 Question Id : 55213114551 Question Type : MCQ Option Shuffling : Yes**  
**Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum**  
**Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No**  
**Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes**  
**Correct Marks : 2 Wrong Marks : 0**

Who invented the high level language "C"?

హైలెవ్ భాష 'C'ను కనుగొన్నది ఎవరు?

**Options :**

Dennis M. Ritchie

డెన్నిస్ యమ్ రిచ్చి

55213157141.

Niklaus Wirth

నికొలస్ విర్త్

55213157142.

Seymour Papert

సెమోర్ పెపరెట్

55213157143.

Donald Kunth

డొనాల్డ్ కుంత్

55213157144.

Question Number : 37 Question Id : 55213114552 Question Type : MCQ Option Shuffling : Yes  
Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum  
Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No  
Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes  
Correct Marks : 2 Wrong Marks : 0

Which of the following is a serial bus

క్రింది వాటిలో ఏది సిరియల్ బస్

Options :

55213157145. PCI

55213157146. ISA

55213157147. USB

55213157148. GPIB

Question Number : 38 Question Id : 55213114553 Question Type : MCQ Option Shuffling : Yes  
Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum  
Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No  
Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes  
Correct Marks : 2 Wrong Marks : 0

What does the acronym POP stand for?

PoP పూర్తి రూపం

Options :

55213157149. Post Officed Protocol  
పోస్ట్ అఫీస్ డ్ ప్రోటోకాల్

55213157150. Post Office Protocol  
పోస్ట్ ఆఫీస్ ప్రోటోకాల్

55213157151. Post Official Protocol  
పోస్ట్ అఫీసియల్ ప్రోటోకాల్

55213157152. Postal Office Protocol  
పోస్టల్ ఆఫీస్ ప్రోటోకాల్

**Question Number : 39 Question Id : 55213114554 Question Type : MCQ Option Shuffling : Yes  
Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum  
Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No  
Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes  
Correct Marks : 2 Wrong Marks : 0**

FTP stands for

FTP అంటే

**Options :**

55213157153. File transport protocol  
ఫైల్ ట్రాన్స్‌పార్ట్ ప్రోటోకాల్

55213157154. File transfer protocol  
ఫైల్ ట్రాన్స్‌ఫర్ ప్రోటోకాల్

55213157155. File transit protocol  
ఫైల్ ట్రాన్సిట్ ప్రోటోకాల్

File tracking protocol

ఫైల్ ట్రాకింగ్ ప్రోటోకాల్

55213157156.

**Question Number : 40 Question Id : 55213114555 Question Type : MCQ Option Shuffling : Yes  
Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum  
Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No  
Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes  
Correct Marks : 2 Wrong Marks : 0**

Which of the following is UGC initiated network of university libraries

UGC మొదలు పెట్టిన విశ్వవిద్యాలయ గ్రంథాల నెట్‌వర్కు ఈ క్రింది వాటిలో ఏది?

**Options :**

55213157157. [inlibnet](#)

55213157158. [infonet](#)

55213157159. [ernet](#)

55213157160. [indonet](#)

**Sub-Section Number :** 9

**Sub-Section Id :** 5521311283

**Question Shuffling Allowed :** Yes

**Question Number : 41 Question Id : 55213114556 Question Type : MCQ Option Shuffling : Yes  
Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum  
Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No  
Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes**

**Correct Marks : 2 Wrong Marks : 0**

An annual event that is observed on July 11<sup>th</sup> of every year is

ప్రతి సంవత్సరం జూలై 11న జరుపుకునే వార్షిక కార్యక్రమము

**Options :**

World Environment Day

ప్రపంచ పర్యావరణ దినం

55213157161.

World Forest Conservation Day

ప్రపంచ అరణ్య సంరక్షణ దినము

55213157162.

World Population Day

ప్రపంచ జనాభా దినము

55213157163.

World Food Security Day

ప్రపంచ ఆహార రక్షణ దినము

55213157164.

**Question Number : 42 Question Id : 55213114557 Question Type : MCQ Option Shuffling : Yes**

**Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum**

**Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No**

**Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes**

**Correct Marks : 2 Wrong Marks : 0**

The largest wind farm of the world is

అతిపెద్ద ప్రపంచపు గాలిసాగు కేంద్రము

**Options :**

Mancelona Wind Farm

మాన్సిలోన గాలిసాగు కేంద్రము

55213157165.

Ganso Wind Farm

గన్సో గాలిసాగు కేంద్రము

55213157166.

King Mountain Wind Ranch

కింగ్ మాంటెన్ గాలి రాంచ్

55213157167.

Jagur Creek Wind Farm

జాగూర్ క్రీక్ గాలిసాగు కేంద్రము

55213157168.

**Question Number : 43 Question Id : 55213114558 Question Type : MCQ Option Shuffling : Yes  
Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum  
Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No  
Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes  
Correct Marks : 2 Wrong Marks : 0**

Which of the following is chief pollutant of Bhadra river in Karnataka ?

కర్ణాటకలోని భద్రానది కలుషితానికి ప్రధాన కాలుష్య కారకం ఈ క్రింది వాటిలో ఏది?

**Options :**

Indraprastha power station effluent

ఇంద్రప్రస్థ పవర్ స్టేషన్ నుండి విడుదలయ్యే కలుషిత నీరు

55213157169.

DDT from pesticide industry

క్రిమి సంహారక పరిశ్రమ నుంచి విడుదలయ్యే DDT

55213157170.

Paper and pulp from Paper Industry

కాగిత పరిశ్రమ నుంచి విడుదలయ్యే కాగితం మరియు గుఱ్ఱు

55213157171.



Fly ash and jute from jute industry

జనప నార పరిశ్రమ నుండి విడుదలయ్యే ఎగిరే బూడిద, జనుము

55213157172.

**Question Number : 44 Question Id : 55213114559 Question Type : MCQ Option Shuffling : Yes  
Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum  
Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No  
Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes  
Correct Marks : 2 Wrong Marks : 0**

Which of the following do not support soil erosion ?

ఈ క్రింది వానిలో ఏది మృత్తిక కోతకు తోడ్పడదు?

**Options :**

Over grazing

అతిగా మేయుట

55213157173.

Shifting cultivation

ప్రాంతాన్ని మారుస్తూ సాగు చేయుటం

55213157174.

Forestation

అడవులు పెంచుట

55213157175.

Faulty cultivation practices

లోపభూయిష్ట సాగు పద్ధతులు

55213157176.

**Question Number : 45 Question Id : 55213114560 Question Type : MCQ Option Shuffling : Yes  
Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum  
Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No  
Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes**

**Correct Marks : 2 Wrong Marks : 0**

Which is a baseless belief regarding HIV transmission?

క్రింది వానిలో HIV సక్రమణపై అధారం లేని నమ్మకము ఏది?

i. Air

గాలి

ii. Infected blood

వ్యాధి సోకిన రక్తం

iii. HIV contaminated needles

HIV చే కలుషితం చెందిన సూదులు

iv. Mosquito

దోమ

**Options :**

55213157177.  ii

55213157178.  ii and iii

55213157179.  iv

55213157180.  i and iv

**Sub-Section Number :** 10

**Sub-Section Id :** 5521311284

**Question Shuffling Allowed :** Yes

**Question Number : 46 Question Id : 55213114561 Question Type : MCQ Option Shuffling : Yes**

**Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum**

**Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No**

**Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes**

**Correct Marks : 2 Wrong Marks : 0**

Indira Gandhi National Open University (IGNOU) was established in the year

ఇందిరాగాంధీ జాతీయ సార్వత్రిక విశ్వవిద్యాలయం (IGNOU) స్థాపించిన సంవత్సరం

**Options :**

November 1986

నవంబర్ - 1986

55213157181.

September 1985

సెప్టెంబర్ - 1985

55213157182.

December 1987

డిసెంబర్ - 1987

55213157183.

December 1988

డిసెంబర్ - 1988

55213157184.

**Question Number : 47 Question Id : 55213114562 Question Type : MCQ Option Shuffling : Yes**

**Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum**

**Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No**

**Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes**

**Correct Marks : 2 Wrong Marks : 0**

Which of the following is **Not** a goal of higher education in India?

క్రింది వానిలో భారతదేశ ఉన్నత విద్యా లక్ష్యం కానిది ఏది?

**Options :**

Equity

సమానత్వం

55213157185.

Relevance

ఔచిత్యం

55213157186.

Compulsory and free education

నిర్బంధ ఉచిత విద్య

55213157187.

Value based Education

విలువల ఆధారిత విద్య

55213157188.

**Question Number : 48 Question Id : 55213114563 Question Type : MCQ Option Shuffling : Yes  
Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum  
Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No  
Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes  
Correct Marks : 2 Wrong Marks : 0**

Value Education stands for

విలువల విద్య దేనిని నిర్దేశిస్తుంది?

**Options :**

Making students follow customs and traditions of the society

సామాజిక ఆచార సాంప్రదాయాలను విద్యార్థులు అనుసరించునట్లు చేయుట

55213157189.

Enhancing student employability

విద్యార్థుల ఔద్యోగిక సామర్థ్యాలను పెంపొందించడం

55213157190.

Inculcating virtues and culture to students

సద్గుణాలు మరియు సంస్కృతిని విద్యార్థులలో అలవరచడం

55213157191.

Making students to understand religious values

మత సంబంధమైన విలువలను విద్యార్థులు అవగాహన చేసుకునేట్లు చేయుట

55213157192.

**Question Number : 49 Question Id : 55213114564 Question Type : MCQ Option Shuffling : Yes  
Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum  
Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No  
Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes  
Correct Marks : 2 Wrong Marks : 0**

The grounds on which discrimination in admission to educational institutions constitutionally not prohibited is

విద్యాసంస్థల్లో ప్రవేశానికి సంబంధించి రాజ్యాంగపరమైన నిషేధం లేని అంశం,

**Options :**

Religion

మతం

55213157193.

Sex

లింగం

55213157194.

Place of birth

జన్మ స్థలం

55213157195.

Nationality

జాతీయత

55213157196.

Question Number : 50 Question Id : 55213114565 Question Type : MCQ Option Shuffling : Yes  
Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum  
Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No  
Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes  
Correct Marks : 2 Wrong Marks : 0

Sam Pitroda served as:

శ్యామ్ పిత్రోడా ఏ హోదాలో పనిచేసినారు

Options :

UGC Chairman

విశ్వవిద్యాలయాల విరాళాల సంఘం అధ్యక్షులుగా

55213157197.

NKC Chairman

జాతీయ నాలెడ్జ్ సంఘం అధ్యక్షులు

55213157198.

Director – NCTE

జాతీయ ఉపాధ్యాయ విద్యా మండలి అధ్యక్షులు

55213157199.

Chairman – NCERT

జాతీయ విద్యా పరిశోధనా శిక్షణా సంస్థ అధ్యక్షులు

55213157200.

## CHEMICAL SCIENCES

Group Number :	2
Group Id :	552131192
Group Maximum Duration :	120
Group Minimum Duration :	120



<b>Show Attended Group? :</b>	No
<b>Edit Attended Group? :</b>	No
<b>Break time :</b>	0
<b>Group Marks :</b>	200
<b>Is this Group for Examiner? :</b>	No
<b>Examiner permission :</b>	Cant View
<b>Show Progress Bar? :</b>	No

## **CHEMICAL SCIENCES**

<b>Section Id :</b>	552131192
<b>Section Number :</b>	1
<b>Section type :</b>	Online
<b>Mandatory or Optional :</b>	Mandatory
<b>Number of Questions :</b>	100
<b>Number of Questions to be attempted :</b>	100
<b>Section Marks :</b>	200
<b>Enable Mark as Answered Mark for Review and Clear Response :</b>	Yes
<b>Maximum Instruction Time :</b>	0
<b>Sub-Section Number :</b>	1
<b>Sub-Section Id :</b>	5521311285
<b>Question Shuffling Allowed :</b>	Yes

**Question Number : 51 Question Id : 55213114566 Question Type : MCQ Option Shuffling : Yes**  
**Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum**  
**Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No**  
**Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes**  
**Correct Marks : 2 Wrong Marks : 0**

Which electron configuration among the following has highest number of microstates?

**Options :**

55213157201.  $d^3$

55213157202.  $d^5$

55213157203.  $d^6$

55213157204.  $d^7$

**Question Number : 52 Question Id : 55213114567 Question Type : MCQ Option Shuffling : Yes  
Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum  
Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No  
Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes  
Correct Marks : 2 Wrong Marks : 0**

Rhizobium present in the root modules of leguminous plants convert nitrogen into

**Options :**

55213157205. Ammonia

55213157206. Nitrates

55213157207. Nitrites

55213157208. Nitric oxide

**Question Number : 53 Question Id : 55213114568 Question Type : MCQ Option Shuffling : Yes  
Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum**

**Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No  
Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes  
Correct Marks : 2 Wrong Marks : 0**

Which one among the following is known as Zeise's salt?

**Options :**

55213157209.  $K [Pt(C_2H_4)Cl_3]$

55213157210.  $K[Pt(C_2H_4) Cl]Cl_2$

55213157211.  $K[Pd (C_2H_4)Cl_3]$

55213157212.  $[Pt(C_2H_4)Cl_2]$

**Question Number : 54 Question Id : 55213114569 Question Type : MCQ Option Shuffling : Yes  
Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum  
Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No  
Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes  
Correct Marks : 2 Wrong Marks : 0**

Arrange the following complexes in the increasing order of their conductance values.

$[Co (NH_3)_6]Cl_3$ ,  $[Pt(NH_3)_6]Cl_4$ ,  $[Pt (NH_3)_5Cl]Cl_3$ ,  $K[Pt(NH_3)Cl_5]$

**Options :**

55213157213.  $[Co (NH_3)_6]Cl_3 < [Pt(NH_3)_6]Cl_4 < [Pt (NH_3)_5Cl]Cl_3 < K[Pt(NH_3)Cl_5]$

55213157214.  $[Pt(NH_3)_6]Cl_4 < [Co (NH_3)_6]Cl_3 < [Pt (NH_3)_5Cl]Cl_3 < K[Pt(NH_3)Cl_5]$

55213157215.  $[Co (NH_3)_6]Cl_3 < Pt (NH_3)_5Cl]Cl_3 < K[Pt(NH_3)Cl_5] < [Pt(NH_3)_6]Cl_4$

55213157216.  $K[Pt(NH_3)Cl_5] \cdot [Co(NH_3)_6]Cl_3 \cdot [Pt(NH_3)_5Cl]Cl_3 \cdot [Pt(NH_3)_6]Cl_4$

**Question Number : 55 Question Id : 55213114570 Question Type : MCQ Option Shuffling : Yes  
Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum  
Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No  
Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes  
Correct Marks : 2 Wrong Marks : 0**

The Complex which exists as square-anti prismatic structure is

**Options :**

55213157217.  $[TaF_8]^{3-}$

55213157218.  $[ZrF_8]^{4+}$

55213157219.  $[Mo(CN)_8]^{4+}$

55213157220.  $[Zr(C_2O_4)_4]^{4+}$

**Question Number : 56 Question Id : 55213114571 Question Type : MCQ Option Shuffling : Yes  
Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum  
Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No  
Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes  
Correct Marks : 2 Wrong Marks : 0**

The lanthanide ions known as NMR Shift reagents are

1.  $Pr^{3+}$  2.  $Eu^{3+}$  3.  $Tb^{3+}$

**Options :**

55213157221. 1 and 2

55213157222. 1, 2 and 3

55213157223. 2 and 3

55213157224. 1 and 3

**Question Number : 57 Question Id : 55213114572 Question Type : MCQ Option Shuffling : Yes  
Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum  
Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No  
Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes  
Correct Marks : 2 Wrong Marks : 0**

Assertion (A):  $[\text{Co}(\text{CN})_5\text{I}]^{3-}$  is more stable than  $[\text{Co}(\text{CN})_5\text{I}]^{3+}$

Reason (R): Iodide is a soft base where as fluoride is a hard base. The five cyanide ions have made the  $\text{Co}^{3+}$  in the complex much softer than an isolated  $\text{Co}^{3+}$

**Note: For this question, discrepancy is found in question/answer. Full Marks is being awarded to all candidates.**

**Options :**

55213157225. Assertion (A) is correct and R is the correct explanation of A

55213157226. Assertion (A) is correct and R is NOT the correct explanation of A

55213157227. Assertion (A) is correct and R is NOT correct

55213157228. Assertion (A) is NOT correct and R is correct

**Question Number : 58 Question Id : 55213114573 Question Type : MCQ Option Shuffling : Yes**  
**Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum**  
**Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No**  
**Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes**  
**Correct Marks : 2 Wrong Marks : 0**

Identify the wrong statement among the following

**Options :**

55213157229. All bonds between Ni and C in  $[\text{Ni}(\text{CO})_4]$  are not equivalent

55213157230. Metal carbonyl complexes are belongs to organometallic compounds

55213157231.  $\text{Fe}_3(\text{CO})_{12}$  contains three bridged carbonyls

55213157232. Mn does not form mononuclear carbonyls

**Question Number : 59 Question Id : 55213114574 Question Type : MCQ Option Shuffling : Yes**  
**Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum**  
**Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No**  
**Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes**  
**Correct Marks : 2 Wrong Marks : 0**

Which one is colourless compound among the following?

**Options :**

55213157233.  $\text{VO}\text{SO}_4$

55213157234.  $\text{VCl}_5$



55213157235.  $\text{Na}_5\text{VO}_4$

55213157236.  $[\text{V}(\text{H}_2\text{O})_6]\text{SO}_4 \cdot \text{H}_2\text{O}$

**Question Number : 60 Question Id : 55213114575 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0**

Match List-I (Complexes) with List-II (CFSE values) and select the correct answer using the code given below the Lists

List-I

1.  $[\text{Co}(\text{NH}_3)_6]^{3+}$
2.  $[\text{Cr}(\text{NH}_3)_6]^{3+}$
3.  $[\text{Fe}(\text{CN})_6]^{3-}$
4.  $[\text{Fe}(\text{F}_6)]^{3-}$

List-II

- a. 20 Dq-2P
- b. 24 Dq-2P
- c. 0
- d. 12 Dq

Code:

**Options :**

55213157237. 1-a, 2-d, 3-b, 4-c

55213157238. 1-a, 2-c, 3-b, 4-d

55213157239. 1-b, 2-c, 3-a, 4-d

55213157240. 1-b, 2-d, 3-a, 4-c

**Question Number : 61 Question Id : 55213114576 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0**

Which one is the correct increasing order of acidity of hydrogen halides?

**Options :**

55213157241.  $\text{HF} < \text{HCl} < \text{HBr} < \text{HI}$

55213157242.  $\text{HI} < \text{HBr} < \text{HCl} < \text{HF}$

55213157243.  $\text{HF} < \text{HBr} < \text{HI} < \text{HCl}$

55213157244.  $\text{HF} < \text{HI} < \text{HBr} < \text{HCl}$

**Question Number : 62 Question Id : 55213114577 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0**

What is the correct sequence for the processes occurring in a mass spectrometer?

**Options :**

55213157245. Vapourization, ionization, acceleration, deflection

55213157246. Vapourization , acceleration, ionization, deflection

55213157247. Ionization, deflection, acceleration, vapourization

55213157248. Vapourization, deflection, ionization, accelatation

**Question Number : 63 Question Id : 55213114578 Question Type : MCQ Option Shuffling : Yes  
Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum  
Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No  
Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes  
Correct Marks : 2 Wrong Marks : 0**

The metals present in Cytochrome-C are

**Options :**

55213157249. Fe and Zn

55213157250. Cu and Zn

55213157251. Fe and Cu

55213157252. Fe and Mn

**Question Number : 64 Question Id : 55213114579 Question Type : MCQ Option Shuffling : Yes  
Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum  
Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No  
Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes  
Correct Marks : 2 Wrong Marks : 0**

The osmium cluster  $\text{Os}_6(\text{CO})_{18}$  Py has a total valance electron count of 86. Wade's rule predicts an octahedral structure. However, its observed structure is different. What is the structure of the compound?

**Options :**

55213157253. Pentagonal bi pyramid

55213157254. Edge capped Trigonal bi pyramid

55213157255. Monocaped Suare pyramid

55213157256. Edge caped tetrahedron

**Question Number : 65 Question Id : 55213114580 Question Type : MCQ Option Shuffling : Yes  
Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum  
Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No  
Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes  
Correct Marks : 2 Wrong Marks : 0**

Which of the following analytical methods would you choose to investigate whether a compound is a monomer, dimer or trimer?

**Options :**

55213157257. ESI-MS

55213157258. Infra-red spectroscopy

55213157259. NMR

55213157260. ESR

**Question Number : 66 Question Id : 55213114581 Question Type : MCQ Option Shuffling : Yes  
Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum  
Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No  
Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes  
Correct Marks : 2 Wrong Marks : 0**

To compare the electronic absorption spectra of three iron(II) complexes, you want to combine the three spectra in one plot. Then you should plot:

**Options :**

55213157261. Absorbance against wave number
55213157262. Absorbance against wave length
55213157263. Extinction coefficient against wavelength
55213157264. Extinction coefficient against concentration

**Question Number : 67 Question Id : 55213114582 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0**

The functional group region and fingerprint region of an IR spectrum are respectively

**Options :**

55213157265.  $4000\text{ cm}^{-1} - 1500\text{ cm}^{-1}$  and  $1500\text{ cm}^{-1} - 660\text{ cm}^{-1}$
55213157266.  $4000\text{ cm}^{-1} - 2500\text{ cm}^{-1}$  and  $2500\text{ cm}^{-1} - 1500\text{ cm}^{-1}$
55213157267.  $4000\text{ cm}^{-1} - 3000\text{ cm}^{-1}$  and  $3000\text{ cm}^{-1} - 2000\text{ cm}^{-1}$
55213157268.  $4000\text{ cm}^{-1} - 1500\text{ cm}^{-1}$  and  $1500\text{ cm}^{-1} - 250\text{ cm}^{-1}$



**Question Number : 68 Question Id : 55213114583 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0**

The common coordination numbers of f-block elements are

**Options :**

55213157269. 6 and 7

55213157270. 8 and 9

55213157271. 5 and 6

55213157272. 4 and 6

**Question Number : 69 Question Id : 55213114584 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0**

At a certain instant, a piece of radioactive material contains  $10^{12}$  atoms. The half-life of material is 0.693 seconds. Calculate the number of disintegrations in the first second

**Options :**

55213157273.  $10^{12}$  atoms

55213157274.  $10^6$  atoms

55213157275.  $10^{24}$  atoms

55213157276.  $10^4$  atoms

**Question Number : 70 Question Id : 55213114585 Question Type : MCQ Option Shuffling : Yes  
Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum  
Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No  
Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes  
Correct Marks : 2 Wrong Marks : 0**

Assertion (A): In a given principal quantum number, the penetrating effect decreases in  
the order:  $s > p > d > f$

Reason (R): The s-electron penetrates closer to the nucleus and hence is held less tightly  
compared to p, d or f electron

**Options :**

55213157277. Assertion (A) is correct and R is the correct explanation of A

55213157278. Assertion (A) is correct and R is NOT the correct explanation of A

55213157279. Assertion (A) is correct and R is NOT correct

55213157280. Assertion (A) is NOT correct and R is correct

**Question Number : 71 Question Id : 55213114586 Question Type : MCQ Option Shuffling : Yes  
Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum  
Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No  
Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes  
Correct Marks : 2 Wrong Marks : 0**

Which compound among the following is in octahedral structure and square-pyramidal shape?

**Options :**

55213157281.  $\text{XeF}_6$

55213157282.  $\text{XeF}_4$

55213157283.  $\text{IF}_5$

55213157284.  $\text{TeCl}_4$

**Question Number : 72 Question Id : 55213114587 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0**

Assertion (A): Acetamide is a weak base in aqueous solution. However, it shows acidic property in liquid ammonia

Reason (R): Liquid ammonia has a strong tendency to pick up protons from neutral or weakly basic substances

**Options :**

55213157285. Assertion (A) is correct and R is the correct explanation of A

55213157286. Assertion (A) is correct and R is NOT the correct explanation of A

55213157287. Assertion (A) is correct and R is NOT correct

55213157288. Assertion (A) is NOT correct and R is correct

**Question Number : 73 Question Id : 55213114588 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0**

Which of the following compound contains P-H bond?

**Options :**

55213157289.  $\text{H}_3\text{PO}_4$

55213157290.  $\text{H}_3\text{PO}_3$

55213157291.  $\text{H}_4\text{P}_2\text{O}_7$

55213157292.  $\text{HPO}_3$

**Question Number : 74 Question Id : 55213114589 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0**

Which of the following has the capability to form complex compound and also possesses oxidizing and reducing property?

**Options :**

55213157293.  $\text{HNO}_3$

55213157294.  $\text{HNO}_2$

55213157295. HCOOH

55213157296. HCN

**Question Number : 75 Question Id : 55213114590 Question Type : MCQ Option Shuffling : Yes  
Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum  
Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No  
Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes  
Correct Marks : 2 Wrong Marks : 0**

A Mossbauer nucleus  $^{57}\text{Fe}$  makes the transition from the excited state of energy  $14.4 \times 10^3$  eV to the ground state. What is its recoil energy?

**Options :**

55213157297.  $1.45 \times 10^{-3}$  eV

55213157298.  $1.95 \times 10^{-3}$  eV

55213157299.  $3.90 \times 10^{-3}$  eV

55213157300.  $1.95 \times 10^3$  eV

**Question Number : 76 Question Id : 55213114591 Question Type : MCQ Option Shuffling : Yes  
Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum  
Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No  
Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes  
Correct Marks : 2 Wrong Marks : 0**

Number of vibrations observed for water molecule is 3. Out of which how many are IR active and how many are Raman active?

**Options :**

55213157301. 2 are IR active and 1 is Raman active

55213157302. 1 is IR active and 2 are Raman active

55213157303. All 3 are IR and Raman active

55213157304. All 3 are IR active but not Raman active

**Question Number : 77 Question Id : 55213114592 Question Type : MCQ Option Shuffling : Yes  
Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum  
Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No  
Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes  
Correct Marks : 2 Wrong Marks : 0**

Assertion (A): The energy yield in fusion reaction is about four times more compared to that in fission reaction

Reason (R): In fusion reaction neutron is released

**Options :**

55213157305. Assertion (A) is correct and R is the correct explanation of A

55213157306. Assertion (A) is correct and R is NOT the correct explanation of A

55213157307. Assertion (A) is correct and R is NOT correct

55213157308. Assertion (A) is NOT correct and R is correct

**Question Number : 78 Question Id : 55213114593 Question Type : MCQ Option Shuffling : Yes**



**Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0**

What is the shift of the resonance from TMS of a group of nuclei with  $\delta = 3.50$  and an operating frequency of 350 MHz

**Options :**

55213157309. 0.62 kHz

55213157310. 1.23 kHz

55213157311. 0.35 kHz

55213157312. 2.46 kHz

**Question Number : 79 Question Id : 55213114594 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0**

Which complex among the following has spin forbidden transitions?

**Options :**

55213157313.  $[\text{Co}(\text{NH}_3)_6]^{2+}$

55213157314.  $[\text{Cu}(\text{NH}_3)_4]^{2+}$

55213157315.  $[\text{Mn}(\text{H}_2\text{O})_6]^{2+}$

55213157316.  $[\text{Fe}(\text{H}_2\text{O})_6]^{2+}$

**Question Number : 80 Question Id : 55213114595 Question Type : MCQ Option Shuffling : Yes  
Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum  
Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No  
Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes  
Correct Marks : 2 Wrong Marks : 0**

Which one among the following is unsuitable as a carrier gas for Gas Liquid  
Chromatography?

**Options :**

55213157317.  $\text{N}_2$

55213157318.  $\text{H}_2$

55213157319.  $\text{Ar}$

55213157320.  $\text{O}_2$

**Question Number : 81 Question Id : 55213114596 Question Type : MCQ Option Shuffling : Yes  
Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum  
Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No  
Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes  
Correct Marks : 2 Wrong Marks : 0**

How many peaks are appeared for bis-salicylaldiamine-Cu(II) complex in its ESR  
spectrum?

**Options :**

55213157321. 5

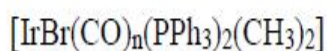
55213157322. 7

55213157323. 9

55213157324. 11

**Question Number : 82 Question Id : 55213114597 Question Type : MCQ Option Shuffling : Yes  
Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum  
Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No  
Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes  
Correct Marks : 2 Wrong Marks : 0**

Using the 18-electron rule, calculate the n value for the complex



**Options :**

55213157325. 1

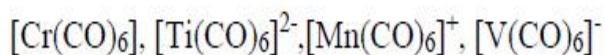
55213157326. 2

55213157327. 3

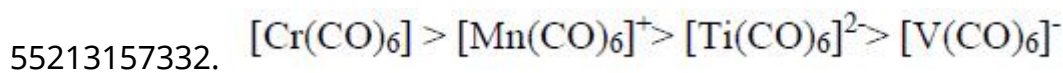
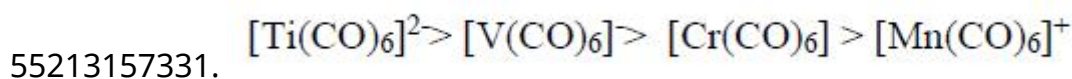
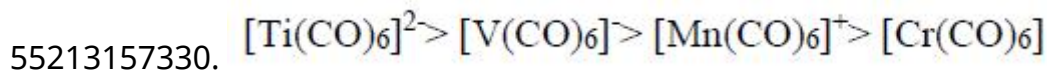
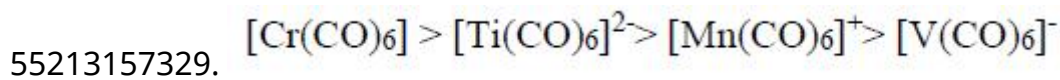
55213157328. Zero

**Question Number : 83 Question Id : 55213114598 Question Type : MCQ Option Shuffling : Yes  
Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum  
Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No  
Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes  
Correct Marks : 2 Wrong Marks : 0**

Arrange the following metal carbonyls in the decreasing order of their back donation capacity

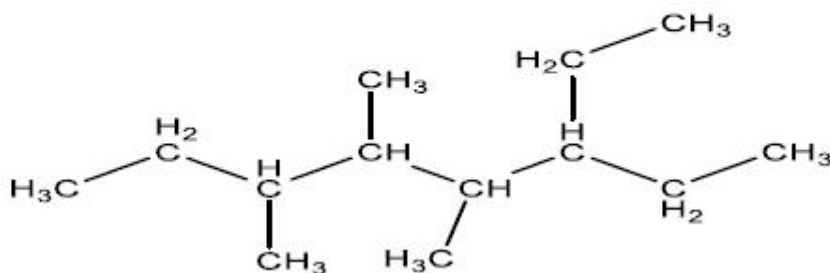


**Options :**

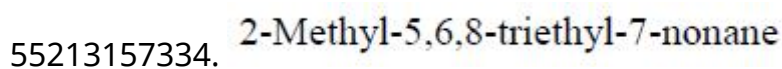
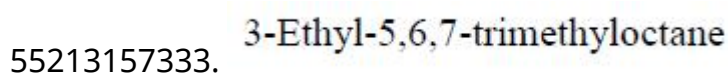


**Question Number : 84 Question Id : 55213114599 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0**

Provide IUPAC Name for the given structural formula:



**Options :**

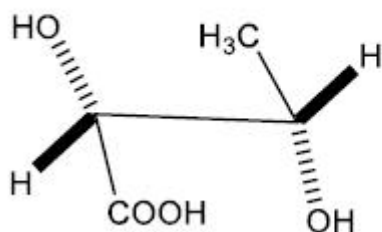


55213157335. 2-Methyl-4,5,6-trimethylnonane

55213157336. 3-Ethyl-4,5,6-trimethyloctane

Question Number : 85 Question Id : 55213114600 Question Type : MCQ Option Shuffling : Yes  
Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum  
Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No  
Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes  
Correct Marks : 2 Wrong Marks : 0

Predict the Configuration



Options :

55213157337. "R" and "R"

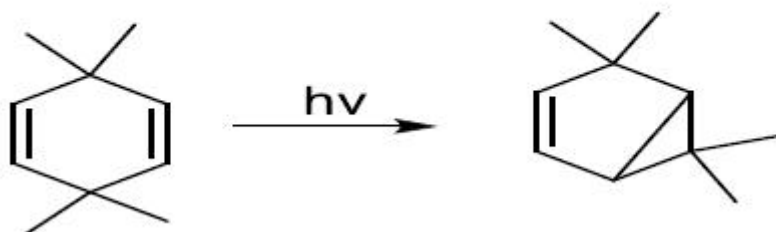
55213157338. "S" and "S"

55213157339. "2R" and "3S"

55213157340. "2S" and "3R"

Question Number : 86 Question Id : 55213114601 Question Type : MCQ Option Shuffling : Yes  
Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum  
Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No  
Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes  
Correct Marks : 2 Wrong Marks : 0

Identify the photochemical conversion



Options :

55213157341. Paterno-Buchi Reaction

55213157342. Norrish Reaction

55213157343. Wittig Reaction

55213157344. Di- $\pi$ -Methane Reaction

Question Number : 87 Question Id : 55213114602 Question Type : MCQ Option Shuffling : Yes

Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum

Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No

Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes

Correct Marks : 2 Wrong Marks : 0

Define Excited state of molecular oxygen

Options :

55213157345. Triplet

55213157346. Singlet

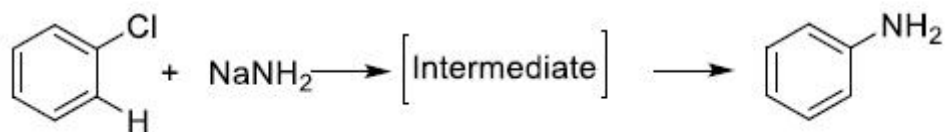
55213157347. Singlet and Triplet



55213157348. Semi Singlet

Question Number : 88 Question Id : 55213114603 Question Type : MCQ Option Shuffling : Yes  
Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum  
Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No  
Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes  
Correct Marks : 2 Wrong Marks : 0

Predict the Intermediate



Options :

55213157349. Carbanion

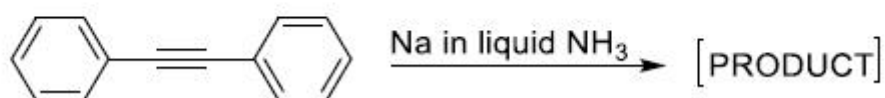
55213157350. Carbocation

55213157351. Zwitterion

55213157352. Benzyne

Question Number : 89 Question Id : 55213114604 Question Type : MCQ Option Shuffling : Yes  
Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum  
Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No  
Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes  
Correct Marks : 2 Wrong Marks : 0

Predict the Product



**Options :**

55213157353. Alkene

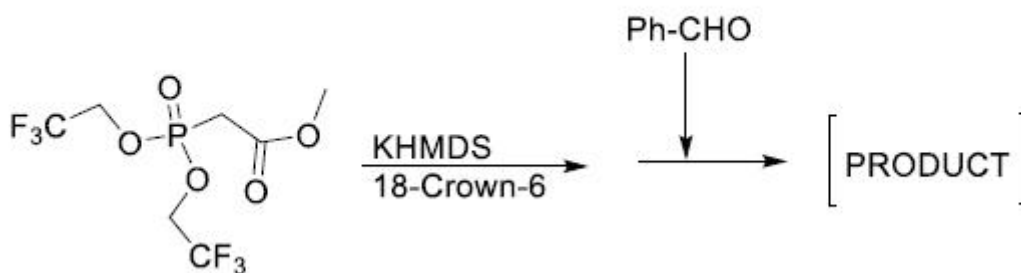
55213157354. *cis*-Alkene

55213157355. *trans*-Alkene

55213157356. Acetylene Compound

**Question Number : 90 Question Id : 55213114605 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0**

Predict the Selective Product



**Options :**

55213157357. Methyl ester

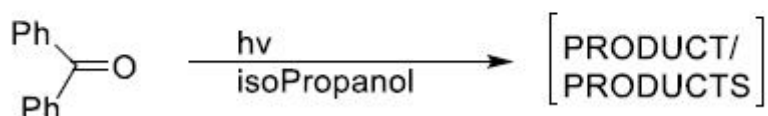
55213157358. *E*-Methylcinnamate

55213157359. Cinnamic acid

55213157360. *Z*-Methylcinnamate

Question Number : 91 Question Id : 55213114606 Question Type : MCQ Option Shuffling : Yes  
Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum  
Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No  
Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes  
Correct Marks : 2 Wrong Marks : 0

Indicate Photoreduction Product/Products

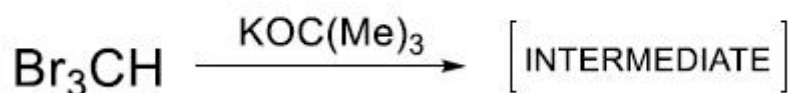


Options :

55213157361. Benzhydrol
55213157362. Benzhydrol and Benzpinacol
55213157363. Diphenylethanol
55213157364. Benzhydrol and Diphenylethanol

Question Number : 92 Question Id : 55213114607 Question Type : MCQ Option Shuffling : Yes  
Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum  
Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No  
Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes  
Correct Marks : 2 Wrong Marks : 0

Identify the Intermediate



**Options :**

55213157365. Radical Cation

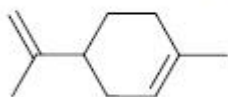
55213157366. Radical Anion

55213157367. Zwitterion

55213157368. Carbene

**Question Number : 93 Question Id : 55213114608 Question Type : MCQ Option Shuffling : Yes  
Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum  
Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No  
Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes  
Correct Marks : 2 Wrong Marks : 0**

Identify the Chiral Carbon



LIMONENE

**Options :**

55213157369. Carbon 4

55213157370. Carbon 2

55213157371. Carbon 1

55213157372. Carbon 6

**Question Number : 94 Question Id : 55213114609 Question Type : MCQ Option Shuffling : Yes**

**Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0**

Resonance Energy of Benzene is Derived from

**Options :**

55213157373. Heat of Oxidation

55213157374. Heat of Radical addition

55213157375. Heat of Hydrogenation

55213157376. Heat of Rearrangement

**Question Number : 95 Question Id : 55213114610 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0**

Identify Buckyball Formula

**Options :**

55213157377. C40

55213157378. C60

55213157379. C50

55213157380. C100

**Question Number : 96 Question Id : 55213114611 Question Type : MCQ Option Shuffling : Yes  
Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum  
Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No  
Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes  
Correct Marks : 2 Wrong Marks : 0**

Select 2-Butanone Preparation

**Options :**

55213157381. HexylMgBr reacts with Acetaldehyde and then Oxidation

55213157382. PropylMgBr reacts with Acetaldehyde and then Reduction

55213157383. EthylMgBr reacts with Butyraldehyde and then Oxidation

55213157384. EthylMgBr reacts with Acetaldehyde and then Oxidation

**Question Number : 97 Question Id : 55213114612 Question Type : MCQ Option Shuffling : Yes  
Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum  
Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No  
Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes  
Correct Marks : 2 Wrong Marks : 0**

Predict the Triplebond Frequency in IR Spectrum:

**Options :**

55213157385.  $3200 - 3600 \text{ cm}^{-1}$

55213157386.  $1620 - 1680 \text{ cm}^{-1}$

55213157387.  $2000 - 2300 \text{ cm}^{-1}$



55213157388.  $1000 - 1200 \text{ cm}^{-1}$

**Question Number : 98 Question Id : 55213114613 Question Type : MCQ Option Shuffling : Yes  
Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum  
Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No  
Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes  
Correct Marks : 2 Wrong Marks : 0**

UV-Visible absorption spectrum is represented as:

**Options :**

55213157389. "X" Coordinate and "Y" Coordinate as Wavelength (nm)

55213157390. "X" Coordinate as Wavelength and "Y" Coordinate as molar absorption coefficient

55213157391. "X" Coordinate as Wavelength and "Y" Coordinate as wavenumber

55213157392. "X" Coordinate as Wavelength and "Y" Coordinate as transition

**Question Number : 99 Question Id : 55213114614 Question Type : MCQ Option Shuffling : Yes  
Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum  
Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No  
Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes  
Correct Marks : 2 Wrong Marks : 0**

Predict H-NMR for 1,3,5-Trimethylbenzene

**Options :**

55213157393. Two Singlets

55213157394. One Singlet and One Triplet

55213157395. Singlet, Doublet and Triplet

55213157396. Doublet of Doublet and Triplet

**Question Number : 100 Question Id : 55213114615 Question Type : MCQ Option Shuffling : Yes  
Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum  
Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No  
Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes  
Correct Marks : 2 Wrong Marks : 0**

How many structural formulae written (based on H-nmr and C-nmr) for RIBOSE present  
in water?

**Options :**

55213157397. One Cyclic and Two open chain structures

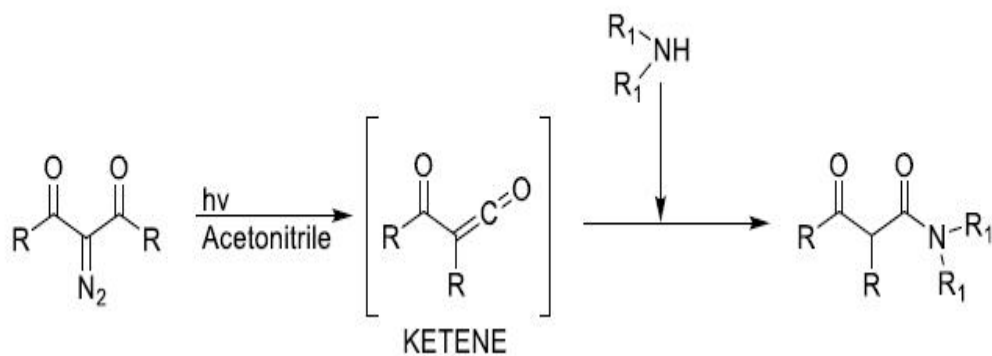
55213157398. One Open chain and Three Cyclic structures

55213157399. One Open chain and Four Cyclic structures

55213157400. Two Open Chain and Two Cyclic structures

**Question Number : 101 Question Id : 55213114616 Question Type : MCQ Option Shuffling : Yes  
Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum  
Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No  
Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes  
Correct Marks : 2 Wrong Marks : 0**

Identify Name Reaction



Options :

55213157401. Amadori

55213157402. Wittig

55213157403. Corey

55213157404. Wolf

Question Number : 102 Question Id : 55213114617 Question Type : MCQ Option Shuffling : Yes

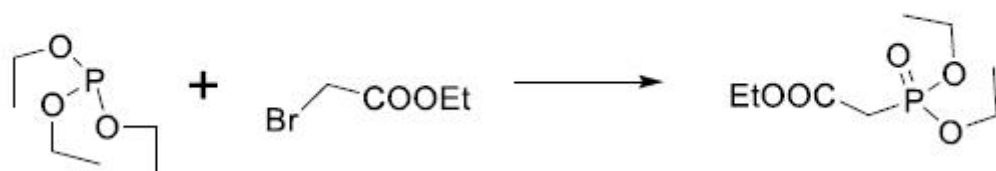
Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum

Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No

Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes

Correct Marks : 2 Wrong Marks : 0

Identify Name Reaction



Options :

55213157405. Redmore

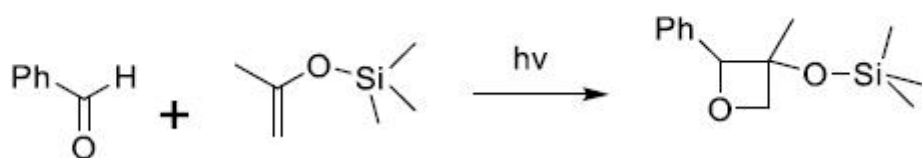
55213157406. Michaelis-Arbuzav

55213157407. Sommet

55213157408. Perkin

Question Number : 103 Question Id : 55213114618 Question Type : MCQ Option Shuffling : Yes  
Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum  
Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No  
Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes  
Correct Marks : 2 Wrong Marks : 0

Identify Name Reaction



Options :

55213157409. Pauson-Khand

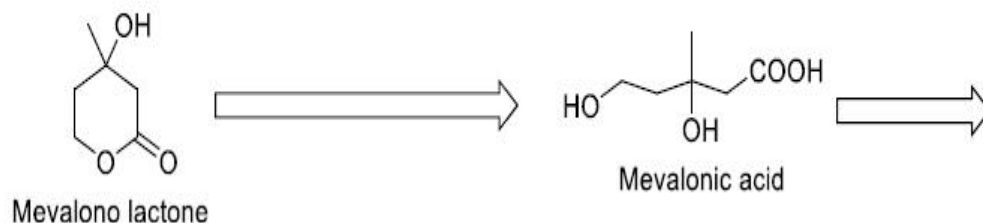
55213157410. Payne

55213157411. Pearlman

55213157412. Paterno-Buchi

Question Number : 104 Question Id : 55213114619 Question Type : MCQ Option Shuffling : Yes  
Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum  
Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No  
Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes  
Correct Marks : 2 Wrong Marks : 0

What is the arrow stands for?



**Options :**

55213157413. Radical Initiated Synthesis

55213157414. Preparation

55213157415. Retro-synthesis

55213157416. Photochemical Preparation

**Question Number : 105 Question Id : 55213114620 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0**

Predict the transition state of Malonic acid decarboxylation

**Options :**

55213157417. Six membered ring

55213157418. Five membered ring

55213157419. Four membered ring

55213157420. Seven membered ring

Question Number : 106 Question Id : 55213114621 Question Type : MCQ Option Shuffling : Yes  
Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum  
Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No  
Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes  
Correct Marks : 2 Wrong Marks : 0

Identify intermediate involved



Options :

55213157421. Alcohol

55213157422. Enolate

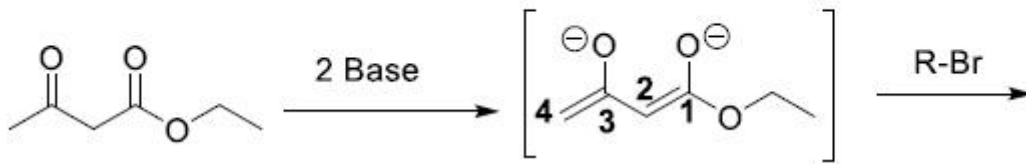
55213157423. Dienol

55213157424. Phenol

Question Number : 107 Question Id : 55213114622 Question Type : MCQ Option Shuffling : Yes  
Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum  
Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No  
Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes  
Correct Marks : 2 Wrong Marks : 0



Predict the regio-selectivity of Mono Alkylation



Options :

55213157425. Carbon -2

55213157426. Carbon -3

55213157427. Carbon -1

55213157428. Carbon -4

Question Number : 108 Question Id : 55213114623 Question Type : MCQ Option Shuffling : Yes  
Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum  
Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No  
Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes  
Correct Marks : 2 Wrong Marks : 0

Indicate Medicinal Property of Paracetamol

Options :

55213157429. Reduces Fever

55213157430. Reduces Pain

55213157431. Reduces Pain and Fever

55213157432. Antibacterial

**Question Number : 109 Question Id : 55213114624 Question Type : MCQ Option Shuffling : Yes  
Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum  
Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No  
Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes  
Correct Marks : 2 Wrong Marks : 0**

Indicate Aspirin's role

**Options :**

55213157433. Inhibits Prostaglandin Biosynthesis

55213157434. Inhibits Alkaloid Biosynthesis

55213157435. Inhibits Vitamin Biosynthesis

55213157436. Inhibits Steroidal Biosynthesis

**Question Number : 110 Question Id : 55213114625 Question Type : MCQ Option Shuffling : Yes  
Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum  
Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No  
Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes  
Correct Marks : 2 Wrong Marks : 0**

Inform the property of Carbon Nanotubes

**Options :**

55213157437. Metallic Property

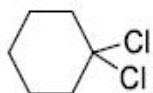
55213157438. Adhesion Property

55213157439. Alloy Property

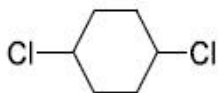
55213157440. Electrical Property

Question Number : 111 Question Id : 55213114626 Question Type : MCQ Option Shuffling : Yes  
Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum  
Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No  
Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes  
Correct Marks : 2 Wrong Marks : 0

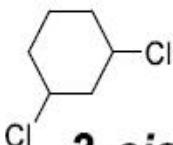
Identify Chiral Compound



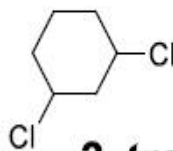
1



2



3-cis



3-trans

Options :

55213157441. One

55213157442. Two

55213157443. Three-trans

55213157444. Three-cis

Question Number : 112 Question Id : 55213114627 Question Type : MCQ Option Shuffling : Yes  
Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum  
Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No  
Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes  
Correct Marks : 2 Wrong Marks : 0

## Identify Catalyst Employed for Resolution of Racemic Mixture

### Options :

55213157445. Copperchromite

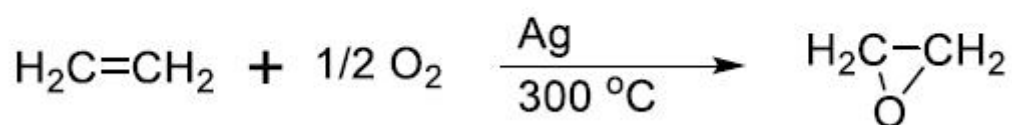
55213157446. Sodiumhydroxide

55213157447. Zincacetate

55213157448. Lipase or Eaterase

**Question Number : 113 Question Id : 55213114628 Question Type : MCQ Option Shuffling : Yes  
Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum  
Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No  
Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes  
Correct Marks : 2 Wrong Marks : 0**

Identify the Correct Expression



### Options :

55213157449. Preparation of Ethanol

55213157450. Non Catalytic Reaction

55213157451. Environmentally Benign Production

55213157452. Explosive Reaction

**Question Number : 114 Question Id : 55213114629 Question Type : MCQ Option Shuffling : Yes  
Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum  
Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No  
Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes  
Correct Marks : 2 Wrong Marks : 0**

Indicate the Heterocyclic Moiety Present in Histidine

**Options :**

55213157453. Pyrrole

55213157454. Oxazole

55213157455. Pyrazole

55213157456. Imidazole

**Question Number : 115 Question Id : 55213114630 Question Type : MCQ Option Shuffling : Yes  
Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum  
Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No  
Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes  
Correct Marks : 2 Wrong Marks : 0**

Indicate TWO Heterocyclic Rings Present in Nicotine

**Options :**

55213157457. Pyrrole and Furan

55213157458. Oxazole and Thiophene

55213157459. Pyridine and Pyrrole

55213157460. Indole and Pyridine

**Question Number : 116 Question Id : 55213114631 Question Type : MCQ Option Shuffling : Yes  
Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum  
Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No  
Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes  
Correct Marks : 2 Wrong Marks : 0**

Indicate Heterocycle isolated from Tea Leaves and has Medicinal Property

**Options :**

55213157461. Theobromine

55213157462. Purine

55213157463. Pyrimidine

55213157464. Guanine

**Question Number : 117 Question Id : 55213114632 Question Type : MCQ Option Shuffling : Yes  
Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum  
Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No  
Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes  
Correct Marks : 2 Wrong Marks : 0**

Indicate Chemical responsible for making Vitamin D upon exposure to Sun Light

**Options :**

55213157465. Cortisol



55213157466. Lanosterol

55213157467. Cholic acid

55213157468. 7-Dehydrocholesterol

**Question Number : 118 Question Id : 55213114633 Question Type : MCQ Option Shuffling : Yes  
Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum  
Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No  
Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes  
Correct Marks : 2 Wrong Marks : 0**

If  $A = \frac{d}{dx}$  and  $B = x^3$ , then find  $[A, B]$

**Options :**

55213157469. -1

55213157470.  $x^3$

55213157471.  $3x^2$

55213157472.  $3x$

**Question Number : 119 Question Id : 55213114634 Question Type : MCQ Option Shuffling : Yes  
Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum  
Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No  
Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes  
Correct Marks : 2 Wrong Marks : 0**

A particle of mass 'm' is confined in a two dimensional box having lengths 'a' and '2a'.

What is its ground state energy?

**Options :**

55213157473.  $\frac{h^2}{4ma^2}$

55213157474.  $\frac{5h^2}{32ma^2}$

55213157475.  $\frac{32h^2}{5ma^2}$

55213157476.  $\frac{h^2}{32ma^2}$

**Question Number : 120 Question Id : 55213114635 Question Type : MCQ Option Shuffling : Yes**

**Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum**

**Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No**

**Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes**

**Correct Marks : 2 Wrong Marks : 0**

The Hamiltonian for He atom under perturbation theory is given by

$$H = H^{(0)} + H'$$

where  $H'$  is the first order perturbation.  $H'$  in atomic units is given by

**Options :**

55213157477.  $H' = -\frac{1}{2} \nabla_1^2$

55213157478.

$$\frac{\Lambda}{H'} = -\frac{1}{2}(\nabla_1^2 + \nabla_2^2) - \left(\frac{2}{r_1} + \frac{2}{r_2}\right)$$

55213157479.

$$\frac{\Lambda}{H'} = \frac{1}{r_{12}}$$

55213157480.

$$\frac{\Lambda}{H'} = r_{12}$$

**Question Number : 121 Question Id : 55213114636 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0**

The ground state energy ( $E_{\text{var}}$ ) of a particle of mass “m” present in one dimensional box of length “a” cm is estimated by variation method using a trial wave function,

$\psi(x) = x(a-x)$ . If the true ground state energy of particle is  $\frac{h^2}{8ma^2}$ , then  $E_{\text{var}}$  will be

**Options :**

55213157481.

$$E_{\text{var}} = \frac{0.56h^2}{8ma^2}$$

55213157482.

$$E_{\text{var}} = \frac{h^2}{16ma^2}$$

55213157483.

$$E_{\text{var}} = \frac{h^2}{8.096ma^2}$$

$$E_{\text{var}} = \frac{1.012 h^2}{8 m a^2}$$

55213157484.

**Question Number : 122 Question Id : 55213114637 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0**

The ground state term symbols of two elements X and Y are  $^3P_2$  and  $^3P_0$  respectively. The elements X and Y are respectively

**Options :**

55213157485. F, C

55213157486. O, N

55213157487. O, C

55213157488. N, C

**Question Number : 123 Question Id : 55213114638 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0**

Identify the correct statements from the following.

(i). The term symbol for excited state of H atom is  $^2P_{3/2}$ .

(ii).  $\psi(x) = \alpha(1)\alpha(2)$  is an antisymmetric wave function

(iii). The total number of microstates for  $p^2$  configuration is 15

**Options :**

55213157489. i, ii, iii

55213157490. i, ii

55213157491. ii, iii

55213157492. i, iii

**Question Number : 124 Question Id : 55213114639 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0**

What is the valence bond wave function of HX which is 75 % covalent and 25 % ionic?

Assume that HX is formed by the overlap of 1s of H and  $2p_z$  of X.

**Options :**

55213157493.  $0.75[\phi_H(1)\phi_X(2) + \phi_H(2)\phi_X(1)] + 0.25[\phi_X(1)\phi_X(2)]$

55213157494.  $0.866[\phi_H(1)\phi_X(2) + \phi_H(2)\phi_X(1)] + 0.5[\phi_X(1)\phi_X(2)]$

55213157495.  $0.75[\phi_X(1)\phi_X(2)] + 0.25[\phi_H(1)\phi_X(2) + \phi_H(2)\phi_X(1)]$

55213157496.  $0.866[\phi_X(1)\phi_X(2)] + 0.5[\phi_H(1)\phi_X(2) + \phi_H(2)\phi_X(1)]$

**Question Number : 125 Question Id : 55213114640 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0**

The delocalization energy of cyclopropenyl cation, cyclopropenyl radical and cyclopropenyl anion are respectively ( $\beta$  = exchange integral)

**Options :**

55213157497.  $-2\beta, -\beta, 0$

55213157498.  $-\beta, -2\beta, 0$

55213157499.  $-2\beta, 0, -2\beta$

55213157500.  $-2\beta, -2\beta, 0$

**Question Number : 126 Question Id : 55213114641 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0**

Identify the correct statements from the following

- (i).  $H_2O$  belongs to Abelian group and  $NH_3$  belongs to Non-Abelian group
- (ii).  $H_2CO$  belongs to Non-Abelian group and  $CHCl_3$  belongs to Abelian group
- (iii). The point group of benzene is  $D_{6h}$



**Options :**55213157501. **i, ii**55213157502. **i, iii**55213157503. **i, ii, iii**55213157504. **ii, iii**

**Question Number : 127 Question Id : 55213114642 Question Type : MCQ Option Shuffling : Yes  
Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum  
Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No  
Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes  
Correct Marks : 2 Wrong Marks : 0**

The character table of  $C_{3v}$  point group is given below, along with additional reducible representation,  $\Gamma$ .

$C_{3v}$	E	$2C_3$	$3\sigma_v$
$A_1$	1	1	1
$A_2$	1	1	-1
E	2	-1	0
$\Gamma$	12	0	2

$\Gamma$  is given by

**Options :**55213157505.  **$3A_1 + A_2 + 4E$** 55213157506.  **$3A_1 + 2A_2 + 4E$** 55213157507.  **$3A_1 + A_2 + 3E$** 55213157508.  **$2A_1 + 3A_2 + 3E$**

**Question Number : 128 Question Id : 55213114643 Question Type : MCQ Option Shuffling : Yes  
Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum  
Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No  
Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes  
Correct Marks : 2 Wrong Marks : 0**

Which one of the following molecules possess  $S_4$  symmetry element?

**Options :**

55213157509.  $\text{CH}_4$

55213157510.  $\text{CH}_3\text{Cl}$

55213157511.  $\text{CH}_2\text{O}$

55213157512.  $\text{CO}_2$

**Question Number : 129 Question Id : 55213114644 Question Type : MCQ Option Shuffling : Yes  
Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum  
Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No  
Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes  
Correct Marks : 2 Wrong Marks : 0**

The stretching vibration of  $^{16}\text{O}^1\text{H}$  is  $3300\text{ cm}^{-1}$ . What will be the stretching vibration (in  $\text{cm}^{-1}$ ) of  $^{16}\text{O}^2\text{H}$ ?

**Options :**

55213157513. 3300

55213157514. 2401

55213157515. 4521

55213157516. 3760

**Question Number : 130 Question Id : 55213114645 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0**

The ratio of nuclear g factors of  $^1\text{H}$  and  $^{13}\text{C}$  is 3.978. If  $^1\text{H}$  resonates at frequency 100 MHz for a given magnetic field, what will be the frequency (in MHz) at the same magnetic field?

**Options :**

55213157517. 100

55213157518. 25.14

55213157519. 397.8

55213157520. 7.69

**Question Number : 131 Question Id : 55213114646 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0**

The correct order of  $\lambda_{\text{max}}$  of ethylene (a), 1,3,5-hexatriene (b) and 1,3-butadiene (c) is

**Options :**

55213157521.  $b > a > c$

55213157522.  $c > a > b$

55213157523.  $b > c > a$

55213157524.  $a > c > b$

**Question Number : 132 Question Id : 55213114647 Question Type : MCQ Option Shuffling : Yes  
Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum  
Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No  
Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes  
Correct Marks : 2 Wrong Marks : 0**

The rotational spectrum of a diatomic molecule gave a series of lines at 25.3, 29.5, 33.7, 37.9, 42.1  $\text{cm}^{-1}$ . What is the rotational constant (B) in  $\text{cm}^{-1}$  of the molecule?

**Options :**

55213157525. 4.2

55213157526. 33.7

55213157527. 2.1

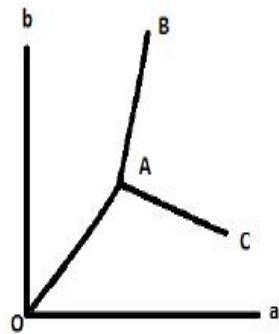
55213157528. 1.05

**Question Number : 133 Question Id : 55213114648 Question Type : MCQ Option Shuffling : Yes  
Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum  
Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No**

Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes

Correct Marks : 2 Wrong Marks : 0

The phase diagram of a compound is shown below (b = pressure; a = temperature)



The slopes of lines OA, AB and AC are x, y and z respectively. The compound melting

point is 300 K and  $\Delta V$  is  $\frac{10}{z}$ . What is its  $\Delta H$  in  $\text{kJ mol}^{-1}$ ?

Options :

55213157529. 3

55213157530. 30

55213157531. 300

55213157532. 3000

Question Number : 134 Question Id : 55213114649 Question Type : MCQ Option Shuffling : Yes

Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum

Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No

Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes

Correct Marks : 2 Wrong Marks : 0

Identify the correct statements from the following

(i) The work done is reversible isothermal expansion from  $V_1$  to  $V_2$  litres of an ideal

$$\text{gas is } w = -RT \ln \frac{V_2}{V_1}$$

(ii) Mass is an extensive property and density is an intensive property

(iii) In an adiabatic process, the temperature of the system remains constant during each stage of the process

**Options :**

55213157533. **i, ii, iii**

55213157534. **i, ii**

55213157535. **i, iii**

55213157536. **ii, iii**

**Question Number : 135 Question Id : 55213114650 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0**

Match the following

List I

1. variation of  $C_p$  with temperature
2. Reversible expansion of gas
3. Joule Thomson effect
4. Specific heat

List II

- a. Maximum work
- b.  $\Delta H = 0$
- c. extensive property
- d. entropy
- e. Intensive property



**Options :**

55213157537. 1-d, 2-a, 3-b, 4-c

55213157538. 1-d, 2-a, 3-b, 4-e

55213157539. 1-d, 2-a, 3-e, 4-b

55213157540. 1-b, 2-a, 3-d, 4-e

**Question Number : 136 Question Id : 55213114651 Question Type : MCQ Option Shuffling : Yes  
Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum  
Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No  
Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes  
Correct Marks : 2 Wrong Marks : 0**

The partition function ( $q$ ) for a gas is  $q = q_{tr} q_{ele}$

The gas is

**Options :**

55213157541.  $H_2$

55213157542.  $N_2$

55213157543.  $Ne$

55213157544.  $CH_4$

**Question Number : 137 Question Id : 55213114652 Question Type : MCQ Option Shuffling : Yes  
Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum**

**Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0**

At 1000 K, a system of N particles has two energy levels with  $g_1 = g_2 = 1$ ;  $E_1 = 50 \text{ J mol}^{-1}$

and  $E_2 = 58.314 \text{ J mol}^{-1}$ . What is the ratio  $\left(\frac{n_2}{n_1}\right)$  of number of particles in the two energy

levels? ( $R = 8.314 \text{ J mol}^{-1} \text{ K}^{-1}$ )

**Options :**

55213157545.  $\exp(-10^{-3})$

55213157546.  $\exp(10^{-3})$

55213157547.  $\exp(10^{-2})$

55213157548.  $\exp(-10^{-2})$

**Question Number : 138 Question Id : 55213114653 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0**

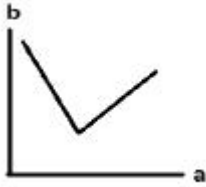
In a conductometric titration, NaOH is taken in a beaker and a mixture of HCl and  $\text{CH}_3\text{COOH}$  solutions is taken in a burette. The volume of mixed acid added (b) is plotted on y- axis and conductance (a) on x-axis. The expected plot will be

**Options :**



55213157549.

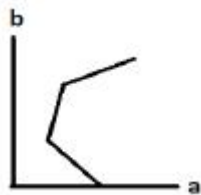
55213157550.



55213157551.



55213157552.



**Question Number : 139 Question Id : 55213114654 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0**

In a typical potentiometric titration of HCl with NaOH, the end point is characterized by

**Options :**

55213157553.  $\frac{dE}{dV} \neq 0 ; \frac{d^2E}{dV^2} = 0$

55213157554.  $\frac{dE}{dV} \neq 0 ; \frac{d^2E}{dV^2} \neq 0$

55213157555.  $\frac{dE}{dV} = 0 ; \frac{d^2E}{dV^2} \neq 0$

55213157556.  $\frac{dE}{dV} \neq 0$  ;  $\frac{d^2E}{dV^2} = 0$

**Note: For this question, ambiguity is found in question/answer. Candidate will get full marks for this question if any of the correct options are chosen.**

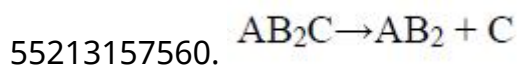
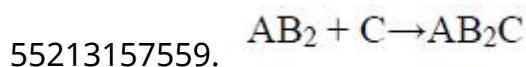
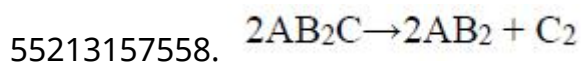
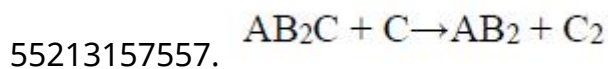
**Question Number : 140 Question Id : 55213114655 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0**

For the reaction,  $2AB_2C \rightarrow 2AB_2 + C_2$ , the experimentally determined rate (R) law is

$$R = K[AB_2C]$$

The rate determining step is

**Options :**



**Question Number : 141 Question Id : 55213114656 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0**

For a first order reaction, the following equation is obtained

$$k = 2 \times 10^5 \exp(-0.5)$$

The activation energy (in cal mol<sup>-1</sup>) of the reaction is (R = 2 cal mol<sup>-1</sup> K<sup>-1</sup>)

**Options :**

55213157561.  $2 \times 10^5$

55213157562. 100

55213157563. 300

55213157564. 150

**Question Number : 142 Question Id : 55213114657 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0**

For enzyme catalyzed reaction, a plot between  $\frac{1}{\text{Rate}}$  on y-axis and  $\frac{1}{\text{substrate conc.}}$

on x-axis gave slope (m) and intercept (c). The correct relationship between K<sub>m</sub> (Michaelis-Menten constant), m and c is

**Options :**

55213157565.  $V_m = \frac{m}{c}$

55213157566.  $V_m = mc$

55213157567.

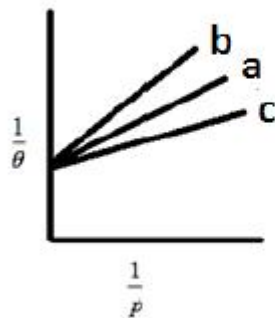
$$V_m = \frac{c}{m}$$

55213157568.

$$V_m = \frac{1}{m \cdot c}$$

**Question Number : 143 Question Id : 55213114658 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0**

Adsorption isotherm of A, B and C gases are shown below



The extent of adsorption of these gases follows the order

**Options :**

55213157569.  $c > a > b$

55213157570.  $b > a > c$

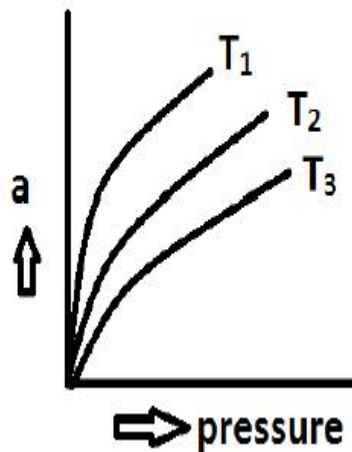
55213157571.  $b > c > a$

55213157572.  $a > b > c$



Question Number : 144 Question Id : 55213114659 Question Type : MCQ Option Shuffling : Yes  
Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum  
Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No  
Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes  
Correct Marks : 2 Wrong Marks : 0

The following curves are obtained for a gas at different temperatures. The correct order of temperature is ('a' is the amount of gas adsorbed per unit mass of adsorbent)



Options :

55213157573.  $T_1 < T_2 < T_3$

55213157574.  $T_3 < T_2 < T_1$

55213157575.  $T_2 < T_1 < T_3$

55213157576.  $T_2 < T_3 < T_1$

Question Number : 145 Question Id : 55213114660 Question Type : MCQ Option Shuffling : Yes  
Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum  
Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No  
Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes

**Correct Marks : 2 Wrong Marks : 0**

The separation of (1 2 3) planes of a tetragonal ( $a = b \neq c; \alpha = \beta = \gamma = 90^\circ$ ) unit cell is 3.50 nm. The separation of (2 4 6) planes in nm is

**Options :**

55213157577. 1. 3.5

55213157578. 1.75

55213157579. 0.875

55213157580. 1.25

**Question Number : 146 Question Id : 55213114661 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes**

**Correct Marks : 2 Wrong Marks : 0**

A crystal lattice exposed to (i) X-rays, (ii) electron beam, (iii) neutron beam, (iv) UV- rays, separately. Diffraction will be observed for

**Options :**

55213157581. i, ii, iii, iv

55213157582. i, ii, iv only

55213157583. i, ii, iii only

55213157584. ii, iii, iv only

**Question Number : 147 Question Id : 55213114662 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0**

If  $\overline{M}_n$  and  $\overline{M}_w$  are number average and weight average molecular weight of a polymer sample, then its polydispersity index (PDI) is

**Options :**

55213157585.  $\frac{\overline{M}_n}{\overline{M}_w}$

55213157586.  $\frac{\overline{M}_w}{\overline{M}_n}$

55213157587.  $\frac{(\overline{M}_n + \overline{M}_w)}{2}$

55213157588.  $\overline{M}_n \times \overline{M}_w$

**Question Number : 148 Question Id : 55213114663 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0**

Repeated estimation of copper in an alloy gave 6, 10, 15 ppm of copper. Standard deviation in the estimation of copper is

**Options :**

55213157589.  $\sqrt{203.3} \text{ ppm}$

55213157590.  $\sqrt{2.033} \text{ ppm}$

55213157591.  $\sqrt{20.33} \text{ ppm}$

55213157592.  $6.5 \text{ ppm}$

**Question Number : 149 Question Id : 55213114664 Question Type : MCQ Option Shuffling : Yes  
Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum  
Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No  
Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes  
Correct Marks : 2 Wrong Marks : 0**

Which one of the following methods is less expensive to prepare inorganic nano materials?

**Options :**

55213157593. Reverse micelle method

55213157594. Surfactant assisted hydrothermal method

55213157595. sol-gel method

55213157596. High temperature (above 1000 °C) ceramic method

Question Number : 150 Question Id : 55213114665 Question Type : MCQ Option Shuffling : Yes  
Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum  
Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No  
Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes  
Correct Marks : 2 Wrong Marks : 0

Assertion (A): The nuclear spin (I) of any element is zero or integer or half integer.

Reason (R): Both protons and neutron have spin of  $\frac{1}{2}$  each.

The correct answer is

**Options :**

55213157597. Both (A) and (R) are correct and (R) is the correct explanation of (A).

55213157598. Both (A) and (R) are correct but (R) is not the correct explanation of (A).

55213157599. (R) is correct but (A) is not correct

55213157600. (R) is not correct but (A) is correct.