

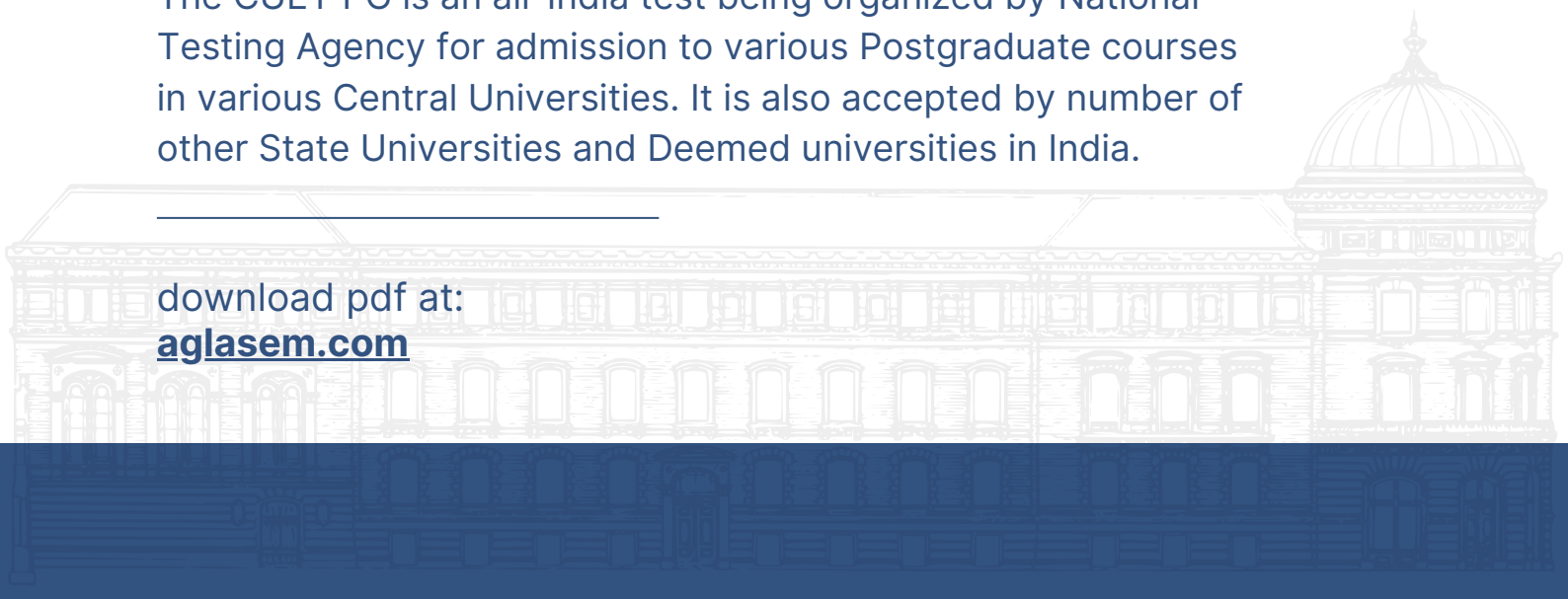


Common University Entrance Test (PG)

CUET PG 2023 Question Paper

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Question Paper Name :	Nano Science Nano Technology Eng 12th June 2023 Shift 3
Subject Name :	Nano Science Nano Technology Eng
Creation Date :	2023-06-12 20:46:02
Duration :	120
Total Marks :	400
Display Marks:	Yes

Nano Science Nano Technology

Group Number :	1
Group Id :	920906157
Group Maximum Duration :	0
Group Minimum Duration :	120
Show Attended Group? :	No
Edit Attended Group? :	No
Break time :	0
Group Marks :	400
Is this Group for Examiner? :	No
Examiner permission :	Cant View
Show Progress Bar? :	No

Part A

Section Id :	920906313
Section Number :	1
Section type :	Online
Mandatory or Optional :	Mandatory
Number of Questions :	21
Number of Questions to be attempted :	21
Section Marks :	100
Enable Mark as Answered Mark for Review and Clear Response :	Yes
Maximum Instruction Time :	0
Sub-Section Number :	1
Sub-Section Id :	920906511
Question Shuffling Allowed :	No
Is Section Default? :	null

Question Id : 92090615794 Question Type : COMPREHENSION Sub Question Shuffling Allowed : Yes Group Comprehension Questions : No Question Pattern Type : NonMatrix Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Question Numbers : (1 to 5)
Question Label : Comprehension

It depends on who is giving the rating: Centre on India's rank in press freedom index

KRISHNADAS RAJAGOPAL, NEW DELHI

Solicitor-General Tushar Mehta, appearing for the government in the Supreme Court on Tuesday, made light of India's fall to 161st position in press freedom ranking, saying "that depends on who is giving the rating. I can have my own forum and give India the first rating".

The remark was in response to the Supreme Court's observation that India has fallen to the 161st position out of 180 countries in the World Press Freedom Index published by the non-profit organization, reporters Without Borders. In 2022, India was ranked at 150.

India is ranked behind countries such as Afghanistan, Pakistan and Somalia.

"India is 161 in ranking in journalistic freedom," Justice K.M. Joseph, addressed the Union and Gujarat government, represented by Mr. Mehta during a hearing in the Billkis Bano case.

HEARING ON JULY 10

Change between Justice Joseph and Mr. Mehta came while the Supreme Court ordered the publication of a notice giving the details of the case and the next date of court hearing, July 10, in two vernacular papers in Gujarat to alert those unserved among the 11 convicts who were released prematurely from their life imprisonment. They had been found guilty of the gang rape of Ms. Bano and the murder of her family members. Ms. Bano and other writ petitioners have separately challenged their remission.

The hearing, at one point, saw the Supreme Court wonder whether some of the released convicts were making a "mockery" of or even "playing" with the court by either going incognito to hamper the serving of notice of the case on them or seeking time to file counter affidavits. Previous hearings have been a no go with lawyers for the men seeking adjournment on procedural grounds.

The court decided to publish the notice in the newspapers so that the convicts would not take the plea of ignorance and the case could go ahead and be heard on merits.

Sub questions

Question Number : 1 Question Id : 92090615795 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

Synonym of the term 'incognito' is:

- | | |
|---------------|---------------|
| (1) Inclusive | (2) Inaudible |
| (3) Undutiful | (4) Concealed |

Options :

- 92090662401. 1
- 92090662402. 2
- 92090662403. 3
- 92090662404. 4

Question Number : 2 Question Id : 92090615796 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

'Made light of' means:

- (1) Removed darkness
- (2) Put something on fire
- (3) To act as if something is serious especially when it is not serious
- (4) Play down

Options :

- 92090662405. 1
- 92090662406. 2
- 92090662407. 3
- 92090662408. 4

Question Number : 3 Question Id : 92090615797 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

The antonym of 'remission' is:

- (A) Exoneration
- (B) Censure
- (C) Reprieve
- (D) Increase

Choose the correct answer from the options given below :

- (1) (A) and (B)
- (2) (B) and (C)
- (3) (B) and (D)
- (4) (D) only

Options :

- 92090662409. 1
- 92090662410. 2
- 92090662411. 3
- 92090662412. 4

Question Number : 4 Question Id : 92090615798 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

'Going incognito' means:

- (A) Using false name
- (B) Wearing a disguise
- (C) To be recognised
- (D) Not to be identified.

Choose the correct answer from the options given below :

- (1) (A) and (D)
- (2) (A), (B) and (C)
- (3) (A), (B), and (D)
- (4) (A), (B), (C) and (D)

Options :

- 92090662413. 1
- 92090662414. 2
- 92090662415. 3
- 92090662416. 4

Question Number : 5 Question Id : 92090615799 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

Why Justice K.M. Josheph addressed Gujurat Government during the hearing?

- (1) Gujurat is the reason behind our sharp fall in press freedom ranking
- (2) India is ranked 161, behind nations such as Pakistan, Afganistan etc.
- (3) Bilk is Bano case was iniatiated and registered in Gujurat.
- (4) The murder convicts were not arrested by the then Gujurat government.

Options :

- 92090662417. 1
- 92090662418. 2
- 92090662419. 3
- 92090662420. 4

Question Id : 92090615794 Question Type : COMPREHENSION Sub Question Shuffling Allowed : Yes Group Comprehension Questions : No Question Pattern Type : NonMatrix Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Question Numbers : (1 to 5)

Question Label : Comprehension

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The hearing, at one point, saw the Supreme Court wonder whether some of the released convicts were making a "mockery" of or even "playing" with the court by either going incognito to hamper the serving of notice of the case on them or seeking time to file counter affidavits. Previous hearings have been a no go with lawyers for the men seeking adjournment on procedural grounds.

The court decided to publish the notice in the newspapers so that the convicts would not take the plea of ignorance and the case could go ahead and be heard on merits.

Sub questions

Question Number : 1 Question Id : 92090615795 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Synonym of the term 'incognito' is:

- | | |
|---------------|---------------|
| (1) Inclusive | (2) Inaudible |
| (3) Undutiful | (4) Concealed |

Options :

- 92090662401. 1
- 92090662402. 2
- 92090662403. 3
- 92090662404. 4

Question Number : 2 Question Id : 92090615796 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

'Made light of' means:

- (1) Removed darkness
- (2) Put something on fire
- (3) To act as if something is serious especially when it is not serious
- (4) Play down

Options :

- 92090662405. 1
- 92090662406. 2
- 92090662407. 3
- 92090662408. 4

Question Number : 3 Question Id : 92090615797 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

The antonym of 'remission' is:

- (A) Exoneration
- (B) Censure
- (C) Reprieve
- (D) Increase

Choose the correct answer from the options given below :

- (1) (A) and (B)
- (2) (B) and (C)
- (3) (B) and (D)
- (4) (D) only

Options :

- 92090662409. 1

92090662410. 2

92090662411. 3

92090662412. 4

Question Number : 4 Question Id : 92090615798 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

'Going incognito' means:

- (A) Using false name
- (B) Wearing a disguise
- (C) To be recognised
- (D) Not to be identified.

Choose the correct answer from the options given below :

- (1) (A) and (D)
- (2) (A), (B) and (C)
- (3) (A), (B), and (D)
- (4) (A), (B), (C) and (D)

Options :

92090662413. 1

92090662414. 2

92090662415. 3

92090662416. 4

Question Number : 5 Question Id : 92090615799 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Why Justice K.M. Josheph addressed Gujurat Government during the hearing?

- (1) Gujurat is the reason behind our sharp fall in press freedom ranking
- (2) India is ranked 161, behind nations such as Pakistan, Afganistan etc.
- (3) Bilk is Bano case was initiated and registered in Gujurat.
- (4) The murder convicts were not arrested by the then Gujurat government.

Options :

92090662417. 1

92090662418. 2

92090662419. 3

92090662420. 4

Sub-Section Number : 2
Sub-Section Id : 920906512
Question Shuffling Allowed : Yes
Is Section Default? : null

Question Number : 6 Question Id : 92090615800 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

The synonym of the word 'VINDICTIVE' is _____.

- | | |
|-------------------|---------------|
| (1) Revengeful | (2) Bigoted |
| (3) Demonstrative | (4) Strategic |

Options :

92090662421. 1
92090662422. 2
92090662423. 3
92090662424. 4

Question Number : 6 Question Id : 92090615800 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

The synonym of the word 'VINDICTIVE' is _____.

- | | |
|-------------------|---------------|
| (1) Revengeful | (2) Bigoted |
| (3) Demonstrative | (4) Strategic |

Options :

92090662421. 1
92090662422. 2
92090662423. 3
92090662424. 4

Question Number : 7 Question Id : 92090615801 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Fill in the blanks with appropriate prepositions from the options given below:

The e-cycle project _____ the city is slowly finding takers most of them college students who would earlier depend _____ cabs and bike taxis _____ commuting.

(1) in, upon, to

(2) in, on, for

(3) in, off, for

(4) on, with, on

Options :

92090662425. 1

92090662426. 2

92090662427. 3

92090662428. 4

Question Number : 7 Question Id : 92090615801 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Fill in the blanks with appropriate prepositions from the options given below:

The e-cycle project _____ the city is slowly finding takers most of them college students who would earlier depend _____ cabs and bike taxis _____ commuting.

(1) in, upon, to

(2) in, on, for

(3) in, off, for

(4) on, with, on

Options :

92090662425. 1

92090662426. 2

92090662427. 3

92090662428. 4

Question Number : 8 Question Id : 92090615802 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Choose the meaning of the term "Bon voyage"

- (A) Used to express good wishes to someone about to set off on a journey.
- (B) Good morning.
- (C) Long Journey.
- (D) Good night.

Options :

- 92090662429. 1
- 92090662430. 2
- 92090662431. 3
- 92090662432. 4

Question Number : 8 Question Id : 92090615802 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Choose the meaning of the term "Bon voyage"

- (A) Used to express good wishes to someone about to set off on a journey.
- (B) Good morning.
- (C) Long Journey.
- (D) Good night.

Options :

- 92090662429. 1
- 92090662430. 2
- 92090662431. 3
- 92090662432. 4

Question Number : 9 Question Id : 92090615803 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

The correctly spelt word from the following option:-

- | | |
|----------------|----------------|
| (1) BITUMENEZE | (2) BIBEMINIZE |
| (3) BETUMINEZE | (4) BITUMINIZE |

Options :

- 92090662433. 1
- 92090662434. 2
- 92090662435. 3
- 92090662436. 4

Question Number : 9 Question Id : 92090615803 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

The correctly spelt word from the following option:-

- | | |
|----------------|----------------|
| (1) BITUMENEZE | (2) BIBEMINIZE |
| (3) BETUMINEZE | (4) BITUMINIZE |

Options :

- 92090662433. 1
- 92090662434. 2
- 92090662435. 3
- 92090662436. 4

Question Number : 10 Question Id : 92090615804 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Fear of open spaces is called:

- | | |
|-----------------|-----------------|
| (1) Agoraphobia | (2) Anachronism |
| (3) Anecdote | (4) Apiary |

Options :

- 92090662437. 1
- 92090662438. 2
- 92090662439. 3
- 92090662440. 4

Question Number : 10 Question Id : 92090615804 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Fear of open spaces is called:

- | | |
|-----------------|-----------------|
| (1) Agoraphobia | (2) Anachronism |
| (3) Anecdote | (4) Apiary |

Options :

- 92090662437. 1
- 92090662438. 2
- 92090662439. 3
- 92090662440. 4

Question Number : 11 Question Id : 92090615805 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

A boat goes 12 km in one hour along the stream and 6 km in one hour against the stream. Th speed of the stream in km/h is:

- | | |
|-------|-------|
| (1) 2 | (2) 3 |
| (3) 4 | (4) 5 |

Options :

- 92090662441. 1
- 92090662442. 2
- 92090662443. 3
- 92090662444. 4

Question Number : 11 Question Id : 92090615805 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

A boat goes 12 km in one hour along the stream and 6 km in one hour against the stream. Th speed of the stream in km/h is:

- | | |
|-------|-------|
| (1) 2 | (2) 3 |
| (3) 4 | (4) 5 |

Options :

- 92090662441. 1
- 92090662442. 2
- 92090662443. 3
- 92090662444. 4

Question Number : 12 Question Id : 92090615806 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

For $x = 3$, find the value of $x^5 + x^4 - x^3 - x^2 + x - 1$.

- | | |
|---------|---------|
| (1) 280 | (2) 270 |
| (3) 290 | (4) 300 |

Options :

- 92090662445. 1
- 92090662446. 2

92090662447. 3

92090662448. 4

Question Number : 12 Question Id : 92090615806 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

For $x = 3$, find the value of $x^5 + x^4 - x^3 - x^2 + x - 1$.

(1) 280

(2) 270

(3) 290

(4) 300

Options :

92090662445. 1

92090662446. 2

92090662447. 3

92090662448. 4

Question Number : 13 Question Id : 92090615807 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

The sides of three solid metallic cubes are 30cm, 40cm and 50cm respectively. Find the side of the new cube formed by melting the three cubes (in cm)

(1) 60

(2) 120

(3) 90

(4) 80

Options :

92090662449. 1

92090662450. 2

92090662451. 3

92090662452. 4

Question Number : 13 Question Id : 92090615807 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

The sides of three solid metallic cubes are 30cm, 40cm and 50cm respectively. Find the side of the new cube formed by melting the three cubes (in cm)

(1) 60

(2) 120

(3) 90

(4) 80

Options :

- 92090662449. 1
- 92090662450. 2
- 92090662451. 3
- 92090662452. 4

Question Number : 14 Question Id : 92090615808 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Ankit owes ₹ 42,580 on his credit cards, but he could pay only ₹ 12,580. If the annual rate of compound interest is 10%, then how much will he owe after 4 years?

- | | |
|----------------|----------------|
| (1) Rs. 42,580 | (2) Rs. 43,000 |
| (3) Rs. 43,923 | (4) Rs. 44,228 |

Options :

- 92090662453. 1
- 92090662454. 2
- 92090662455. 3
- 92090662456. 4

Question Number : 14 Question Id : 92090615808 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Ankit owes ₹ 42,580 on his credit cards, but he could pay only ₹ 12,580. If the annual rate of compound interest is 10%, then how much will he owe after 4 years?

- | | |
|----------------|----------------|
| (1) Rs. 42,580 | (2) Rs. 43,000 |
| (3) Rs. 43,923 | (4) Rs. 44,228 |

Options :

- 92090662453. 1
- 92090662454. 2
- 92090662455. 3
- 92090662456. 4

Question Number : 15 Question Id : 92090615809 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

The percentage of loss when an article is sold at Rs. 50 is the same as that of the profit when it is sold at Rs. 70. Percentage of profit or loss on the article is_____.

- | | |
|-----------------------|----------------------|
| (1) 10% | (2) 12% |
| (3) $16\frac{2}{3}\%$ | (4) $8\frac{1}{3}\%$ |

Options :

92090662457. 1
92090662458. 2
92090662459. 3
92090662460. 4

Question Number : 15 Question Id : 92090615809 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

The percentage of loss when an article is sold at Rs. 50 is the same as that of the profit when it is sold at Rs. 70. Percentage of profit or loss on the article is_____.

- | | |
|-----------------------|----------------------|
| (1) 10% | (2) 12% |
| (3) $16\frac{2}{3}\%$ | (4) $8\frac{1}{3}\%$ |

Options :

92090662457. 1
92090662458. 2
92090662459. 3
92090662460. 4

Question Number : 16 Question Id : 92090615810 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Which number comes next in the following series?

0, 5, 22, 57, 116, _____.

- | | |
|---------|---------|
| (1) 216 | (2) 205 |
| (3) 207 | (4) 192 |

Options :

92090662461. 1
92090662462. 2
92090662463. 3
92090662464. 4

Question Number : 16 Question Id : 92090615810 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Which number comes next in the following series?

0, 5, 22, 57, 116, _____.

- | | |
|---------|---------|
| (1) 216 | (2) 205 |
| (3) 207 | (4) 192 |

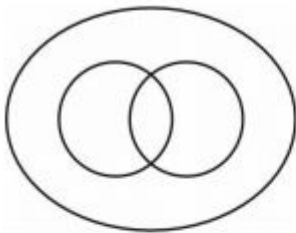
Options :

92090662461. 1
92090662462. 2
92090662463. 3
92090662464. 4

Question Number : 17 Question Id : 92090615811 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Which of the following group best represented by the figure below:



- (A) Men, Citizions, Educated
(B) Professionals, Doctors, Lawyers
(C) Diseases, Leprosy, Scurvy
(D) Earth, mountain, Forests.
(E) Atmosphere, Water, Hydrogen.

Choose the correct answer from the options given below :

- (1) (A) and(B) only
(2) (B) and (D) only
(3) (A) and (D) only
(4) (C) and (E) only

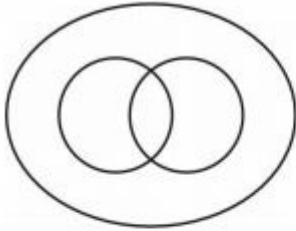
Options :

92090662465. 1
92090662466. 2
92090662467. 3
92090662468. 4

Question Number : 17 Question Id : 92090615811 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Which of the following group best represented by the figure below:



- (A) Men, Citizions, Educated
- (B) Professionals, Doctors, Lawyers
- (C) Diseases, Leprosy, Scurvy
- (D) Earth, mountain, Forests.
- (E) Atmosphere, Water, Hydrogen.

Choose the correct answer from the options given below :

- (1) (A) and(B) only
- (2) (B) and (D) only
- (3) (A) and (D) only
- (4) (C) and (E) only

Options :

92090662465. 1
92090662466. 2
92090662467. 3
92090662468. 4

Question Number : 18 Question Id : 92090615812 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Identify the correct water – image of the fig. (X)

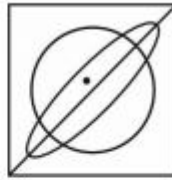
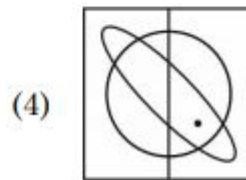
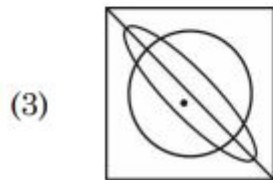
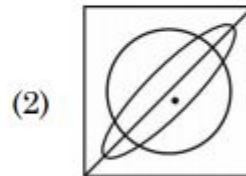
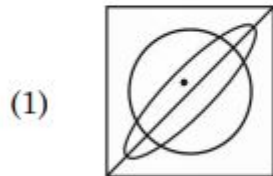


Fig. (X)



Options :

92090662469. 1

92090662470. 2

92090662471. 3

92090662472. 4

Question Number : 18 Question Id : 92090615812 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Identify the correct water – image of the fig. (X)

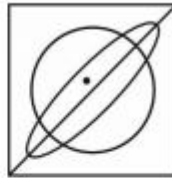
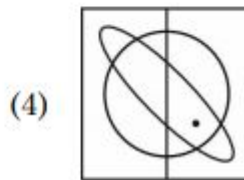
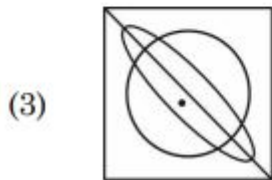
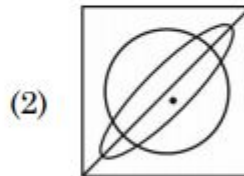
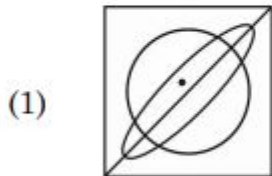


Fig. (X)



Options :

92090662469. 1

92090662470. 2

92090662471. 3

92090662472. 4

Question Number : 19 Question Id : 92090615813 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

If in a certain language, GRASP is codes as BMVNK, which word could be coded as CRANE?

(1) FUDQH

(2) GVERI

(3) HWFSJ

(4) BQZMD

Options :

92090662473. 1

92090662474. 2

92090662475. 3

92090662476. 4

Question Number : 19 Question Id : 92090615813 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

If in a certain language, GRASP is coded as BMVNK, which word could be coded as CRANE?

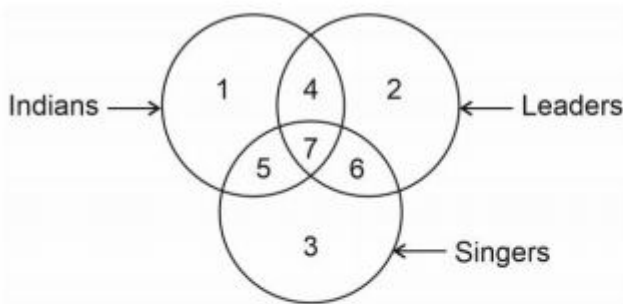
- | | |
|-----------|-----------|
| (1) FUDQH | (2) GVERI |
| (3) HWFSJ | (4) BQZMD |

Options :

92090662473. 1
92090662474. 2
92090662475. 3
92090662476. 4

Question Number : 20 Question Id : 92090615814 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1



Which region represents leaders who are neither singers nor Indians?

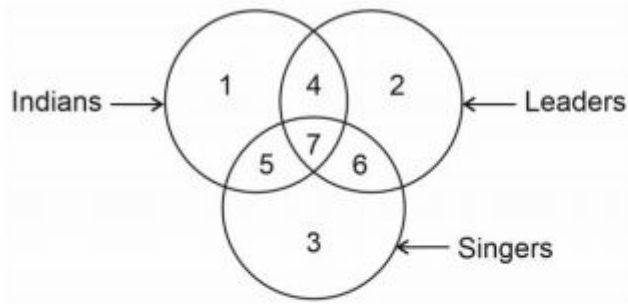
- | | |
|-------|-------|
| (1) 3 | (2) 6 |
| (3) 2 | (4) 4 |

Options :

92090662477. 1
92090662478. 2
92090662479. 3
92090662480. 4

Question Number : 20 Question Id : 92090615814 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1



Which region represents leaders who are neither singers nor Indians?

- | | |
|-------|-------|
| (1) 3 | (2) 6 |
| (3) 2 | (4) 4 |

Options :

92090662477. 1
 92090662478. 2
 92090662479. 3
 92090662480. 4

Question Number : 21 Question Id : 92090615815 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Who has won the women's singles title of Odisha badminton tournament held in Cuttack, Odisha in the year 2022?

- | | |
|-----------------|------------------|
| (1) Ashly Barty | (2) Unnati Hooda |
| (3) P V Sindhu | (4) Saina Nehwal |

Options :

92090662481. 1
 92090662482. 2
 92090662483. 3
 92090662484. 4

Question Number : 21 Question Id : 92090615815 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Who has won the women's singles title of Odisha badminton tournament held in Cuttack, Odisha in the year 2022?

- | | |
|-----------------|------------------|
| (1) Ashly Barty | (2) Unnati Hooda |
| (3) P V Sindhu | (4) Saina Nehwal |

Options :

- 92090662481. 1
- 92090662482. 2
- 92090662483. 3
- 92090662484. 4

Question Number : 22 Question Id : 92090615816 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Pandit Shiv Kumar Sharma who passed away in May 2022 was a maestro of:

- | | |
|-----------|-------------|
| (1) Flute | (2) Santoor |
| (3) Tabla | (4) EsraJ |

Options :

- 92090662485. 1
- 92090662486. 2
- 92090662487. 3
- 92090662488. 4

Question Number : 22 Question Id : 92090615816 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Pandit Shiv Kumar Sharma who passed away in May 2022 was a maestro of:

- | | |
|-----------|-------------|
| (1) Flute | (2) Santoor |
| (3) Tabla | (4) EsraJ |

Options :

- 92090662485. 1
- 92090662486. 2
- 92090662487. 3
- 92090662488. 4

Question Number : 23 Question Id : 92090615817 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Largest Gas pipe line in India is operated by which company?

- | | |
|------------------------|----------------------|
| (1) Reliance Petroleum | (2) GAIL |
| (3) ONGC | (4) Bharat Petroleum |

Options :

- 92090662489. 1
- 92090662490. 2
- 92090662491. 3
- 92090662492. 4

Question Number : 23 Question Id : 92090615817 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Largest Gas pipe line in India is operated by which company?

- | | |
|------------------------|----------------------|
| (1) Reliance Petroleum | (2) GAIL |
| (3) ONGC | (4) Bharat Petroleum |

Options :

- 92090662489. 1
- 92090662490. 2
- 92090662491. 3
- 92090662492. 4

Question Number : 24 Question Id : 92090615818 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Which of the following can be recycled 100%?

- | | |
|---------------------|-------------------|
| (1) Food waste | (2) Glass bottles |
| (3) Alluminium cans | (4) Card board |

Options :

- 92090662493. 1
- 92090662494. 2
- 92090662495. 3
- 92090662496. 4

Question Number : 24 Question Id : 92090615818 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Which of the following can be recycled 100%?

- | | |
|---------------------|-------------------|
| (1) Food waste | (2) Glass bottles |
| (3) Alluminium cans | (4) Card board |

Options :

- 92090662493. 1
- 92090662494. 2
- 92090662495. 3
- 92090662496. 4

Question Number : 25 Question Id : 92090615819 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Given below are two statements :

Statement I : "The Restoration of life of Lok Sabha and State Assemblies to 5year" is passed in the 52nd Amendment of constitution of India

Statement II : 99th Amendment of constitution of India provides for formation of National Judicial Appointments Commission".

In the light of the above statements, choose the correct answer from the options given below :

- (1) Both Statement I and Statement II are correct
- (2) Both Statement I and Statement II are incorrect
- (3) Statement I is correct but Statement II is incorrect
- (4) Statement I is incorrect but Statement II is correct

Options :

- 92090662497. 1
- 92090662498. 2
- 92090662499. 3
- 92090662500. 4

Question Number : 25 Question Id : 92090615819 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Given below are two statements :

Statement I : "The Restoration of life of Lok Sabha and State Assemblies to 5year" is passed in the 52nd Amendment of constitution of India

Statement II : 99th Amendment of constitution of India provides for formation of National Judicial Appointments Commission".

In the light of the above statements, choose the correct answer from the options given below :

- (1) Both Statement I and Statement II are correct
- (2) Both Statement I and Statement II are incorrect
- (3) Statement I is correct but Statement II is incorrect
- (4) Statement I is incorrect but Statement II is correct

Options :

92090662497. 1

92090662498. 2

92090662499. 3

92090662500. 4

Part B: Nano Science Nano Technology

Section Id :	920906314
Section Number :	2
Section type :	Online
Mandatory or Optional :	Mandatory
Number of Questions :	75
Number of Questions to be attempted :	75
Section Marks :	300
Enable Mark as Answered Mark for Review and Clear Response :	Yes
Maximum Instruction Time :	0
Sub-Section Number :	1
Sub-Section Id :	920906513
Question Shuffling Allowed :	Yes
Is Section Default? :	null

Question Number : 26 Question Id : 92090615820 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

One mole of Helium, Hydrogen, Nitrogen and Carbon dioxide are filled in four different containers at the same temperature.

Which of the following has minimum energy :

- | | |
|--------------|--------------------|
| (1) Helium | (2) Hydrogen |
| (3) Nitrogen | (4) Carbon dioxide |

Options :

92090662501. 1
92090662502. 2
92090662503. 3
92090662504. 4

Question Number : 26 Question Id : 92090615820 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

हीलियम, हाइड्रोजन, नाइट्रोजन और कार्बन डाइ ऑक्साइड के एक मोल को समान तापमान पर चार अलग-अलग बर्तनों में भरा गया है। न्यूनतम ऊर्जा, जिसकी है, वह है

- | | |
|---------------|------------------------|
| (1) हीलियम | (2) हाइड्रोजन |
| (3) नाइट्रोजन | (4) कार्बन डाइ ऑक्साइड |

Options :

92090662501. 1
92090662502. 2
92090662503. 3
92090662504. 4

Question Number : 27 Question Id : 92090615821 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

In a cross $AaBbCc \times AaBbCc$ number of genotypic class formed will be:

- | | |
|--------|--------|
| (1) 9 | (2) 18 |
| (3) 27 | (4) 36 |

Options :

92090662505. 1

92090662506. 2

92090662507. 3

92090662508. 4

Question Number : 27 Question Id : 92090615821 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

$AaBbCc \times AaBbCc$ के संकरण में, बनने वाले जीन प्ररूप वर्गों संख्या होगी-

(1) 9

(2) 18

(3) 27

(4) 36

Options :

92090662505. 1

92090662506. 2

92090662507. 3

92090662508. 4

Question Number : 28 Question Id : 92090615822 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Statement (I) : Barazine which is isoelectronic with benzene has molecular formula B_6H_6 .

Statement (II): Barazine on heating gives polymers on heating gives polymers substances like inorganic naphthalene

In the light of the above statements choose the correct answer from the options given below

(1) Both Statement I and Statement II are true

(2) Both Statement I and Statement II are false

(3) Statement I is true but statement II is false

(4) Statement I is false but statement II is true

Options :

92090662509. 1

92090662510. 2

92090662511. 3

92090662512. 4

Question Number : 28 Question Id : 92090615822 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

नीचे दो कथन दिए गए हैं :

कथन (I) : बोरैज़ीन जो कि बेन्ज़ीन के साथ समइलेक्ट्रानी है, का आण्विक सूत्र है B_6H_6 .

कथन (II) : गर्म करने पर बोरैज़ीन बहुलक पदार्थ जैसे अकार्बनिक नैफ्थेलीन देता है।

उपरोक्त कथन के आलोक में, नीचे दिए गए विकल्पों में से सबसे उपयुक्त उत्तर का चयन कीजिए :

- (1) कथन (I) और (II) दोनों सही हैं ।
- (2) कथन (I) और (II) दोनों गलत हैं ।
- (3) कथन (I) सही है, लेकिन कथन (II) गलत है ।
- (4) कथन (I) गलत है, लेकिन कथन (II) सही है ।

Options :

92090662509. 1

92090662510. 2

92090662511. 3

92090662512. 4

Question Number : 29 Question Id : 92090615823 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Match List I with List II

List I	List II
Cytone	Origin
(A) Interleukin 1	(I) Cytotoxic T Cells
(B) Interleukin 6	(II) Macrophages
(C) Interferons	(III) Helper T cells
(D) Chemokines	(IV) Virus – infected Cells

Choose the correct answer from the options given below:

- (1) (A)-(III), (B)-(I), (C)-(IV), (D)-(II)
- (2) (A)-(II), (B)-(III), (C)-(I), (D)-(IV)
- (3) (A)-(III), (B)-(II), (C)-(IV), (D)-(I)
- (4) (A)-(I), (B)-(III), (C)-(IV), (D)-(II)

Options :

- 92090662513. 1
- 92090662514. 2
- 92090662515. 3
- 92090662516. 4

Question Number : 29 Question Id : 92090615823 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

सूची I के साथ सूची II का मिलान कीजिए।

सूची I कोशिका द्रव्य	सूची II उत्पत्ति
(A) अंतःल्यूकीन 1 (इन्टरल्यूकीन)	(I) कोशिकाविष T कोशिकाएँ
(B) अंतःल्यूकीन 6 (इन्टरल्यूकीन)	(II) वृहतभक्षकाणु
(C) इन्टरफेरोन	(III) सहायक T कोशिकाएँ
(D) सूक्ष्मभक्षक प्रवास संदमन कारक	(IV) बिषाणु ग्रस्त कोशिकाएँ

नीचे दिए गए विकल्पों में से उचित उत्तर का चयन कीजिए :

- (1) (A)-(III), (B)-(I), (C)-(IV), (D)-(II)
- (2) (A)-(II), (B)-(III), (C)-(I), (D)-(IV)
- (3) (A)-(III), (B)-(II), (C)-(IV), (D)-(I)
- (4) (A)-(I), (B)-(III), (C)-(IV), (D)-(II)

Options :

92090662513. 1
92090662514. 2
92090662515. 3
92090662516. 4

**Question Number : 30 Question Id : 92090615824 Question Type : MCQ Option Shuffling : No Is
Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum
Instruction Time : 0**

Correct Marks : 4 Wrong Marks : 1

Match List I with List II

List I
Types

List II
Working Torsional Strain

- | | |
|--------------------------|---|
| (A) Dna B | (I) Relieves torsional strain |
| (B) Dna 6 | (II) Unwinds DNA |
| (C) Dna A | (III) synthesis of RNA primer |
| (D) DNA topoisomerase II | (IV) opens duplex of DNA at specific site
oric |

Choose the the correct answer from the options given below:

- (1) (A)-(III), (B)-(II), (C)-(IV), (D)-(I)
- (2) (A)-(II), (B)-(III), (C)-(I), (D)-(IV)
- (3) (A)-(II), (B)-(III), (C)-(IV), (D)-(I)
- (4) (A)-(IV), (B)-(I), (C)-(II), (D)-(III)

Options :

- 92090662517. 1
- 92090662518. 2
- 92090662519. 3
- 92090662520. 4

**Question Number : 30 Question Id : 92090615824 Question Type : MCQ Option Shuffling : No Is
Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum
Instruction Time : 0**

Correct Marks : 4 Wrong Marks : 1

सूची I के साथ सूची II का मिलान कीजिए।

सूची I प्रकार	सूची II कार्य
(A) Dna B	(I) विमोटी विकृति का निष्कासन
(B) Dna 6	(II) DNA खोलना
(C) Dna A	(III) RNA प्राइमर का संश्लेषण
(D) DNA	(IV) विशिष्ट स्थान ऑरी पर DNA के द्वैध को खोलना

नीचे दिए गए विकल्पों में से उचित उत्तर का चयन कीजिए :

- (1) (A)-(III), (B)-(II), (C)-(IV), (D)-(I)
- (2) (A)-(II), (B)-(III), (C)-(I), (D)-(IV)
- (3) (A)-(II), (B)-(III), (C)-(IV), (D)-(I)
- (4) (A)-(IV), (B)-(I), (C)-(II), (D)-(III)

Options :

- 92090662517. 1
- 92090662518. 2
- 92090662519. 3
- 92090662520. 4

Question Number : 31 Question Id : 92090615825 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Given below are two statements:

Statement I: For first order reaction, rate of reaction is independent of the initial concentration of the reactant.

Statement II: For Zero order reaction the rate constant is independent of the concentration of the reactant.

In the light of the above statements, choose the most appropriate answer from the options given below:

Both Statement I and Statement II are correct

Both Statement I and Statement II are incorrect

Statement I is correct but Statement II is incorrect

Statement I is incorrect but Statement II is correct

Options :

92090662521. 1

92090662522. 2

92090662523. 3

92090662524. 4

Question Number : 31 Question Id : 92090615825 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

नीचे दो कथन दिए गए हैं :

अभिकथन (I) : प्रथम दर अभिक्रिया के लिए, अभिक्रिया दर अभिकारक की शुरुआती सांद्रता से स्वतंत्र होती है।

अभिकथन (II) : शून्य दर अभिक्रिया के लिए, दर स्थिरांक अभिकारक की सांद्रता से स्वतंत्र होता है।

उपरोक्त अभिकथनों के संदर्भ में, नीचे दिए गए विकल्पों में से उचित उत्तर का चयन कीजिए :

- (1) अभिकथन (I) और अभिकथन (II) दोनों सही हैं।
- (2) अभिकथन (I) और अभिकथन (II) दोनों गलत हैं।
- (3) अभिकथन (I) सही है, लेकिन अभिकथन (II) गलत है।
- (4) अभिकथन (I) गलत है, लेकिन अभिकथन (II) सही है।

Options :

92090662521. 1
92090662522. 2
92090662523. 3
92090662524. 4

Question Number : 32 Question Id : 92090615826 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Match List I with List II

List I		List II
Physical quatity		Unit
(A) Energy	(I) tesla	
(B) Power	(II) Watt	
(C) Magnetic Field	(III) Weber	
(D) Magnetic fluse	(IV) Joule	

Choose the the correct answer from the options given below:

- (1) (A)-(II), (B)-(III), (C)-(IV), (D)-(I)
- (2) (A)-(III), (B)-(I), (C)-(IV), (D)-(II)
- (3) (A)-(IV), (B)-(III), (C)-(II), (D)-(I)
- (4) (A)-(IV), (B)-(II), (C)-(I), (D)-(III)

Options :

92090662525. 1
92090662526. 2
92090662527. 3
92090662528. 4

Question Number : 32 Question Id : 92090615826 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

सूची I के साथ सूची II का मिलान कीजिए।

सूची I	सूची II
भौतिक राशि	इकाई
(A) ऊर्जा	(I) टेस्ला
(B) शक्ति	(II) वॉट
(C) चुम्बकीय क्षेत्र	(III) वेबर
(D) चुम्बकीय फ्लक्स	(IV) जूल

नीचे दिए गए विकल्पों में से उचित उत्तर का चयन कीजिए :

- (1) (A)-(II), (B)-(III), (C)-(IV), (D)-(I)
(2) (A)-(III), (B)-(I), (C)-(IV), (D)-(II)
(3) (A)-(IV), (B)-(III), (C)-(II), (D)-(I)
(4) (A)-(IV), (B)-(II), (C)-(I), (D)-(III)

Options :

92090662525. 1
92090662526. 2
92090662527. 3
92090662528. 4

Question Number : 33 Question Id : 92090615827 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Match List I with List II

List I		List II
Physical constant		Unit
(A) Gas Constant	(I)	Jk^{-1}
(B) Boltzman Constant	(II)	Nm^2Kg^2
(C) Permeability of vaccume	(III)	$Jk^{-2}mol^{-1}$
(D) Constant of gravitation	(IV)	NA^{-2}

Choose the the correct answer from the options given below:

- (1) (A)-(II), (B)-(III), (C)-(IV), (D)-(I)
- (2) (A)-(III), (B)-(IV), (C)-(I), (D)-(II)
- (3) (A)-(III), (B)-(I), (C)-(IV), (D)-(II)
- (4) (A)-(IV), (B)-(I), (C)-(II), (D)-(III)

Options :

92090662529. 1

92090662530. 2

92090662531. 3

92090662532. 4

Question Number : 33 Question Id : 92090615827 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

सूची I के साथ सूची II का मिलान कीजिए।

सूची I	सूची II
भौतिक स्थिरांक	ईकाई
(A) गैस स्थिरांक	(I) Jk^{-1}
(B) बोल्ट्समान स्थिरांक	(II) Nm^2Kg^{-2}
(C) निर्वात की पारगम्यता	(III) $Jk^{-2}mol^{-1}$
(D) गुरुत्वाकर्षण स्थिरांक	(IV) NA^{-2}

नीचे दिए गए विकल्पों में से उचित उत्तर का चयन कीजिए :

- (1) (A)-(II), (B)-(III), (C)-(IV), (D)-(I)
- (2) (A)-(III), (B)-(IV), (C)-(I), (D)-(II)
- (3) (A)-(III), (B)-(I), (C)-(IV), (D)-(II)
- (4) (A)-(IV), (B)-(I), (C)-(II), (D)-(III)

Options :

92090662529. 1

92090662530. 2

92090662531. 3

92090662532. 4

Question Number : 34 Question Id : 92090615828 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Given below are two statements:

Statement I: $H_5C_6CH_2CH_2Br$ When treated with EtONa gives predominantly $H_5C_6CH=CH_2$ through Carbanion intermediate.

Statement II: EtONa acts as a strong base hence abstracts proton.

In the light of the above statements, choose the most appropriate answer from the options given below:

Both Statement I and Statement II are correct

Both Statement I and Statement II are incorrect

Statement I is correct but Statement II is incorrect

Statement I is incorrect but Statement II is correct

Options :

92090662533. 1

92090662534. 2

92090662535. 3

92090662536. 4

Question Number : 34 Question Id : 92090615828 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

नीचे दो कथन दिए गए हैं :

अभिकथन (I) : कार्बन आयन मध्य आवृत्ति से $H_5C_6CH_2CH_2Br$ EtONa के साथ मुख्यत $H_5C_6CH=CH_2$ देता है।

अभिकथन (II) : EtONa एक प्रबल क्षारक की भाँति क्रिया करता है, इसलिए प्रोटान अमूर्त करता है।

उपरोक्त अभिकथनों के संदर्भ में, नीचे दिए गए विकल्पों में से उचित उत्तर का चयन कीजिए :

- (1) अभिकथन (I) और अभिकथन (II) दोनों सही हैं।
- (2) अभिकथन (I) और अभिकथन (II) दोनों गलत हैं।
- (3) अभिकथन (I) सही है, लेकिन अभिकथन (II) गलत है।
- (4) अभिकथन (I) गलत है, लेकिन अभिकथन (II) सही है।

Options :

92090662533. 1

92090662534. 2

92090662535. 3

92090662536. 4

Question Number : 35 Question Id : 92090615829 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Identify the correct statements regarding role of Calcium in Hoemone action

- (A) The hormones that bind cell membrane receptor enhance membrane permeability to Ca^{++} and thereby increase Ca^{++} influx.
- (B) Ionized Calcium of the cytosol is the important signal for hormone action than CAMP
- (C) Na^{++}/Ca^{++} exchange mecehnism has low capacity but high affinity for Ca^{++} .
- (D) The Calcium dependent regulatory Protein is called Calmodulin.
- (E) Calmodulin has $2Ca^{++}$ binding sites.

Choose the correct answer from the options given below.

- (1) Only (A), (B) and (C)
- (2) Only (B), (C) and (D)
- (3) Only (A), (B) and (D)
- (4) Only (C), (D) and (E)

Options :

- 92090662537. 1
- 92090662538. 2
- 92090662539. 3
- 92090662540. 4

Question Number : 35 Question Id : 92090615829 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

हार्मोन क्रिया में कैल्सियम की भूमिका के संदर्भ में उचित कथनों को पहचानिए-

- (A) हार्मोन जो कोशिका-कला ग्राही का बन्धन करता है, वो कोशिका कला की Ca^{++} की पारगम्यता में वृद्धि करता है और इसका Ca^{++} के अंतर्वाह को बढ़ाता है।
- (B) साइटोसोल का आयोनाइज़्ड कैल्सियम, CAMP को तुलना में हार्मोन क्रिया के लिए महत्वपूर्ण संकेत है।
- (C) Ca^{++} के लिए Na^{++}/Ca^{++} विनमय प्रणाली की क्षमता कम है, लेकिन बंधुता अधिक है।
- (D) कैल्सियम आश्रित नियमित प्रोटीन काल्मोडुलिन कहलाता है।
- (E) काल्मोडुलिन के $2Ca^{++}$ बंधन स्थल हैं।

नीचे दिए गए विकल्पों में से उचित उत्तर का चयन कीजिए :

- | | |
|--------------------------|--------------------------|
| (1) केवल (A), (B) और (C) | (2) केवल (B), (C) और (D) |
| (3) केवल (A), (B) और (D) | (4) केवल (C), (D) और (E) |

Options :

- 92090662537. 1
- 92090662538. 2
- 92090662539. 3
- 92090662540. 4

Question Number : 36 Question Id : 92090615830 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Match List I with List II

List I Shape	List II Cell Component
(A) Cartwheel like	(I) Mitochondria
(B) Sausage Shaped	(II) Cilium
(C) lense shaped	(III) Centriole
(D) Oar like	(IV) Chloroplast

Choose the the correct answer from the options given below:

- (1) (A)-(III), (B)-(IV), (C)-(I), (D)-(II)
- (2) (A)-(III), (B)-(I), (C)-(IV), (D)-(II)
- (3) (A)-(III), (B)-(II), (C)-(IV), (D)-(I)
- (4) (A)-(II), (B)-(III), (C)-(IV), (D)-(I)

Options :

- 92090662541. 1
- 92090662542. 2
- 92090662543. 3
- 92090662544. 4

Question Number : 36 Question Id : 92090615830 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

सूची I के साथ सूची II का मिलान कीजिए।

सूची I

आकृति

सूची II

कोशिका-तत्व

(A) कार्टव्हील जैसा

(B) सोसेज के आकार - सा

(C) लेंस के आकार - सा

(D) चप्पु जैसा

(I) माइटोकॉण्ड्रिया

(II) पक्ष्माभ

(III) तारक केन्द्र

(IV) क्लोरोप्लास्ट/हरितलवक

नीचे दिए गए विकल्पों में से सही उत्तर का चयन कीजिए :

(1) (A)-(III), (B)-(IV), (C)-(I), (D)-(II)

(2) (A)-(III), (B)-(I), (C)-(IV), (D)-(II)

(3) (A)-(III), (B)-(II), (C)-(IV), (D)-(I)

(4) (A)-(II), (B)-(III), (C)-(IV), (D)-(I)

Options :

92090662541. 1

92090662542. 2

92090662543. 3

92090662544. 4

Question Number : 37 Question Id : 92090615831 Question Type : MCQ Option Shuffling : No Is

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

Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Match List I with List II

List I		List II	
Name		Formula	
(A)	Thiosulphuric acid	(I)	$H_2S_2O_6$
(B)	Dithionic acid	(II)	$H_2S_2O_8$
(C)	Disulphuric acid	(III)	$H_2S_2O_3$
(D)	Peroxidisulphuric acid	(IV)	$H_2S_2O_7$

Choose the the correct answer from the options given below:

- (1) (A)-(I), (B)-(III), (C)-(IV), (D)-(II)
- (2) (A)-(III), (B)-(I), (C)-(IV), (D)-(II)
- (3) (A)-(III), (B)-(I), (C)-(II), (D)-(IV)
- (4) (A)-(III), (B)-(IV), (C)-(I), (D)-(II)

Options :

- 92090662545. 1
- 92090662546. 2
- 92090662547. 3
- 92090662548. 4

Question Number : 37 Question Id : 92090615831 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

सूची I के साथ सूची II का मिलान कीजिए।

सूची I	सूची II
नाम	सूत्र
(A) थाइयोसल्फ्यूरिक अम्ल	(I) $H_2S_2O_6$
(B) डाय थाइयोनिक अम्ल	(II) $H_2S_2O_8$
(C) डाइसल्फ्यूरिक अम्ल	(III) $H_2S_2O_3$
(D) परओक्सोडाइसल्फ्यूरिक अम्ल	(IV) $H_2S_2O_7$

नीचे दिए गए विकल्पों में से उचित उत्तर का चयन कीजिए :

- (1) (A)-(I), (B)-(III), (C)-(IV), (D)-(II)
- (2) (A)-(III), (B)-(I), (C)-(IV), (D)-(II)
- (3) (A)-(III), (B)-(I), (C)-(II), (D)-(IV)
- (4) (A)-(III), (B)-(IV), (C)-(I), (D)-(II)

Options :

92090662545. 1
92090662546. 2
92090662547. 3
92090662548. 4

Question Number : 38 Question Id : 92090615832 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

For hydrogen atom, the selection rules for allowed transitions, between energy levels are:

- (A) $\Delta l = 0, \Delta m = \pm 1$
- (B) $\Delta l = 0, \Delta m = 0$
- (C) $\Delta l = \pm 1, \Delta m = \pm 1$
- (D) $\Delta l = \pm 1, \Delta m = 0$

Choose the most correct answer from the options given below:

- (1) Only (A) and (D)
- (2) Only (B)
- (3) Only (C)
- (4) Only (A) and (C)

Options :

- 92090662549. 1
- 92090662550. 2
- 92090662551. 3
- 92090662552. 4

Question Number : 38 Question Id : 92090615832 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

एक हाइड्रोजन परमाणु का ऊर्जा स्तरों के मध्य संक्रमण अनुमत के लिए चयन-नियम हैं-

- (A) $\Delta l = 0, \Delta m = \pm 1$
- (B) $\Delta l = 0, \Delta m = 0$
- (C) $\Delta l = \pm 1, \Delta m = \pm 1$
- (D) $\Delta l = \pm 1, \Delta m = 0$

नीचे दिए गए विकल्पों में से उचित उत्तर का चयन कीजिए :

- (1) केवल (A) और (D)
- (2) केवल (B)
- (3) केवल (C)
- (4) केवल (A) और (C)

Options :

- 92090662549. 1
- 92090662550. 2

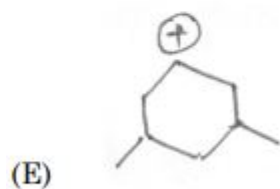
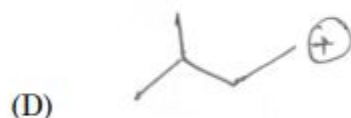
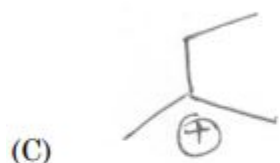
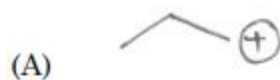
92090662551. 3

92090662552. 4

Question Number : 39 Question Id : 92090615833 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Given below are some carbocations. The increasing order of stability will be:



Choose the most correct answer from the options given below:

(1) (A), (B), (C), (D), (E)

(2) (A), (D), (E), (B), (C)

(3) (B), (C), (D), (E), (A)

(4) (C), (D), (E), (B), (A)

Options :

92090662553. 1

92090662554. 2

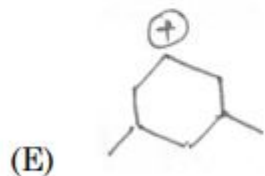
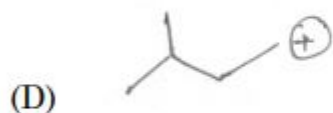
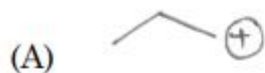
92090662555. 3

92090662556. 4

Question Number : 39 Question Id : 92090615833 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

नीचे कुछ कार्बन धनायन दिए गए हैं। बढ़ते हुए क्रम में स्थिरता की दर होगी-



नीचे दिए गए विकल्पों में उचित उत्तर का चयन कीजिए :

(1) (A), (B), (C), (D), (E)

(2) (A), (D), (E), (B), (C)

(3) (B), (C), (D), (E), (A)

(4) (C), (D), (E), (B), (A)

Options :

92090662553. 1

92090662554. 2

92090662555. 3

92090662556. 4

Question Number : 40 Question Id : 92090615834 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Given below are two statements:

Statement I: Nucleous consists of nuclear envelope with pores, nucleoli and Chromosome as mass of Chromatin in interphase cells.

Statement II: Nuclear pores control the movement of substances between the nucleous and cytoplasm, nucleoli produce ribosomes and chromosoms consists of genes.

In the light of the above statements, choose the most appropriate answer from the options given below:

Both Statement I and Statement II are correct

Both Statement I and Statement II are incorrect

Statement I is correct but Statement II is incorrect

Statement I is incorrect but Statement II is correct

Options :

92090662557. 1

92090662558. 2

92090662559. 3

92090662560. 4

Question Number : 40 Question Id : 92090615834 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

नीचे दो कथन दिए गए हैं :

अभिकथन (I) : केन्द्रक के केन्द्रक-आवरण में रंध्र, न्यूक्लियोली और क्रोमोसोम अन्तरावस्था कोशिका में क्रोमोटिन के द्रव्यमान के रूप में होते हैं।

अभिकथन (II) : केन्द्रक रंध्र, केन्द्रक और कोशिका-द्रव्य के मध्य पदार्थों के आवागमन को नियन्त्रित करते हैं, न्यूक्लियोली जिन्स के राइबोसोम और क्रोमोसोम को उत्पन्न करते हैं।

उपरोक्त अभिकथनों के संदर्भ में, नीचे दिए गए विकल्पों में से उचित उत्तर का चयन कीजिए :

- (1) अभिकथन (I) और अभिकथन (II) दोनों सही हैं।
- (2) अभिकथन (I) और अभिकथन (II) दोनों गलत हैं।
- (3) अभिकथन (I) सही है, लेकिन अभिकथन (II) गलत है।
- (4) अभिकथन (I) गलत है, लेकिन अभिकथन (II) सही है।

Options :

- 92090662557. 1
- 92090662558. 2
- 92090662559. 3
- 92090662560. 4

Question Number : 41 Question Id : 92090615835 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

In which of the following situations the heavier of the two particles has smaller de Broglie wavelength? The two particles

- (A) move with the same speed.
- (B) move with the same linear momentum.
- (C) move with the same Kinetic energy.
- (D) have fallen through the same height.

Choose the most correct answer from the options given below:

- | | |
|---------------------------|---------------------------|
| (1) (A) and (B) Only | (2) (B) and (C) Only |
| (3) (B), (C) and (D) Only | (4) (A), (C) and (D) Only |

Options :

- 92090662561. 1

92090662562. 2

92090662563. 3

92090662564. 4

Question Number : 41 Question Id : 92090615835 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

निम्नलिखित परिस्थितियों में, दो कणों में किस भारी कण की दे ब्रॉगली तरंग दैर्घ्य अपेक्षाकृत छोटी होगी?

दोनों कण :

- (A) सामान चाल से शक्ति करते हैं।
- (B) समान सदिश संवेग से गति करते हैं।
- (C) समान गतिज ऊर्जा से गति करते हैं।
- (D) समान ऊँचाई से नीचे गिराए जाते हैं।

नीचे दिए गए विकल्पों में से उचित उत्तर का चयन कीजिए :

- | | |
|--------------------------|--------------------------|
| (1) केवल (A) और (B) | (2) केवल (B) और (C) |
| (3) केवल (B), (C) और (D) | (4) केवल (A), (C) और (D) |

Options :

92090662561. 1

92090662562. 2

92090662563. 3

92090662564. 4

Question Number : 42 Question Id : 92090615836 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Arrange the following compounds in the increasing order of stability of their conjugate bases.

- (A) HClO
- (B) HClO_4
- (C) HClO_2
- (D) HClO_3

Choose the most correct answer from the options given below:

- (1) (A), (B), (C), (D)
- (2) (B), (A), (C), (D)
- (3) (A), (C), (D), (B)
- (4) (D), (A), (C), (B)

Options :

- 92090662565. 1
- 92090662566. 2
- 92090662567. 3
- 92090662568. 4

Question Number : 42 Question Id : 92090615836 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

निम्नलिखित यौगिकों को क्षारक के स्थिरता के बढ़ते हुए क्रम में संयोजित कीजिए-

- (A) HClO
- (B) HClO_4
- (C) HClO_2
- (D) HClO_3

नीचे दिए गए विकल्पों में से उचित उत्तर का चयन कीजिए :

- (1) (A), (B), (C), (D)
- (2) (B), (A), (C), (D)
- (3) (A), (C), (D), (B)
- (4) (D), (A), (C), (B)

Options :

- 92090662565. 1
- 92090662566. 2
- 92090662567. 3
- 92090662568. 4

Question Number : 43 Question Id : 92090615837 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Given below are two statements:

Statement I: A residue of 7-methylguanosine Forms 5' cap is most eukaryotic mRNA

Statement II: 7-Methylguanosine residue is linked to 5' of the mRNA through a 5'-3' triphosphate linkage.

In the light of the above statements, choose the most appropriate answer from the options given below:

Both Statement I and Statement II are correct

Both Statement I and Statement II are incorrect

Statement I is correct but Statement II is incorrect

Statement I is incorrect but Statement II is correct

Options :

- 92090662569. 1
- 92090662570. 2
- 92090662571. 3
- 92090662572. 4

Question Number : 43 Question Id : 92090615837 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

नीचे दो कथन दिए गए हैं :

अभिकथन (I) : अधिकतर यूकेरियोटिक mRNA में 7-मीथाइल गुआनोसिन का अवशेष 5' कैप बनाता है।

अभिकथन (II) : 7-मेथाइल गुआनोसिन का अवशेष 5'-3' ट्राइफोस्फेट संबंध द्वारा mRNA के 5' टर्मिनल से सम्बन्धित है।

उपरोक्त अभिकथनों के संदर्भ में, नीचे दिए गए विकल्पों में से उचित उत्तर का चयन कीजिए :

- (1) अभिकथन (I) और अभिकथन (II) दोनों सही हैं।
- (2) अभिकथन (I) और अभिकथन (II) दोनों गलत हैं।
- (3) अभिकथन (I) सही है, लेकिन अभिकथन (II) गलत है।
- (4) अभिकथन (I) गलत है, लेकिन अभिकथन (II) सही है।

Options :

92090662569. 1

92090662570. 2

92090662571. 3

92090662572. 4

Question Number : 44 Question Id : 92090615838 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

If the flux of the electric field through a closed surface is zero:

- (A) the electric field must be zero everywhere on the surface
- (B) the electric field may be zero everywhere on the surface.
- (C) the charge inside the surface must be zero.
- (D) the charge in the vicinity of the surface must be zero.

Choose the most correct answer from the options given below:

- (1) Only (A) and (B)
- (2) Only (A) and (C)
- (3) Only (B) and (C)
- (4) Only (B) and (D)

Options :

- 92090662573. 1
- 92090662574. 2
- 92090662575. 3
- 92090662576. 4

Question Number : 44 Question Id : 92090615838 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

यदि एक बंद पृष्ठ के प्रवाहित विद्युत क्षेत्र का फ्लक्स शून्य है-

- (A) पृष्ठ के प्रत्येक स्थान पर विद्युत क्षेत्र शून्य होना चाहिए।
- (B) पृष्ठ के प्रत्येक स्थान पर विद्युत क्षेत्र शून्य हो सकता है।
- (C) पृष्ठ के अन्दर आवेश शून्य होना चाहिए।
- (D) पृष्ठ के आस-पास आवेश शून्य होना चाहिए।

नीचे दिए गए विकल्पों में से उचित उत्तर का चयन कीजिए :

- (1) केवल (A) और (B)
- (2) केवल (A) और (C)
- (3) केवल (B) और (C)
- (4) केवल (B) और (D)

Options :

92090662573. 1
92090662574. 2
92090662575. 3
92090662576. 4

Question Number : 45 Question Id : 92090615839 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Given below are two statements:

Statement I: At a given temperature, the values of magnetic susceptibility increases with increasing magnetic field.

Statement II: For a paramagnetic substance, the magnetic susceptibility is inversely proportional to its absolute temperature.

In the light of the above statements, choose the most appropriate answer from the options given below:

Both Statement I and Statement II are correct

Both Statement I and Statement II are incorrect

Statement I is correct but Statement II is incorrect

Statement I is incorrect but Statement II is correct

Options :

92090662577. 1
92090662578. 2
92090662579. 3
92090662580. 4

Question Number : 45 Question Id : 92090615839 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

नीचे दो कथन दिए गए हैं :

अभिकथन (I) : एक दिए गए तापमान पर, चुम्बकीय प्रवृत्ति का मान, बढ़ती हुए चुम्बकीय क्षेत्र के साथ बढ़ता है।

अभिकथन (II) : एक परामैग्नेटिक पदार्थ के लिए, चुम्बकीय प्रवृत्ति, इसके निरपेक्ष तापमान के व्युत्क्रमानुपाती होती है।

उपरोक्त अभिकथनों के संदर्भ में, नीचे दिए गए विकल्पों में से उचित उत्तर का चयन कीजिए :

- (1) अभिकथन (I) और अभिकथन (II) दोनों सही हैं।
- (2) अभिकथन (I) और अभिकथन (II) दोनों गलत हैं।
- (3) अभिकथन (I) सही है, लेकिन अभिकथन (II) गलत है।
- (4) अभिकथन (I) गलत है, लेकिन अभिकथन (II) सही है।

Options :

92090662577. 1
92090662578. 2
92090662579. 3
92090662580. 4

Question Number : 46 Question Id : 92090615840 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Given below are two statements: one is labelled as Assertion A and the other is labelled as Reason R

Assertion A : Half lives provide a useful way of comparing the rates of reactions of different orders.

Reason R : Half lives of different reactions have different units.

In the light of the above statements, choose the correct answer from the options given below

1. Both A and R are true and R is the correct explanation of A
2. Both A and R are true but R is NOT the correct explanation of A
3. A is true but R is false
4. A is false but R is true

Options :

92090662581. 1
92090662582. 2
92090662583. 3

Question Number : 46 Question Id : 92090615840 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

नीचे दो कथन दिए गए हैं : एक अभिकथन (Assertion A) के रूप में लिखित है तो दूसरा उसके कारण (Reason R) के रूप में :

अभिकथन (A) : अर्ध आयु विभिन्न क्रमों की अभिक्रियाओं पर दरों की तुलना करने का एक उपयोगी तरीका प्रदान करते हैं।

कारण (R) : विभिन्न अभिक्रियाओं की अर्ध-आयु की विभिन्न इकाइयाँ होती हैं।

उपरोक्त कथनों के संदर्भ में, नीचे दिए गए विकल्पों में से उचित उत्तर का चयन कीजिए :

- (1) (A) और (R) दोनों सत्य हैं और (R), (A) की सही व्याख्या है।
- (2) (A) और (R) दोनों सत्य हैं, लेकिन (R), (A) की सही व्याख्या नहीं है।
- (3) (A) सत्य है, लेकिन (R) असत्य है।
- (4) (A) असत्य है, लेकिन (R) सत्य है।

Options :

- 92090662581. 1
- 92090662582. 2
- 92090662583. 3
- 92090662584. 4

Question Number : 47 Question Id : 92090615841 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Given below are two statements:

Statement I : Deletions and duplications are especially likely to occur during meiosis. In crossing over non sister chromatids sometimes exchange unequal sized segments of DNA.

Statement II : "Cri-du chat" syndrome results from a specific deletion in chromosome 5.

In the light of the above statements, choose the correct answer from the options given below

1. Both Statement I and Statement II are true
2. Both Statement I and Statement II are false
3. Statement I is true but Statement II is false
4. Statement I is false but Statement II is true

Options :

- 92090662585. 1
- 92090662586. 2
- 92090662587. 3
- 92090662588. 4

Question Number : 47 Question Id : 92090615841 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

नीचे दो कथन दिए गए हैं :

अभिकथन (I) : अर्द्धसूत्री विभाजन के दौरान, विशेषतः विलोपन और दोहराव होते हैं। संकरण में, कभी-कभी DNA के असमान आकार के खण्डों का विनमय करते हैं।

अभिकथन (II) : क्रोमोसोम 5 में विशिष्ट विलोपन से 'क्राइ-ड्यू चैठ' संरक्षण परिणामित होता है।

उपरोक्त अभिकथनों के संदर्भ में, नीचे दिए गए विकल्पों में से उचित उत्तर का चयन कीजिए :

- (1) अभिकथन (I) और अभिकथन (II) दोनों सही हैं।
- (2) अभिकथन (I) और अभिकथन (II) दोनों गलत हैं।
- (3) अभिकथन (I) सही है, लेकिन अभिकथन (II) गलत है।
- (4) अभिकथन (I) गलत है, लेकिन अभिकथन (II) सही है।

Options :

- 92090662585. 1
- 92090662586. 2
- 92090662587. 3
- 92090662588. 4

Question Number : 48 Question Id : 92090615842 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Given below are two statements:

Statement I : The electric field calculated by Gauss's law is the field due to the charges inside the Gaussian surface.

Statement II : The flux of the electric field through a closed surface due to all the charges is equal to the flux due to the charges enclosed by the surface.

In the light of the above statements, choose the correct answer from the options given below

1. Both Statement I and Statement II are true
2. Both Statement I and Statement II are false
3. Statement I is true but Statement II is false
4. Statement I is false but Statement II is true

Options :

92090662589. 1
92090662590. 2
92090662591. 3
92090662592. 4

Question Number : 48 Question Id : 92090615842 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

नीचे दो कथन दिए गए हैं :

अभिकथन (I) : गाउस नियम द्वारा गणित विद्युत क्षेत्र, वह क्षेत्र है जो गाउस पृष्ठ के अन्दर आवेशों के कारण होता है।

अभिकथन (II) : एक बंद पृष्ठ से सभी आवेशों के कारण विद्युत क्षेत्र का फ्लक्स, पृष्ठ द्वारा परिबद्ध आवेशों के कारण फ्लक्स के बराबर होता है।

उपरोक्त अभिकथनों के संदर्भ में, नीचे दिए गए विकल्पों में से उचित उत्तर का चयन कीजिए :

- (1) अभिकथन (I) और अभिकथन (II) दोनों सही हैं।
- (2) अभिकथन (I) और अभिकथन (II) दोनों गलत हैं।
- (3) अभिकथन (I) सही है, लेकिन अभिकथन (II) गलत है।
- (4) अभिकथन (I) गलत है, लेकिन अभिकथन (II) सही है।

Options :

92090662589. 1
92090662590. 2
92090662591. 3

Question Number : 49 Question Id : 92090615843 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Given below are two statements:

Statement I : Innate immunity includes the external physical and chemical barriers provided by the skin and mucous membranes only.

Statement II : When pathogens penetrate the physical and barriers of skin and mucous membrane they encounter second line of defense like phagocytes, natural killer cells, inflammation and fever.

In the light of the above statements, choose the correct answer from the options given below

1. Both Statement I and Statement II are true
2. Both Statement I and Statement II are false
3. Statement I is true but Statement II is false
4. Statement I is false but Statement II is true

Options :

92090662593. 1

92090662594. 2

92090662595. 3

92090662596. 4

Question Number : 49 Question Id : 92090615843 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

नीचे दो कथन दिए गए हैं :

अभिकथन (I) : त्वचा और श्लेष्मल झिल्ली द्वारा प्रदत्त बाह्य भौतिक और रासायनिक रोधकता सहज प्रतिरोधकता में आती है।

अभिकथन (II) : जब रोगाणु त्वचा और रलेष्मल झिल्ली के भौतिक और रासायनिक रोधकों को भेदते हैं, तब वे सुरक्षा की द्वितीय रेखा जैसे - भक्षकाणु, प्राकृतिक मारक कोशिका, शोथ और बुखार से सामना करते हैं।

उपरोक्त अभिकथनों के संदर्भ में, नीचे दिए गए विकल्पों में से उचित उत्तर का चयन कीजिए :

- (1) अभिकथन (I) और अभिकथन (II) दोनों सही हैं।
- (2) अभिकथन (I) और अभिकथन (II) दोनों गलत हैं।
- (3) अभिकथन (I) सही है, लेकिन अभिकथन (II) गलत है।
- (4) अभिकथन (I) गलत है, लेकिन अभिकथन (II) सही है।

Options :

92090662593. 1
92090662594. 2
92090662595. 3
92090662596. 4

Question Number : 50 Question Id : 92090615844 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Given below are two statements:

Statement I : Magnetic induction of ferrites is much less than that of ferromagnetics.

Statement II : Ferrites have a higher permeability and lower hysteresis loss as compared to ferromagnetics.

In the light of the above statements, choose the correct answer from the options given below

1. Both Statement I and Statement II are true
2. Both Statement I and Statement II are false
3. Statement I is true but Statement II is false
4. Statement I is false but Statement II is true

Options :

92090662597. 1
92090662598. 2
92090662599. 3

Question Number : 50 Question Id : 92090615844 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

नीचे दो कथन दिए गए हैं :

अभिकथन (I) : फेराइट का चुम्बकीय प्रेरणन, फेरोचुंबकिकी (लोह-चुम्बकिकी) से काफी कम होता है।

अभिकथन (II) : फेराइट का फेरोचुंबकिकी की अपेक्षा उच्चतम चुम्बकशीलता और न्यूनतम शैथिल्य हास होता है।

उपरोक्त अभिकथनों के संदर्भ में, नीचे दिए गए विकल्पों में से उचित उत्तर का चयन कीजिए :

- (1) अभिकथन (I) और अभिकथन (II) दोनों सही हैं।
- (2) अभिकथन (I) और अभिकथन (II) दोनों गलत हैं।
- (3) अभिकथन (I) सही है, लेकिन अभिकथन (II) गलत है।
- (4) अभिकथन (I) गलत है, लेकिन अभिकथन (II) सही है।

Options :

92090662597. 1
92090662598. 2
92090662599. 3
92090662600. 4

Question Number : 51 Question Id : 92090615845 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Given below are two statements: one is labelled as Assertion A and the other is labelled as Reason R

Assertion A : Ice skaters can move smoothly on ice because a thin layer of liquid water is formed below the skates.

Reason R : The melting point of ice increases with increase in pressure.

In the light of the above statements, choose the correct answer from the options given below

1. Both A and R are true and R is the correct explanation of A
2. Both A and R are true but R is NOT the correct explanation of A
3. A is true but R is false
4. A is false but R is true

Options :

- 92090662601. 1
- 92090662602. 2
- 92090662603. 3
- 92090662604. 4

Question Number : 51 Question Id : 92090615845 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

नीचे दो कथन दिए गए हैं : एक अभिकथन (Assertion A) के रूप में लिखित है तो दूसरा उसके कारण (Reason R) के रूप में :

अभिकथन (A) : आइस स्केटर्स बर्फ पर आसानी से चल सकते हैं क्योंकि स्केट्स के नीचे तरल जल की एक पतली परत होती है।

कारण (R) : बर्फ का गलांक बढ़ते हुए दाब के साथ बढ़ता है।

उपरोक्त कथन के संदर्भ में, नीचे दिए गए विकल्पों में से उचित उत्तर का चयन कीजिए :

- (1) (A) और (R) दोनों सत्य हैं और (R), (A) की सही व्याख्या है।
- (2) (A) और (R) दोनों सत्य हैं, लेकिन (R), (A) की सही व्याख्या नहीं है।
- (3) (A) सत्य है, लेकिन (R) असत्य है।
- (4) (A) असत्य है, लेकिन (R) सत्य है।

Options :

- 92090662601. 1
- 92090662602. 2
- 92090662603. 3
- 92090662604. 4

Question Number : 52 Question Id : 92090615846 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

A long current carrying wire is held vertically. Two points in the horizontal plane can be found where :

- A. The magnetic fields are equal
- B. The directions of the magnetic fields are the same.
- C. The magnitudes of the magnetic fields are equal
- D. The magnetic field at one point is opposite to that of the other.

Choose the correct answer from the options given below:

- 1. A, B and C only
- 2. B, C and D only
- 3. A, C and D only
- 4. B and C only

Options :

- 92090662605. 1
- 92090662606. 2
- 92090662607. 3
- 92090662608. 4

Question Number : 52 Question Id : 92090615846 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

एक लम्बी धारा प्रवाहित तार को लम्बवत् रखा जाता है। क्षेत्रिज तल पर दो बिन्दु जहाँ पाए जा सकते हैं वह है, जहाँ -

- (A) चुम्बकीय क्षेत्र बराबर होते हैं।
- (B) चुम्बकीय क्षेत्रों की दिशा समान होती है।
- (C) चुम्बकीय क्षेत्र को मान बराबर होता है।
- (D) एक बिन्दु पर चुम्बकीय क्षेत्र, दूसरे बिन्दु पर चुम्बकीय क्षेत्र के विपरीत होता है।

नीचे दिए गए विकल्पों में से उचित उत्तर का चयन कीजिए :

- (1) केवल (A), (B) और (C)
- (2) केवल (B), (C) और (D)
- (3) केवल (A), (C) और (D)
- (4) केवल (B) और (C)

Options :

- 92090662605. 1
- 92090662606. 2
- 92090662607. 3

Question Number : 53 Question Id : 92090615847 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Given below are two statements: one is labelled as Assertion A and the other is labelled as Reason R

Assertion A : Phosphorus (v) oxide, P_4O_{10} is one of the most effective dehydrating agent.

Reason R : The heat of formation of P_4O_{10} is very high.

In the light of the above statements, choose the correct answer from the options given below

1. Both A and R are true and R is the correct explanation of A
2. Both A and R are true but R is NOT the correct explanation of A
3. A is true but R is false
4. A is false but R is true

Options :

92090662609. 1

92090662610. 2

92090662611. 3

92090662612. 4

Question Number : 53 Question Id : 92090615847 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

नीचे दो कथन दिए गए हैं : एक अभिकथन (Assertion A) के रूप में लिखित है तो दूसरा उसके कारण (Reason R) के रूप में :

अभिकथन (A) : फास्फोरम (V) ऑक्साइड, P_4O_{10} सबसे अधिक प्रभावी निर्जलीकारकों में से एक है।

कारण (R) : P_4O_{10} की उत्पादन ऊष्मा बहुत अधिक उच्च होती है।

उपरोक्त कथन के संदर्भ में, नीचे दिए गए विकल्पों में से उचित उत्तर का चयन कीजिए :

- (1) (A) और (R) दोनों सत्य हैं और (R), (A) की सही व्याख्या है।
- (2) (A) और (R) दोनों सत्य हैं, लेकिन (R), (A) की सही व्याख्या नहीं है।
- (3) (A) सत्य है, लेकिन (R) असत्य है।
- (4) (A) असत्य है, लेकिन (R) सत्य है।

Options :

92090662609. 1

92090662610. 2

92090662611. 3

92090662612. 4

Question Number : 54 Question Id : 92090615848 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Given below are two statements:

Statement I : Low temperature destroys enzymes by causing their denaturation.

Statement II : High temperature preserves the enzymes in their inactive stage.

In the light of the above statements, choose the correct answer from the options given below

1. Both Statement I and Statement II are true
2. Both Statement I and Statement II are false
3. Statement I is true but Statement II is false
4. Statement I is false but Statement II is true

Options :

92090662613. 1

92090662614. 2

92090662615. 3

92090662616. 4

Question Number : 54 Question Id : 92090615848 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

नीचे दो कथन दिए गए हैं :

अभिकथन (I) : कम तापमान एन्जाइम का विकृतिकरण कर, इनको नष्ट करता है।

अभिकथन (II) : उच्च तापमान एन्जाइम को इनकी सक्रिय अवस्था में संरक्षित करत है।

उपरोक्त अभिकथनों के संदर्भ में, नीचे दिए गए विकल्पों में से उचित उत्तर का चयन कीजिए :

- (1) अभिकथन (I) और अभिकथन (II) दोनों सही हैं।
- (2) अभिकथन (I) और अभिकथन (II) दोनों गलत हैं।
- (3) अभिकथन (I) सही है, लेकिन अभिकथन (II) गलत है।
- (4) अभिकथन (I) गलत है, लेकिन अभिकथन (II) सही है।

Options :

92090662613. 1

92090662614. 2

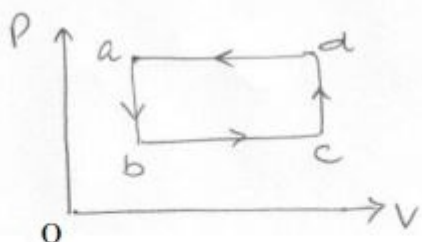
92090662615. 3

92090662616. 4

Question Number : 55 Question Id : 92090615849 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

A thermodynamic system is taken through the cycle abcda.



- A. The change in the internal energy is zero.
- B. The system rejects heat during the cycle.
- C. The system absorbs heat during the cycle.
- D. The total work done by the system during the cycle is zero.

Choose the correct answer from the options given below:

- 1. A and B only
- 2. A, B and D only
- 3. B and D only
- 4. A, C and D only

Options :

92090662617. 1

92090662618. 2

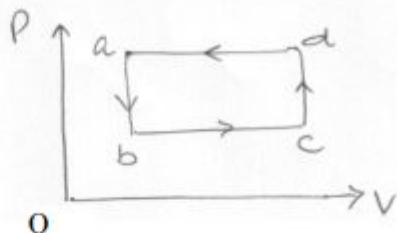
92090662619. 3

92090662620. 4

Question Number : 55 Question Id : 92090615849 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

एक ऊष्मागतिक व्यवस्था को चक्र abcda से ले जाया जाता है।



- (A) आंतरिक ऊर्जा में परिवर्तन शून्य होता है।
- (B) चक्र के दौरान व्यवस्था ऊष्मा को नाकारती है।
- (C) चक्र के दौरान व्यवस्था ऊष्मा को अवशोषित करती है।
- (D) चक्र के दौरान व्यवस्था द्वारा किया गया कुलकार्य शून्य होता है।

नीचे दिए गए विकल्पों में से उचित उत्तर का चयन कीजिए :

- (1) केवल (A) और (B)
- (2) केवल (A), (B) और (D)
- (3) केवल (B) और (D)
- (4) केवल (A), (C) और (D)

Options :

92090662617.1

92090662618.2

92090662619.3

92090662620.4

Question Number : 56 Question Id : 92090615850 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Given below are two statements: one is labelled as Assertion A and the other is labelled as Reason R

Assertion A : Aquatic animals are more comfortable in cold water rather than warm water.

Reason R : Solubility of gases increases with decrease in temperature.

In the light of the above statements, choose the correct answer from the options given below

1. Both A and R are true and R is the correct explanation of A
2. Both A and R are true but R is NOT the correct explanation of A
3. A is true but R is false
4. A is false but R is true

Options :

92090662621. 1
92090662622. 2
92090662623. 3
92090662624. 4

Question Number : 56 Question Id : 92090615850 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

नीचे दो कथन दिए गए हैं : एक अभिकथन (Assertion A) के रूप में लिखित है तो दूसरा उसके कारण (Reason R) के रूप में :

अभिकथन (A) : जलीय जन्तु गर्म जल की अपेक्षा ठंडे जल में अधिक सहज होते हैं।

कारण (R) : गैस की घुलनशीलता घटते तापमान के मान के साथ बढ़ती है।

उपरोक्त कथन के संदर्भ में, नीचे दिए गए विकल्पों में से उचित उत्तर का चयन कीजिए :

- (1) (A) और (R) दोनों सत्य हैं और (R), (A) की सही व्याख्या है।
- (2) (A) और (R) दोनों सत्य हैं, लेकिन (R), (A) की सही व्याख्या नहीं है।
- (3) (A) सत्य है, लेकिन (R) असत्य है।
- (4) (A) असत्य है, लेकिन (R) सत्य है।

Options :

92090662621. 1
92090662622. 2
92090662623. 3
92090662624. 4

Question Number : 57 Question Id : 92090615851 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

The correct sequence of action potentials propagated through conduction system in human heart are :

- A. Both right and left bundle branches.
- B. A V node
- C. S A node
- D. Bundle of His
- E. Purkinje fibers

Choose the correct statements from the options given below are :

- 1. $C \rightarrow D \rightarrow B \rightarrow A \rightarrow E$
- 2. $C \rightarrow B \rightarrow D \rightarrow A \rightarrow E$
- 3. $B \rightarrow C \rightarrow D \rightarrow A \rightarrow E$
- 4. $C \rightarrow A \rightarrow D \rightarrow B \rightarrow E$

Options :

- 92090662625. 1
- 92090662626. 2
- 92090662627. 3
- 92090662628. 4

Question Number : 57 Question Id : 92090615851 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

मानव हृदय में चालन तंत्र द्वारा क्रिया विभव प्रवाहित होने का सही क्रम है -

- (A) दक्षिण और वायु बेडल ब्रांच
- (B) AV नोड
- (C) SA नोड
- (D) His का समूह
- (E) पुरकिंजे तंतु

नीचे दिए गए विकल्पों में से उचित उत्तर का चयन कीजिए :

- (1) $C \rightarrow D \rightarrow B \rightarrow A \rightarrow E$
- (2) $C \rightarrow B \rightarrow D \rightarrow A \rightarrow E$
- (3) $B \rightarrow C \rightarrow D \rightarrow A \rightarrow E$
- (4) $C \rightarrow A \rightarrow D \rightarrow B \rightarrow E$

Options :

- 92090662625. 1
- 92090662626. 2
- 92090662627. 3

Question Number : 58 Question Id : 92090615852 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Given below are two statements: one is labelled as Assertion A and the other is labelled as Reason R

Assertion A : In a semiconductor, electrons are assumed to be located at the top edge of the conduction band and the holes at the bottom edge of the valence band.

Reason R : The Fermi-Dirac distribution function $f(E)$ rapidly approaches zero with increasing energy E .

In the light of the above statements, choose the correct answer from the options given below

1. Both A and R are true and R is the correct explanation of A
2. Both A and R are true but R is NOT the correct explanation of A
3. A is true but R is false
4. A is false but R is true

Options :

92090662629. 1
92090662630. 2
92090662631. 3
92090662632. 4

Question Number : 58 Question Id : 92090615852 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

नीचे दो कथन दिए गए हैं : एक अभिकथन (Assertion A) के रूप में लिखित है तो दूसरा उसके कारण (Reason R) के रूप में :

अभिकथन (A) : एक अर्द्धचालक में, यह माना जाता है कि इलेक्ट्रॉन चालन बैंड के निचले किनारे पर स्थित होते हैं और छिद्र (होल) संयोजन बैंड के ऊपरी किनारे पर होते हैं।

कारण (R) : फर्मी डायरेक वितरण फलन $f(E)$ बढ़ती हुई ऊर्जा E के साथ द्रुतता से शून्य की ओर बढ़ता है।

उपरोक्त कथन के संदर्भ में, नीचे दिए गए विकल्पों में से उचित उत्तर का चयन कीजिए :

- (1) (A) और (R) दोनों सत्य हैं और (R), (A) की सही व्याख्या है।
- (2) (A) और (R) दोनों सत्य हैं, लेकिन (R), (A) की सही व्याख्या नहीं है।
- (3) (A) सत्य है, लेकिन (R) असत्य है।
- (4) (A) असत्य है, लेकिन (R) सत्य है।

Options :

- 92090662629. 1
- 92090662630. 2
- 92090662631. 3
- 92090662632. 4

Question Number : 59 Question Id : 92090615853 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Arrange the events of infection of Microles in human body :

- A. From lymphatic capillaries to large lymph vessels connected to arculatory system.
- B. Reaching terminal lymphatic capillarles by action of coagulase, collagenase, elastase, porim etc.
- C. Attachment and colonization by the pathogens.
- D. Entry into host by dissolving host tissue by lytic substance.
- E. Discharge of pathogens in circulatory system and to the entire body.

Choose the correct statements from the options given below are :

- 1. $C \rightarrow B \rightarrow D \rightarrow A \rightarrow E$
- 2. $C \rightarrow D \rightarrow B \rightarrow A \rightarrow E$
- 3. $D \rightarrow C \rightarrow A \rightarrow B \rightarrow E$
- 4. $C \rightarrow A \rightarrow D \rightarrow B \rightarrow E$

Options :

- 92090662633. 1
- 92090662634. 2
- 92090662635. 3
- 92090662636. 4

Question Number : 59 Question Id : 92090615853 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

मानव शरीर में सूक्ष्म जीवों से संक्रमण की घटनाओं को सुनियोजित किजिए:

- (A) लसीका केशिका से दीर्घ लसीका वाहिका, जो परिसंचरण तंत्र से जुड़ती है।
- (B) आदि की क्रिया से अंतिम लसीका केशिकाओं तक पहुँचना।
- (C) रोगाणुओं द्वारा जुड़ाव व अनिवेशन।
- (D) परपोषी उत्तक को लायटिक पदार्थ द्वारा तोड़ कर कर परपोषी में प्रवेश पाना।
- (D) सम्पूर्ण शरीर और परिसंचरण तंत्र रोगाणुओं का स्राव करना।

नीचे दिए गए विकल्पों में से उचित उत्तर का चयन कीजिए :

- (1) $C \rightarrow B \rightarrow D \rightarrow A \rightarrow E$
- (2) $C \rightarrow D \rightarrow B \rightarrow A \rightarrow E$
- (3) $D \rightarrow C \rightarrow A \rightarrow B \rightarrow E$
- (4) $C \rightarrow A \rightarrow D \rightarrow B \rightarrow E$

Options :

- 92090662633. 1
- 92090662634. 2
- 92090662635. 3
- 92090662636. 4

Question Number : 60 Question Id : 92090615854 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Given below are two statements: one is labelled as Assertion A and the other is labelled as Reason R

Assertion A : For a particle to tunnel through a potential barrier without any reflection (perfect transmission), the transmission co-efficient should be unity.

Reason R : Transmission through a potential barrier will be perfect if the width of the barrier is equal to an integral or half integral multiple of the de-Broglie wavelength associated with the particle.

In the light of the above statements, choose the correct answer from the options given below

- 1. Both A and R are true and R is the correct explanation of A
- 2. Both A and R are true but R is NOT the correct explanation of A
- 3. A is true but R is false
- 4. A is false but R is true

Options :

- 92090662637. 1
- 92090662638. 2
- 92090662639. 3
- 92090662640. 4

Question Number : 60 Question Id : 92090615854 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

नीचे दो कथन दिए गए हैं : एक अभिकथन (Assertion A) के रूप में लिखित है तो दूसरा उसके कारण (Reason R) के रूप में :

अभिकथन (A) : किसी कण के लिए पारगमन गुणांक एक इकाई होना चाहिए, जब उसे विभव प्राचीर द्वारा बिना किसी परावर्तन (पूर्ण संचरण) के सुरंगित किया जाता है।

कारण (R) : विभव प्राचीर द्वारा संचरण पूर्ण होगा यदि प्राचीर की चौड़ाई, सम्बन्धित कण के दे ब्रॉग्ली तरंगदैर्घ्य के पूर्णांकीय अथवा अर्द्धपूर्णांकीय गुणांक के बराबर होती है।

उपरोक्त कथन के संदर्भ में, नीचे दिए गए विकल्पों में से उचित उत्तर का चयन कीजिए :

- (1) (A) और (R) दोनों सत्य हैं और (R), (A) की सही व्याख्या है।
- (2) (A) और (R) दोनों सत्य हैं, लेकिन (R), (A) की सही व्याख्या नहीं है।
- (3) (A) सत्य है, लेकिन (R) असत्य है।
- (4) (A) असत्य है, लेकिन (R) सत्य है।

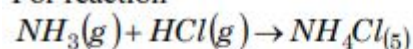
Options :

92090662637. 1
92090662638. 2
92090662639. 3
92090662640. 4

Question Number : 61 Question Id : 92090615855 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

For reaction



$$\Delta^\circ H_f = -176.2 kJ \text{ and } \Delta^\circ S_r = -0.285 kJ K^{-1}$$

The reaction will be :

1. Spontaneous at all temperatures.
2. Non-spontaneous above 618 K
3. Non-spontaneous below 618K
4. Always non-spontaneous

Options :

92090662641. 1
92090662642. 2

92090662643. 3

92090662644. 4

Question Number : 61 Question Id : 92090615855 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

$NH_3(g) + HCl(g) \rightarrow NH_4Cl(s)$ अभिक्रिया लिए $\Delta^\circ H_f = -176.2 kJ$ और $\Delta^\circ S_r = -0.285 kJ K^{-1}$ है।

अभिक्रिया होगी-

- | | |
|------------------------|-----------------------|
| (1) सभी तापमान पर सहज | (2) 618 K से ऊपर असहज |
| (3) 618 K से नीचे असहज | (4) सदैव असहज |

Options :

92090662641. 1

92090662642. 2

92090662643. 3

92090662644. 4

Question Number : 62 Question Id : 92090615856 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Given below are two statements: one is labelled as Assertion A and the other is labelled as Reason R

Assertion A : Vesicles containing neurotransmitter molecules migrate to the tip of axons that release these molecules as chemical signal to adjacent nerve cell.

Reason R : Inside the cell, vesicles and other organelles often use motor protein ('feet' to 'walk') to their destination along a track provided by cytoskeleton.

In the light of the above statements, choose the correct answer from the options given below

1. Both A and R are true and R is the correct explanation of A
2. Both A and R are true but R is NOT the correct explanation of A
3. A is true but R is false
4. A is false but R is true

Options :

92090662645. 1

92090662646. 2

92090662647. 3

92090662648. 4

Question Number : 62 Question Id : 92090615856 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

नीचे दो कथन दिए गए हैं : एक अभिकथन (Assertion A) के रूप में लिखित है तो दूसरा उसके कारण (Reason R) के रूप में :

अभिकथन (A) : पुटिका जिस में तंत्रिका संचारी अणु होते हैं तंत्रिकाय के ऊपरी सिरे की ओर प्रवास करती है, जो साथ वाली तंत्रिका कोशिका को इन अणुओं का रासायनिक संकेत की भांति मोचन करती है।

कारण (R) : कोशिका के भीतर पुटिका और अन्य कोशिकांग प्रायः मोटर प्रोटीन (चलने के लिए 'पैरे') अपने लक्ष्य तक साइटोस्केलेटन द्वारा प्रदत्त पथ का इस्तेमाल करते हैं।

उपरोक्त कथन के संदर्भ में, नीचे दिए गए विकल्पों में से उचित उत्तर का चयन कीजिए :

- (1) (A) और (R) दोनों सत्य हैं और (R), (A) की सही व्याख्या है।
- (2) (A) और (R) दोनों सत्य हैं, लेकिन (R), (A) की सही व्याख्या नहीं है।
- (3) (A) सत्य है, लेकिन (R) असत्य है।
- (4) (A) असत्य है, लेकिन (R) सत्य है।

Options :

92090662645. 1
92090662646. 2
92090662647. 3
92090662648. 4

Question Number : 63 Question Id : 92090615857 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

In an irreversible process entropy of the surroundings :

1. Always increases
2. Always decreases
3. Sometimes increases sometimes decreases
4. Remains constant

Options :

92090662649. 1
92090662650. 2
92090662651. 3
92090662652. 4

Question Number : 63 Question Id : 92090615857 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum

Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

एक अमृत्क्रमणीय प्रक्रिया में आस-पास की एन्ट्रोपी-

- | | |
|-------------------------------|--------------------|
| (1) हमेशा बढ़ती है | (2) हमेशा घटती है। |
| (3) कभी बढ़ती और कभी घटती है। | (4) स्थिर रहती है। |

Options :

92090662649. 1

92090662650. 2

92090662651. 3

92090662652. 4

Question Number : 64 Question Id : 92090615858 Question Type : MCQ Option Shuffling : No Is

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

Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

. If a person with type A blood receives a transfusion of type B blood, then

1. First antibody-A of recepient's plasma does not bind with antigen B on donor's erythrocyte and agglutination does not occur.
2. First antibody A inrecepient's plasma binds to the A antigen on the donors erythrocyte and cause agglutination.
3. First anti-B antibodies inrecepient's plasma can bind to the B antigen on the donor's erythrocytes causing agglutination and hemolysis of RBC's.
4. There is no antibody antigen reaction and there is no transfusion problem.

Options :

92090662653. 1

92090662654. 2

92090662655. 3

92090662656. 4

Question Number : 64 Question Id : 92090615858 Question Type : MCQ Option Shuffling : No Is

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

Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

यदि एक व्यक्ति जिसका रुधिर प्रकार A है, रुधिर प्रकार B का आधान करता है, तो-

- (1) प्राप्तकर्ता के प्लाज्मा का प्रथम प्रतिरक्षी-A, दत्तक के एरीथ्रोसाइट पर प्रतिजन B के साथ नहीं जुड़ता है और एग्ल्युटीनेशन (भागों का जुड़ाव) नहीं होता है।
- (2) प्राप्तकर्ता के प्लाज्मा का प्रथम प्रतिरक्षी-A, दत्तक के एरीथ्रोसाइट पर प्रतिजन B के साथ जुड़ता है और एग्ल्युटीनेशन होता है।
- (3) प्राप्तकर्ता के प्लाज्मा में प्रथम एंटी-B प्रतिरक्षी, दत्तक के एरीथ्रोसाइट पर प्रतिजन B के साथ जुड़ सकता है, एग्ल्युटीनेशन और RBC को रुधिरलयन करता है।
- (4) यहाँ कोई प्रतिरक्षी प्रतिजन अभिक्रिया नहीं होती है और कोई आधान समस्या नहीं होती है।

Options :

92090662653. 1
92090662654. 2
92090662655. 3
92090662656. 4

Question Number : 65 Question Id : 92090615859 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

The atomic radius for fcc lattice is :
(a is the lattice constant)

1. $\frac{\sqrt{2}}{4}a$

2. $\frac{a}{2}$

3. $\frac{\sqrt{3}}{4}a$

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

Options :

92090662657. 1
92090662658. 2
92090662659. 3
92090662660. 4

Question Number : 65 Question Id : 92090615859 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

fcc जालक की परमाणु त्रिज्या है: ('a' जालक स्थिरांक है)

- | | |
|---------------------------|---------------------------|
| (1) $\frac{\sqrt{2}}{4}a$ | (2) $\frac{a}{2}$ |
| (3) $\frac{\sqrt{3}}{4}a$ | (4) $\frac{\sqrt{2}}{3}a$ |

Options :

92090662657. 1
92090662658. 2
92090662659. 3
92090662660. 4

Question Number : 66 Question Id : 92090615860 Question Type : MCQ Option Shuffling : No Is
Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum
Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Change in gibb's free energy depends on:

- (1) Only on change in temperature
(2) Only on change in transfer of heat
(3) Only on the thermodynamic State
(4) Only on the change in volume

Options :

92090662661. 1
92090662662. 2
92090662663. 3
92090662664. 4

Question Number : 66 Question Id : 92090615860 Question Type : MCQ Option Shuffling : No Is
Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum
Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

गिब्स मुक्त ऊर्जा में बदलाव निर्भर करता है-

- | | |
|------------------------------|--|
| (1) केवल तापमान में बदलाव पर | (2) केवल ऊष्मा स्थानान्तरण के बदलाव पर |
| (3) केवल ऊष्मागतिक स्थिति पर | (4) केवल आयतन में बदलाव पर |

Options :

- 92090662661. 1
- 92090662662. 2
- 92090662663. 3
- 92090662664. 4

Question Number : 67 Question Id : 92090615861 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

The Debye temperature of a solid is 3000 K. The lattice specific heat of the solid at 300K is:

- (1) 0.46 J/mole K
- (2) 1.94 J/mole K
- (3) 2.34 J/mole K
- (4) 5.97 J/mole K

Options :

- 92090662665. 1
- 92090662666. 2
- 92090662667. 3
- 92090662668. 4

Question Number : 67 Question Id : 92090615861 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

एक ठोस का डेबाई तापमान 3000 K है। इस ठोस की 300K पर जालक विशिष्ट ऊष्मा है-

- | | |
|-------------------|-------------------|
| (1) 0.46 J/mole K | (2) 1.94 J/mole K |
| (3) 2.34 J/mole K | (4) 5.97 J/mole K |

Options :

- 92090662665. 1
- 92090662666. 2
- 92090662667. 3
- 92090662668. 4

Question Number : 68 Question Id : 92090615862 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Ferrites are:

- (1) Ferrimagnetic having large electrical conductivity.
- (2) Diamagnetic having large electrical conductivity.
- (3) Ferromagnetic having negligible electrical conductivity.
- (4) Ferrimagnetic having negligible electrical conductivity.

Options :

- 92090662669. 1
- 92090662670. 2
- 92090662671. 3
- 92090662672. 4

Question Number : 68 Question Id : 92090615862 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

फेराइट होते हैं:

- (1) फेरी चुम्बक, जिनकी विद्युत सुचालकता अधिक होती है
- (2) डाइचुम्बक, जिनकी विद्युत सुचालकता अधिक होती है।
- (3) फेरोचुम्बक, जिनकी विद्युत सुचालकता नगण्य होती है
- (4) फेरी चुम्बक, जिनकी विद्युत सुचालकता नगण्य होती है

Options :

- 92090662669. 1
- 92090662670. 2
- 92090662671. 3
- 92090662672. 4

Question Number : 69 Question Id : 92090615863 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

The hormone secreting cells of pancreatic islets are responsible for secretion of somatostatin are:

- (1) Alpha cells
- (2) Beta cells
- (3) Delta cells
- (4) F cells

Options :

- 92090662673. 1
- 92090662674. 2
- 92090662675. 3
- 92090662676. 4

Question Number : 69 Question Id : 92090615863 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

अग्न्याशय आइलेट की हार्मोन स्रावण कोशिकाएँ जो सोमोटोस्टेटिन के स्रावण के लिए उत्तरदायी होती हैं-

- | | |
|---------------------|-------------------|
| (1) एल्फा कोशिकाएँ | (2) बीटा कोशिकाएँ |
| (3) डेल्टा कोशिकाएँ | (4) F कोशिकाएँ |

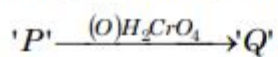
Options :

- 92090662673. 1
- 92090662674. 2
- 92090662675. 3
- 92090662676. 4

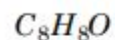
Question Number : 70 Question Id : 92090615864 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

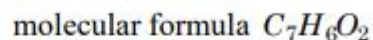
Compound 'p' based upon following observations is



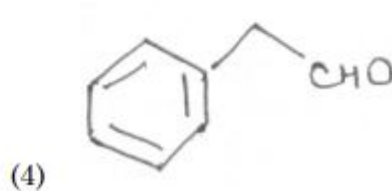
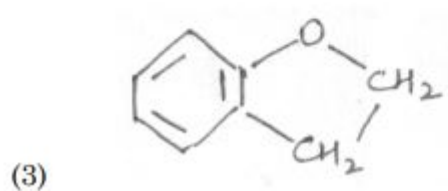
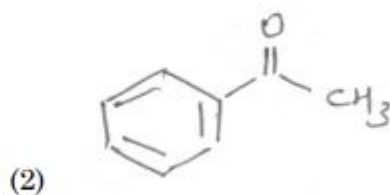
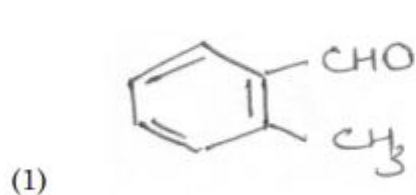
Molecular Formula



Effervescence with $NaHCO_3$



orange ppt with 2, 4 DNP Does not reduce tollen's reagent.



Options :

92090662677. 1

92090662678. 2

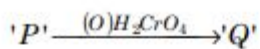
92090662679. 3

92090662680. 4

Question Number : 70 Question Id : 92090615864 Question Type : MCQ Option Shuffling : No Is
Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum
Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

निम्नलिखित अवलोकनों पर यौगिक " " आधारित है-



आण्विक सूत्र

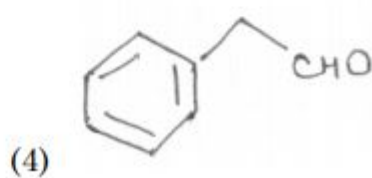
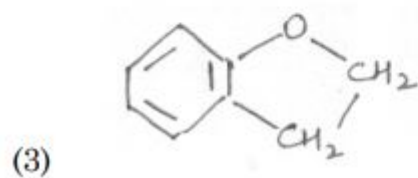
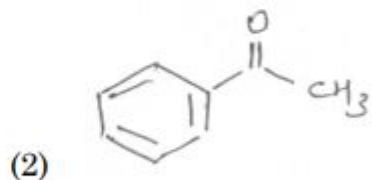
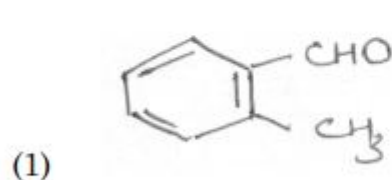
$NaHCO_3$ के साथ बुदबुदाना

C_8H_8O

अण्विक सूत्र $C_7H_6O_2$

2, 4 DNP के साथ

ओरल अवक्षेप, टॉलेन्स अभिकर्मक का अपचयन नहीं करता है



Options :

92090662677. 1

92090662678. 2

92090662679. 3

92090662680. 4

Question Number : 71 Question Id : 92090615865 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

The amphoteric substance given is:

(1) SO_3

(2) $NaOH$

(3) CO_2

(4) $Al(OH)_3$

Options :

92090662681. 1

92090662682. 2

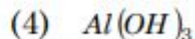
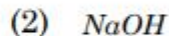
92090662683. 3

92090662684. 4

Question Number : 71 Question Id : 92090615865 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

दिया गया उभयधर्मी पदार्थ है-



Options :

92090662681. 1

92090662682. 2

92090662683. 3

92090662684. 4

Question Number : 72 Question Id : 92090615866 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Ferrui level is defined as:

(1) the lowest filled level at 0 k

(2) the lowest filled level at 300 k

(3) the highest filled level at 0 k

(4) the highest filled level at 300 k

Options :

92090662685. 1

92090662686. 2

92090662687. 3

92090662688. 4

Question Number : 72 Question Id : 92090615866 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

फर्मो स्तर को परिभाषित किया जाता है-

(1) 0 k पर न्यूनतम पूरित स्तर से

(2) 300 k पर न्यूनतम पूरित स्तर से

(3) 0 k पर उच्चतम पूरित स्तर से

(4) 300 k पर उच्चतम पूरित स्तर से

Options :

92090662685. 1

92090662686. 2

92090662687. 3

92090662688. 4

Question Number : 73 Question Id : 92090615867 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

The quautun of elastic vibration is:

- | | |
|------------|--------------|
| (1) Photo | (2) Graviton |
| (3) phonou | (4) meson |

Options :

92090662689. 1
92090662690. 2
92090662691. 3
92090662692. 4

Question Number : 73 Question Id : 92090615867 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

प्रत्यास्थ कंपन का क्वांटम है-

- | | |
|-----------|---------------|
| (1) फोटॉन | (2) ग्रैविटान |
| (3) फेनॉन | (4) मेसॉन |

Options :

92090662689. 1
92090662690. 2
92090662691. 3
92090662692. 4

Question Number : 74 Question Id : 92090615868 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

If a cople has two girls and one boy, then tha chances of their next child to be a girl's:

- | | |
|---------|----------|
| (1) 25% | (2) 50% |
| (3) 75% | (4) 100% |

Options :

92090662693. 1
92090662694. 2
92090662695. 3
92090662696. 4

Question Number : 74 Question Id : 92090615868 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

एक जोड़े के दो लड़कियाँ और एक लड़का है, उनकी अगली संतति एक लड़की होने की संभावना है-

- | | |
|---------|----------|
| (1) 25% | (2) 50% |
| (3) 75% | (4) 100% |

Options :

- 92090662693. 1
- 92090662694. 2
- 92090662695. 3
- 92090662696. 4

Question Number : 75 Question Id : 92090615869 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

A metal bullet hits a target with a velocity of 80m/s and comes to rest. 50% of the heat generated remains in the bullet. The increase in the temperature of the bullet is: (Specific heat of bullet = 160 J/kg/c)

- | | |
|----------|------------|
| (1) 14°C | (2) 12.5°C |
| (3) 10°C | (4) 8.2°C |

Options :

- 92090662697. 1
- 92090662698. 2
- 92090662699. 3
- 92090662700. 4

Question Number : 75 Question Id : 92090615869 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

एक धातु की बुलेट किसी लक्ष्य को 80 m/s के वेग से टकराती है और विरामावस्था में आ जाती है। उत्पादित ऊष्मा का 50% बुलेट में ही रहता है। बुलेट के तापमान में वृद्धि है: (बुलेट की विशिष्ट ऊष्मा = 160 J/kg/c)

- | | |
|----------|------------|
| (1) 14°C | (2) 12.5°C |
| (3) 10°C | (4) 8.2°C |

Options :

- 92090662697. 1

92090662698. 2

92090662699. 3

92090662700. 4

Question Number : 76 Question Id : 92090615870 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

In a thermodynamic process, the volume of one mole of an ideal gas is varied according to $V = aT^{-1}$ where a is constant. The temperature of the gas increases by ΔT . The amount of heat received by the gas is

(R = gas constant, ν = adiabatic)

- | | |
|-------------------------------|---|
| (1) $R\Delta T$ | (2) $\frac{R\Delta T}{1-\nu}$ |
| (3) $\frac{R\Delta T}{2-\nu}$ | (4) $R\Delta T\left(\frac{2-\nu}{\nu-1}\right)$ |

Options :

92090662701. 1

92090662702. 2

92090662703. 3

92090662704. 4

Question Number : 76 Question Id : 92090615870 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

किसी ऊष्मागतिक प्रक्रिया में, एक मोल आदर्श गैस का आयतन $V = aT^{-1}$ के अनुसार परिवर्तित होता है; a एक स्थिरांक है। इस प्रक्रिया में गैस का तापमान ΔT तक बढ़ता है। गैस द्वारा प्राप्त ऊष्मा का मान है:

(R = गैस स्थिरांक ν = रुद्धोष्म घातांक)

- | | |
|-------------------------------|---|
| (1) $R\Delta T$ | (2) $\frac{R\Delta T}{1-\nu}$ |
| (3) $\frac{R\Delta T}{2-\nu}$ | (4) $R\Delta T\left(\frac{2-\nu}{\nu-1}\right)$ |

Options :

92090662701. 1

92090662702. 2

92090662703. 3

92090662704. 4

Question Number : 77 Question Id : 92090615871 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Match List I with List II

List I		List II	
Formula		Acidic nature	
(A)	H_3PO_2	(I)	Tribasic acid
(B)	H_3PO_3	(II)	Tetrabasic acid
(C)	$H_4P_2O_6$	(III)	Dibasic acid
(D)	H_3PO_4	(IV)	Monobasic acid

Choose the correct answer from the options given below:

- (1) (A)-(IV), (B)-(III), (C)-(II), (D)-(I)
- (2) (A)-(I), (B)-(II), (C)-(III), (D)-(IV)
- (3) (A)-(IV), (B)-(III), (C)-(II), (D)-(I)
- (4) (A)-(III), (B)-(IV), (C)-(II), (D)-(I)

Options :

92090662705. 1

92090662706. 2

92090662707. 3

92090662708. 4

Question Number : 77 Question Id : 92090615871 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

सूची I के साथ सूची II का मिलान कीजिए।

सूची I सूत्र	सूची II अम्लीय प्रकृति
(A) H_3PO_2	(I) त्रिक्षारकी अम्ल
(B) H_3PO_3	(II) चतुर्क्षारकी अम्ल
(C) $H_4P_2O_6$	(III) द्विक्षारकी अम्ल
(D) H_3PO_4	(IV) एकक्षारकी अम्ल

नीचे दिए गए विकल्पों में से उचित उत्तर का चयन कीजिए :

- (1) (A)-(IV), (B)-(III), (C)-(II), (D)-(I)
- (2) (A)-(I), (B)-(II), (C)-(III), (D)-(IV)
- (3) (A)-(IV), (B)-(III), (C)-(I), (D)-(II)
- (4) (A)-(III), (B)-(IV), (C)-(II), (D)-(I)

Options :

92090662705. 1
92090662706. 2
92090662707. 3
92090662708. 4

Question Number : 78 Question Id : 92090615872 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

The compound showing intramolecular

- | | |
|---------------------------|-------------------|
| (1) Acetic acid | (2) O-Nitrophenol |
| (3) 4-Hydroxybenzaldehyde | (4) Benzene |

Options :

92090662709. 1
92090662710. 2
92090662711. 3
92090662712. 4

Question Number : 78 Question Id : 92090615872 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

यौगिक जो अन्तर्आण्विक आबन्ध दर्शाता है-

- | | |
|-----------------------------------|--------------------|
| (1) ऐसिटिक अम्ल | (2) 0-नाइट्रोफिनॉल |
| (3) 4-हाइड्रोओक्सीबैन्ज़ाएलडिहाइड | (4) बैन्जीन |

Options :

92090662709. 1
92090662710. 2
92090662711. 3
92090662712. 4

Question Number : 79 Question Id : 92090615873 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

The equilibrium constant for the reaction $2SO_2(g) + O_2(g) \rightleftharpoons 2SO_3(g)$ is given as K_1 and for

$SO_2 + \frac{1}{2}O_2(g) \rightleftharpoons SO_3$ it is K_2 .

K_1 is related to K_2 as:

- | | |
|---------------------------|------------------------|
| (1) $K_1 = K_2^2$ | (2) $K_1 = \sqrt{K_2}$ |
| (3) $K_1 = \frac{K_2}{2}$ | (4) $K_1 = K_2$ |

Options :

92090662713. 1
92090662714. 2
92090662715. 3
92090662716. 4

Question Number : 79 Question Id : 92090615873 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

अभिक्रिया $2SO_2(g) + O_2(g) \rightleftharpoons 2SO_3(g)$ के लिए संतुलन स्थिरांक K_1 दिया गया है और

$SO_2 + \frac{1}{2}O_2(g) \rightleftharpoons SO_3$ के लिए यह K_2 है।

K_1 , K_2 से इस प्रकार सम्बन्धित है-

(1) $K_1 = K_2^2$

(2) $K_1 = \sqrt{K_2}$

(3) $K_1 = \frac{K_2}{2}$

(4) $K_1 = K_2$

Options :

92090662713. 1

92090662714. 2

92090662715. 3

92090662716. 4

Question Number : 80 Question Id : 92090615874 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

If a mother is having 'O' blood group and father is having 'AB' blood group, then the maximum number of different types of groups that can occur in their pregnancy is:

(1) 1

(2) 2

(3) 3

(4) 4

Options :

92090662717. 1

92090662718. 2

92090662719. 3

92090662720. 4

Question Number : 80 Question Id : 92090615874 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

यदि माँ का रुधिर समूह 'O' है और पिता का रुधिर समूह 'AB' है तो उनकी संतति में अधिकतम रुधिर समूहों की संख्या हो सकती है-

(1) 1

(2) 2

(3) 3

(4) 4

Options :

92090662717. 1

92090662718. 2

92090662719. 3

92090662720. 4

Question Number : 81 Question Id : 92090615875 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

The number of possible gametes of an individual AABbCCDd is:

(1) 2

(2) 4

(3) 6

(4) 8

Options :

92090662721. 1

92090662722. 2

92090662723. 3

92090662724. 4

Question Number : 81 Question Id : 92090615875 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

एक व्यक्ति AABbCCDd में सम्भावित युग्मकों की संख्या है-

(1) 2

(2) 4

(3) 6

(4) 8

Options :

92090662721. 1

92090662722. 2

92090662723. 3

92090662724. 4

Question Number : 82 Question Id : 92090615876 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

A uniform magnetic field $\vec{B}$ pointing upwards fills the circular region as shown in figure. If $\vec{B}$ increases with time, the induced electric field will be directed:

- (1) Clockwise along the circular region (2) anti-clockwise along the circular region.
(3) upwards parallel to $\vec{B}$ (4) downwards antiparallel to $\vec{B}$

Options :

92090662725. 1
92090662726. 2
92090662727. 3
92090662728. 4

Question Number : 82 Question Id : 92090615876 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

एकसमान चुम्बकीय क्षेत्र $\vec{B}$ जो कि उपरिमुखी है, किसी वृत्तीय क्षेत्र (चित्र में छायांकित दर्शाया गया है) को भरता है।

यदि $\vec{B}$ समय के साथ बढ़ता है, तो प्रेरित विद्युत क्षेत्र की दिशा होगी

- (1) वृत्तीय क्षेत्र के दक्षिणावर्त (2) वृत्तीय क्षेत्र के वामावर्त
(3) $\vec{B}$ के सामान्तर उपरिमुखी (4) $\vec{B}$ के असामान्तर अधोमुखी

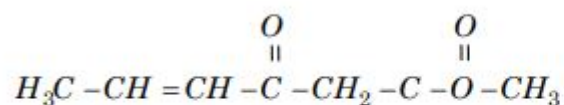
Options :

92090662725. 1
92090662726. 2
92090662727. 3
92090662728. 4

Question Number : 83 Question Id : 92090615877 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

The correct IUPAC name of given compound is:



- (1) Methyl - 4 - oxohex - 2 - enoate (2) Methyl - 3 - oxohexanoate
(3) Methyl - 3 - oxohex - 2 - enoate (4) Methyle - 4 - oxohexanoate

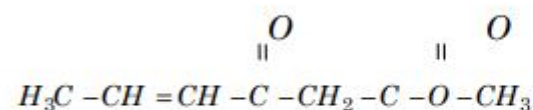
Options :

92090662729. 1
92090662730. 2
92090662731. 3
92090662732. 4

Question Number : 83 Question Id : 92090615877 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

दिए गए यौगिक का उचित IUPAC नाम है-



- (1) मेथाइल - 4 - ऑक्सोहेक्स - 2 - एनोएट (2) मेथाइल - 3 - ऑक्सोहेक्सोनेएट
(3) मेथाइल - 3 - ऑक्सोहेक्स - 2 - एनोएट (4) मेथाइल - 4 - ऑक्सोहेक्सोनेएट

Options :

92090662729. 1
92090662730. 2
92090662731. 3
92090662732. 4

Question Number : 84 Question Id : 92090615878 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

The incorrect statement about resonance/resonating structures is:

- (1) These are hypothetical structures.
(2) These should have almost similar energies.
(3) Energy of resonance hybrid is lower than any of the resonating strutures.
(4) These have different number of unpaired electrons.

Options :

- 92090662733. 1
- 92090662734. 2
- 92090662735. 3
- 92090662736. 4

Question Number : 84 Question Id : 92090615878 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

अनुवाद/अनुवाद संरचना के संदर्भ में अनुचित कथन है-

- (1) सह एक परिकल्पित संरचना है।
- (2) इनकी सामान्यतः समान ऊर्जा होनी चाहिए
- (3) अनुवाद संकर की ऊर्जा किसी भी अनुवाद संरचना के अपेक्षा कम होती है
- (4) इनके निम्न संख्याओं के अयुग्मित इलेक्ट्रॉन होते हैं।

Options :

- 92090662733. 1
- 92090662734. 2
- 92090662735. 3
- 92090662736. 4

Question Number : 85 Question Id : 92090615879 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

The statement true about Okazaki Fragments is:

- (1) Formed by DNA polymerase activity only
- (2) Formed by RNA polymerase activity only.
- (3) Formed in eucaryotic cells only
- (4) Formed at both DNA and RNA

Options :

- 92090662737. 1
- 92090662738. 2
- 92090662739. 3
- 92090662740. 4

Question Number : 85 Question Id : 92090615879 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum

Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

आंकाज़ाकी खण्डों के विषय में सत्य कथन हैं-ट

- (1) केवल DNA पॉलीमेरेज़ क्रिया द्वारा बनते हैं। (2) केवल RNA पॉलीमेरेज़ क्रिया द्वारा बनते हैं।
(3) केवल यूकैरियोटिक कोशिकाओं में बनते हैं। (4) DNA और RNA दानों के बने होते हैं।

Options :

92090662737. 1
92090662738. 2
92090662739. 3
92090662740. 4

**Question Number : 86 Question Id : 92090615880 Question Type : MCQ Option Shuffling : No Is
Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum
Instruction Time : 0**

Correct Marks : 4 Wrong Marks : 1

Pribnow box is located at :

- (1) -35 position (2) -10 position
(3) +25 position (4) -75

Options :

92090662741. 1
92090662742. 2
92090662743. 3
92090662744. 4

**Question Number : 86 Question Id : 92090615880 Question Type : MCQ Option Shuffling : No Is
Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum
Instruction Time : 0**

Correct Marks : 4 Wrong Marks : 1

प्रिबनाओ बॉक्स पाया जाता है-

- (1) -35 स्थान पर (2) -10 स्थान पर
(3) +25 स्थान पर (4) -75 स्थान पर

Options :

92090662741. 1
92090662742. 2
92090662743. 3
92090662744. 4

Question Number : 87 Question Id : 92090615881 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

If the operators A and B satisfy the communication relation $[A, B] = I$, where I is an identity operator, then $[e^A, B]$ is:

- | | |
|-------------------|----------------|
| (1) e^A | (2) $[e^B, A]$ |
| (3) $[e^{-B}, A]$ | (4) I |

Options :

92090662745. 1

92090662746. 2

92090662747. 3

92090662748. 4

Question Number : 87 Question Id : 92090615881 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

यदि संकारक A और B क्रमविनिमय सम्बन्ध $[A, B] = I$, जहाँ I एक परिचायक संकारक है, को संतुष्ट करते हैं, तो $[e^A, B]$ है:

- | | |
|-------------------|----------------|
| (1) e^A | (2) $[e^B, A]$ |
| (3) $[e^{-B}, A]$ | (4) I |

Options :

92090662745. 1

92090662746. 2

92090662747. 3

92090662748. 4

Question Number : 88 Question Id : 92090615882 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

The ground state energy of a particle in a two dimensional potential

$V(x, y) = \frac{1}{2}mw^2(x^2 + 4y^2)$ is:

- | | |
|--------------------------|----------------|
| (1) $\frac{\hbar w}{2}$ | (2) $\hbar w$ |
| (3) $\frac{3}{2}\hbar w$ | (4) $2\hbar w$ |

Options :

92090662749. 1
92090662750. 2
92090662751. 3
92090662752. 4

Question Number : 88 Question Id : 92090615882 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

किसी द्वि विमीय स्थितिज $V(x, y) = \frac{1}{2}mw^2(x^2 + 4y^2)$ में एक कण की भू-स्तर ऊर्जा है:

- | | |
|--------------------------|----------------|
| (1) $\frac{\hbar w}{2}$ | (2) $\hbar w$ |
| (3) $\frac{3}{2}\hbar w$ | (4) $2\hbar w$ |

Options :

92090662749. 1
92090662750. 2
92090662751. 3
92090662752. 4

Question Number : 89 Question Id : 92090615883 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

The property of an element which is most dependent on shielding effect is:

- | | |
|--------------------|-------------------|
| (1) atomic mass | (2) atomic number |
| (3) neutron number | (4) atomic radius |

Options :

92090662753. 1
92090662754. 2
92090662755. 3
92090662756. 4

Question Number : 89 Question Id : 92090615883 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

किसी तत्व का वह गुण जो परिरक्षण प्रभाव पर सबसे अधिक निर्भर करता है, -

- | | |
|----------------------|---------------------|
| (1) परमाणु द्रव्यमान | (2) परमाणु संख्या |
| (3) न्यूट्रॉन संख्या | (4) परमाणु त्रिज्या |

Options :

92090662753. 1
92090662754. 2
92090662755. 3
92090662756. 4

Question Number : 90 Question Id : 92090615884 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

During the electrolysis of water, 0.504 g of H_2 is liberated at the cathode. The mass of O_2 formed at the anode is:

- | | |
|------------|------------|
| (1) 32.0 g | (2) 16.0 g |
| (3) 8.0 g | (4) 4.0 g |

Options :

92090662757. 1
92090662758. 2
92090662759. 3
92090662760. 4

Question Number : 90 Question Id : 92090615884 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

जल की इलेक्ट्रोलिसिस के दौरान, कैथोड पर 0.504 ग्रा. H_2 मुक्त होती है। एनोड पर उत्पन्न O_2 का द्रव्यमान है-

- | | |
|----------------|----------------|
| (1) 32.0 ग्रा. | (2) 16.0 ग्रा. |
| (3) 8.0 ग्रा. | (4) 4.0 ग्रा. |

Options :

92090662757. 1
92090662758. 2

92090662759. 3

92090662760. 4

Question Number : 91 Question Id : 92090615885 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

In the given reaction

I Adenine + X → Adenosine

II Adenosine + Y → Adenylic Acid

X and Y represent:

	X	Y
(1)	Phosphate group	Sugar molecule
(2)	Sugar molecule	Phosphate group
(3)	Sugar molecule	Nitrogenous base 5
(4)	Nitrogenous base	Sugar molecule

Options :

92090662761. 1

92090662762. 2

92090662763. 3

92090662764. 4

Question Number : 91 Question Id : 92090615885 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

दी गई अभिक्रिया में

I एडेनिन + X → एडेनोसिन

II एडेनोसिन + Y → एडिनिलिक अम्ल

X और Y प्रदर्शित करते हैं-

	X	Y
(1)	फोस्फेट समूह	शर्करा अणु
(2)	शर्करा अणु	फोस्फेट समूह
(3)	शर्करा अणु	नाइट्रोजन युक्त क्षार 5
(4)	नाइट्रोजन युक्त क्षारक	शर्करा अणु

Options :

92090662761. 1

92090662762. 2

92090662763. 3

92090662764. 4

Question Number : 92 Question Id : 92090615886 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

The following feature which is not true regarding eukaryotic cell is:

- (1) It has 80s type of ribosomes present in the cytoplasm
- (2) Mitochondria in them have circular DNA
- (3) It has 80s types of ribosomes in the mitochondria
- (4) Most of the DNA is in the nucleus that is bounded by a double membrane

Options :

92090662765. 1

92090662766. 2

92090662767. 3

92090662768. 4

Question Number : 92 Question Id : 92090615886 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

विशेषता जो यूकेरेओटिक कोशिका के संदर्भ में सत्य नहीं है-

- (1) इस के 80s प्रकार के राइबोसोम कोशिका द्रव्य में उपस्थित होते हैं।
- (2) इनके माइटोकॉन्ड्रिया में वृत्ताकार DNA होता है।
- (3) इसके 80s प्रकार के राइबोसोम माइटोकॉन्ड्रिया में उपस्थित होते हैं।
- (4) केन्द्रक में अधिकतर DNA दोहरी झिल्ली युक्त होते हैं।

Options :

92090662765. 1

92090662766. 2

92090662767. 3

92090662768. 4

Question Number : 93 Question Id : 92090615887 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

The kinetic energy of a proton having deBroglie wavelength of 1.000fm is:

Given: Plank's constant = $4.136 \times 10^{-15} \text{ ev.s}$

Proton rest mass energy = 0.938 GeV

Speed of light = $3.0 \times 10^8 \text{ m/s}$

- | | |
|---------------|---------------|
| (1) 1.240 GeV | (2) 1.555 GeV |
| (3) 617 MeV | (4) 617 GeV |

Options :

92090662769. 1
92090662770. 2
92090662771. 3
92090662772. 4

Question Number : 93 Question Id : 92090615887 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

एक प्रोटॉन जिसका दे ब्रॉग्ली तरंगदैर्घ्य 1.000fm है, की गतिज ऊर्जा है:

दिया है: प्लांक स्थिरांक = $4.136 \times 10^{-15} \text{ ev.s}$

प्रोटॉन विराम ऊर्जा = 0.938 GeV

प्रकाश का वेग = $3.0 \times 10^8 \text{ m/s}$

- | | |
|---------------|---------------|
| (1) 1.240 GeV | (2) 1.555 GeV |
| (3) 617 MeV | (4) 617 GeV |

Options :

92090662769. 1
92090662770. 2
92090662771. 3
92090662772. 4

Question Number : 94 Question Id : 92090615888 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

The ground state energy of an electron placed in a box of 0.125 nm is 30 eV. Its energy in the first excited state is:

- | | |
|------------|------------|
| (1) 60 eV | (2) 90 eV |
| (3) 120 eV | (4) 240 eV |

Options :

- 92090662773. 1
- 92090662774. 2
- 92090662775. 3
- 92090662776. 4

Question Number : 94 Question Id : 92090615888 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

एक इलेक्ट्रॉन जो कि 0.125 nm के बॉक्स में स्थित है, की भू स्तर ऊर्जा 30 eV है। प्रथम उत्तेजित स्तर पर इसकी ऊर्जा होगी-

- | | |
|------------|------------|
| (1) 60 eV | (2) 90 eV |
| (3) 120 eV | (4) 240 eV |

Options :

- 92090662773. 1
- 92090662774. 2
- 92090662775. 3
- 92090662776. 4

Question Number : 95 Question Id : 92090615889 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

The statements correct about Sterols are:

- (A) Cholesterol is the major sterol in animal tissue.
- (B) Cholesterol is amphipathic.
- (C) Ergosterol is found in fungi
- (D) Bacteria can synthesize most of the sterols.
- (E) Plant tissue lacks stigmasterol.

Choose the correct answer from the options given below :

- | | |
|---------------------------|---------------------------|
| (1) (A), (C) and (E) only | (2) (A), (B) and (D) only |
| (3) (A), (B) and (C) only | (4) (C), (D) and (E) only |

Options :

- 92090662777. 1
- 92090662778. 2
- 92090662779. 3
- 92090662780. 4

Question Number : 95 Question Id : 92090615889 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

स्टीरॉल के विषय में कौन-से कथन सही हैं-

- (A) जंतु ऊतक में मुख्य स्टीरॉल क्लोस्टीरॉल है।
- (B) क्लोस्टीरॉल उभय संवेदी होता है।
- (C) क्लोस्टीरॉल कवक में पाया जाता है।
- (D) अधिकतर स्टीरॉल का संश्लेषण बैक्टीरिया करते हैं।
- (E) पादप ऊतक में स्टीगमो स्टीरॉल कम पाया जाता है।

नीचे दिए गए विकल्पों में से उचित उत्तर का चयन कीजिए :

- | | |
|--------------------------|--------------------------|
| (1) केवल (A), (C) और (E) | (2) केवल (A), (B) और (D) |
| (3) केवल (A), (B) और (C) | (4) केवल (C), (D) और (E) |

Options :

- 92090662777. 1
- 92090662778. 2
- 92090662779. 3
- 92090662780. 4

Question Number : 96 Question Id : 92090615890 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

The number of hydrogen bonds in a B-DNA with 800 base pairs, in which 20% at deoxyribo nucleotide occurring with adenosine base, is:

- | | |
|----------|----------|
| (1) 2400 | (2) 2240 |
| (3) 2420 | (4) 2042 |

Options :

- 92090662781. 1
- 92090662782. 2
- 92090662783. 3
- 92090662784. 4

Question Number : 96 Question Id : 92090615890 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

800 आधार युग्मों के साथ, एक B-DNA में हाइड्रोजन आबंधों की संख्या, जिन में 20% डीओक्सीराइबो न्यूक्लिओटाइड एडीनोसिन आधार के साथ पाया जाता है, है-

- | | |
|----------|----------|
| (1) 2400 | (2) 2240 |
| (3) 2420 | (4) 2042 |

Options :

92090662781. 1
92090662782. 2
92090662783. 3
92090662784. 4

Question Number : 97 Question Id : 92090615891 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Dimer formation between two adjacent thymidine residues on the same DNA strand is caused by:

- | | |
|------------------|------------------|
| (1) X - rays | (2) Gamma rays |
| (3) UV radiation | (4) Nitrous acid |

Options :

92090662785. 1
92090662786. 2
92090662787. 3
92090662788. 4

Question Number : 97 Question Id : 92090615891 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

दो नजदीकी थायमीडिन अवशेषों के मध्य डायमर का एक ही DNA स्ट्रैंड पर बनने का कारण है-

- | | |
|---------------|------------------|
| (1) X - रे | (2) गामा - रे |
| (3) UV विकिरण | (4) नाइट्रस अम्ल |

Options :

92090662785. 1
92090662786. 2
92090662787. 3
92090662788. 4

Question Number : 98 Question Id : 92090615892 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum

Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

The average velocity of hydrogen molecule at 100 K is twice that of oxygen molecules at temperature:

- | | |
|-----------|------------|
| (1) 200 K | (2) 400 K |
| (3) 800 K | (4) 1600 K |

Options :

92090662789. 1
92090662790. 2
92090662791. 3
92090662792. 4

Question Number : 98 Question Id : 92090615892 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

100 k पर हाइड्रोजन के अणु का औसत वेग, जिस तापमान पर ऑक्सीजन के अणु के औसत वेग से दोगुना होता है, वह है-

- | | |
|-----------|------------|
| (1) 200 k | (2) 400 k |
| (3) 800 k | (4) 1600 k |

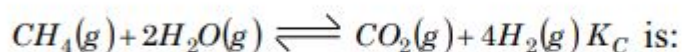
Options :

92090662789. 1
92090662790. 2
92090662791. 3
92090662792. 4

Question Number : 99 Question Id : 92090615893 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

The relation between K_c and K_p for reaction



- | | |
|--------------------------------|----------------------------|
| (1) $K_C = K_P RT$ | (2) $K_C = \frac{K_P}{RT}$ |
| (3) $K_C = \frac{K_P}{(RT)^2}$ | (4) $K_C = K_P (RT)^2$ |

Options :

92090662793. 1

92090662794. 2

92090662795. 3

92090662796. 4

Question Number : 99 Question Id : 92090615893 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

अभिक्रिया $CH_4(g) + 2H_2O(g) \rightleftharpoons CO_2(g) + 4H_2(g)$ के लिए K_C और K_P में सम्बन्ध है-

(1) $K_C = K_P RT$

(2) $K_C = \frac{K_P}{RT}$

(3) $K_C = \frac{K_P}{(RT)^2}$

(4) $K_C = K_P (RT)^2$

Options :

92090662793. 1

92090662794. 2

92090662795. 3

92090662796. 4

Question Number : 100 Question Id : 92090615894 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Given below are two statements:

Statement (I): When Li metal is burnt in air, it mainly gives Li_2O

Statement (II): Stability of superoxides of alkali metals increases as the size of alkali metals increases

In the light of the above statements, choose the correct answer from the options given below

(1) Both Statement I and Statement II are true

(2) Both Statement I and Statement II are false

(3) Statement I is true but Statement II is false

(4) Statement I is false but Statement II is true

Options :

92090662797. 1

92090662798. 2

92090662799. 3

92090662800. 4

Question Number : 100 Question Id : 92090615894 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

नीचे दो कथन दिए गए हैं :

कथन (I) : जब Li धातु का वायु में दहन किया जाता है, तो यह मुख्यतः Li_2O देता है।

कथन (II) : क्षार धातुओं के सुपर-ऑक्साइड की स्थिरता, क्षाट धातुओं के आकार में वृद्धि के साथ बढ़ती है।

उपरोक्त कथन के आलोक में, नीचे दिए गए विकल्पों में से सबसे उपयुक्त उत्तर का चयन कीजिए :

- (1) कथन I और II दोनों सही हैं
- (2) कथन I और II दोनों गलत हैं
- (3) कथन I सही है, लेकिन कथन II गलत है
- (4) कथन I गलत है, लेकिन कथन II सही है

Options :

92090662797. 1

92090662798. 2

92090662799. 3

92090662800. 4