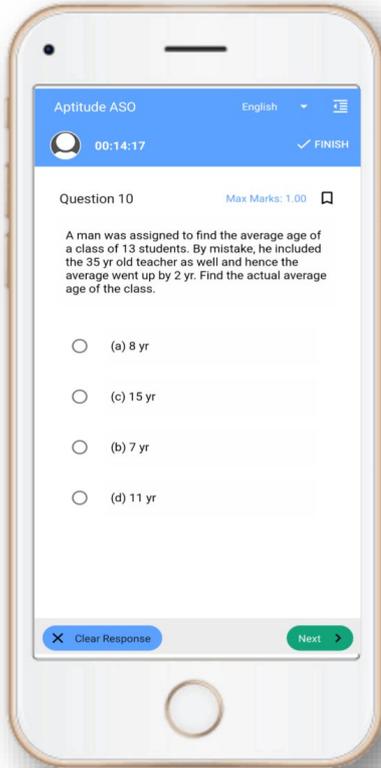


## OAVS Exam- Mock Test, PYQS , Note, E-Books

Get Now On [App](#)



Tech Of World

Download App



[Click Here](#)

 YouTube- [Click Here](#)

 Telegram- [Click Here](#)

 Facebook- [Click Here](#)





## ODISHA ADARSHA VIDYALAYA SANGATHAN

Participant ID	Techofworld.In
Participant Name	Techofworld.In
Test Center Name	iON Digital Zone iDZ Sector 4
Test Date	22/05/2019
Test Time	9:00 AM - 12:20 PM
Subject	PGT PHYSICS

## Section : Language Proficiency Test

Q.1 Meaning of: cook the books

- Ans
- 1. To do something with a lot of energy and often skill.
  - 2. To invent a story or plan, usually dishonestly
  - 3.

A book containing detailed information on how to prepare and cook different foods.

- 4. To alter facts and figures dishonestly.

Question ID : 16794326196

Status : Not Answered

Chosen Option : --

Q.2 Identify the meaning of the highlighted phrase.

Something is wrong with my bike, but I can't figure it out.

- Ans
- 1. Think
  - 2. Understand
  - 3. Repair
  - 4. Prevent

Question ID : 16794326185

Status : Answered

Chosen Option : 2

Q.3 Change the voice:

People praised him for his intelligence.

- Ans
- 1. He was praised for his intelligence.
  - 2. He is praised for his intelligence.
  - 3. He was praised for his intelligence by the people.
  - 4. He is praised for his intelligence by the people

Q.4 Meaning of : Sign off

- Ans
- 1. Give up something
  - 2. Disagree something
  - 3. Agree something
  - 4. End something

Question ID : 16794326195  
Status : Not Answered  
Chosen Option : --

Q.5 Pick out the nearest correct meaning of the given word: Patronage.

- Ans
- 1. Espionage
  - 2. Support
  - 3. Hindrance
  - 4. Beneficiary

Question ID : 16794326198  
Status : Not Answered  
Chosen Option : --

Q.6 Fill in the blank with the appropriate word.

I abstained \_\_\_\_ food for three days.

- Ans
- 1. For
  - 2. From
  - 3. To
  - 4. With

Question ID : 16794326201  
Status : Not Attempted and Marked For Review  
Chosen Option : --

Q.7 Identify the error in the sentence given below.

Many a soldier was killed in the bomb blast.

- Ans
- 1. was killed
  - 2. No error.
  - 3. Many a soldier
  - 4. In the bomb blast.

Status : Answered  
Chosen Option : 2

Q.8 Identify an accurately spelt word:

- Ans
- 1. Fluoridasion
  - 2. Merchandice
  - 3. Ovovivparous
  - 4. Pertinacious

Question ID : 16794326194  
Status : Not Answered  
Chosen Option : --

Q.9 Change the following sentence into Quoted speech.

He said that face is the index of mind.

- Ans
- 1. He explained, "Face is the index of mind".
  - 2. He said, "Face is the index of mind".
  - 3. He said, "Face is the index of the mind".
  - 4. He said, "Face was the index of mind".

Question ID : 16794326191  
Status : Answered  
Chosen Option : 2

Q.10 Change the following sentence into reported speech.

She said to me, "Why were you hiding today?"

- Ans
- 1. She asked me why were I hiding that day
  - 2. She asked me why I had been hiding that day
  - 3. She asked me why I had been hiding today
  - 4. She asked me why were I hiding today

Question ID : 16794326186  
Status : Answered  
Chosen Option : 2

Q.11 Identify the misspelled word.

Imagine an imaginary menagere manager managing an imaginary menagerie.

- Ans
- 1. Menagere
  - 2. Imaginary
  - 3. Managing

4. Menagerie

Question ID : 16794326184  
Status : Not Answered  
Chosen Option : --

Q.1  
2 Fill in the blank with the appropriate word.

CCTV footage from a nearby petrol pump helped cops nab the \_\_\_\_\_, within two days.

- Ans
- 1. Acquitted
  - 2. Person
  - 3. victim
  - 4. Accused

Question ID : 16794326189  
Status : Answered  
Chosen Option : 3

Q.1  
3 Identify the error in the sentence given below.

All the villagers know why Gopal has been threw out of the village.

- Ans
- 1. All the villagers know
  - 2. No improvement.
  - 3. Has been threw out of the village.
  - 4. Why Gopal

Question ID : 16794326187  
Status : Answered  
Chosen Option : 3

Q.1  
4 Fill in the blank with the appropriate option.

Rights and duties \_\_\_\_\_ two sides of the same coin.

- Ans
- 1. Were
  - 2. Was
  - 3. Is
  - 4. Are

Question ID : 16794326197  
Status : Answered  
Chosen Option : 3

Q.1  
5 Which of the following sentence is grammatically incorrect?

- Ans
- 1. Either her parents or she are mistaken.
  - 2. There is no leaf on the tree.

3. He learns his mathematical formulae daily.
4. Each of them is honest.

Question ID : 16794326199  
 Status : Answered  
 Chosen Option : 1

Q.1  
6 Fear of particular or all animals is known as.

- Ans  1. Carcinophobia
2. Aerophobia
3. Hydrophobia
4. Zoophobia

Question ID : 16794326183  
 Status : Not Answered  
 Chosen Option : --

Q.1  
7 Rearrange the shuffled sentence into a meaningful one.

Where righteousness is there the in heart, there is character in the beauty.

- Ans  1.  
 Where there is righteousness in the heart, there is beauty in the character.
2.  
 Where there is righteousness there is beauty in the heart and character.
3.  
 There is beauty, character in heart, Where there is righteousness
4.  
 There is beauty in the character and in heart, where there is righteousness

Question ID : 16794326190  
 Status : Answered  
 Chosen Option : 2

Q.1  
8 Change the voice:

Is he eating bread?

- Ans  1. Is bread being eaten by you?
2. Is bread being eaten by him?
3. Is bread been eaten by you?
4. Is bread been eaten by him?

Q.1 A person who gives money to help poor or sick people is known as:

- Ans
- 1. Philosophy
  - 2. Phenotype
  - 3. Philanthropist
  - 4. Philosopher

Question ID : 16794326192  
Status : Not Answered  
Chosen Option : --

Q.2 Antonym of: loquacious

- Ans
- 1. Ludicrous
  - 2. Restrained
  - 3. Uprising
  - 4. Breach

Question ID : 16794326200  
Status : Not Answered  
Chosen Option : --

Q.2 ନିର୍ଦ୍ଦିଷ୍ଟ ଗୋଟିକ କି ପ୍ରକାର ପତ୍ରିକା ?

- Ans
- 1. ସାହିତ୍ୟ ପତ୍ରିକା
  - 2. ବ୍ୟାଞ୍ଜନାତ୍ମକ ପତ୍ରିକା
  - 3. ସମାଲୋଚନା ମୂଳକ ପତ୍ରିକା
  - 4. ଶିଶୁ ପତ୍ରିକା

Question ID : 16794326203  
Status : Not Answered  
Chosen Option : --

Q.2 ନିମ୍ନୋକ୍ତ ରକ୍ଷିତାମାନଙ୍କ ମଧ୍ୟରୁ ମହର୍ଷି କିଏ ?

- Ans
- 1. ବିଶ୍ଵମିତ୍ର
  - 2. ବଶିଷ୍ଠ
  - 3. ଜନକ
  - 4. ନାରଦ

Question ID : 16794326207  
Status : Answered  
Chosen Option : 2

Q.2 ଭୂବନେଶ୍ଵର ବେହେରା ଓଡ଼ିଆ ସାହିତ୍ୟରେ କିପରି ପରିଚିତ ?

- Ans
- 1. ଅଧ୍ୟାପକ

2. ଔପନ୍ୟାସିକ  
 3. ଲଳିତ ନିବନ୍ଧକାର  
 4. କବି

Question ID : 16794326209  
 Status : Not Answered  
 Chosen Option : --

Q.2  
4 ଉଡିଗଲା ଚଢ଼େଇର ପର ଗଣିବା - ଏହି ଲୋକବାଣୀଟିର ଅର୍ଥ କ'ଣ ?

- Ans  1. ଅତି ସାମାନ୍ୟ  
 2. ସାଧନା ହିଁ ସିଦ୍ଧିର ଜନକ  
 3. ନିଜେ ସମର୍ଥ ହେବା  
 4. ଅତିବୁଦ୍ଧିଆ

Question ID : 16794326221  
 Status : Answered  
 Chosen Option : 4

Q.2  
5 ଦୃଢ଼- ଏହାର ବିଶେଷ୍ୟ ପଦ କ'ଣ ହେବ ?

- Ans  1. ଦାକ୍ଷତା  
 2. ଦୃଢ଼ତ୍ୟ  
 3. ଦୃଢ଼ାମି  
 4. ଦୃଢ଼ତା

Question ID : 16794326217  
 Status : Answered  
 Chosen Option : 4

Q.2  
6 ବରିଷ୍ଠଙ୍କ ଗାଈର ନାମ କ'ଣ ?

- Ans  1. କାମଧେନୁ  
 2. ବାସୁଆ  
 3. ନନ୍ଦିନୀ  
 4. ପାଟ

Question ID : 16794326210  
 Status : Answered  
 Chosen Option : 1

Q.2  
7 ନିମ୍ନୋକ୍ତ କେଉଁ ପୁସ୍ତକଟି ମଧୁସୂଦନ ରାଓଙ୍କ ଦ୍ୱାରା ଲିଖିତ ନୁହେଁ ?

- Ans  1. ବସନ୍ତଗାଥା  
 2. ତପସିନୀ



3. ଛାନ୍ଦମାଳା

4. କୁସୁମାଞ୍ଜଳି

Question ID : 16794326205  
Status : Answered  
Chosen Option : 2

Q.2  
8 "କାହାମୁଖ ଅନାଇ ବଂଚିବି" – କବିତାରେ କେଉଁଭାବ ପ୍ରକାଶିତ ହୋଇଛି ?

Ans  1. ପ୍ରେମଭାବ

2. ଶ୍ରଦ୍ଧା

3. ବାହଲ୍ୟ

4. ବାହଲ୍ୟ ମମତା

Question ID : 16794326204  
Status : Not Answered  
Chosen Option : --

Q.2  
9 ଐଶ୍ଵରିକ - ଏହାର ମୂଳଶବ୍ଦଟି କ'ଣ ?

Ans  1. ଐଶ୍ଵ

2. ଐଶ୍ଵରି

3. ଈଶ୍ଵର

4. ଐଶ

Question ID : 16794326216  
Status : Answered  
Chosen Option : 3

Q.3  
0 କେଉଁ କବି ମାଳିକାଜାର ରୂପେ ବିଖ୍ୟାତ ?

Ans  1. ଯଶୋବନ୍ତ

2. ବଳରାମ

3. ଅଭ୍ୟୁତାନନ୍ଦ

4. ଅନନ୍ତ

Question ID : 16794326212  
Status : Not Answered  
Chosen Option : --

Q.3  
1 ନ୍ୟାୟୋଚିତ ସହି ବିଚ୍ଛେଦ କଲେ କ'ଣ ହେବ ?

Ans  1. ନ୍ୟାୟୋଚିତ

2. ନି+ଆୟ+ଉଚିତ

3. ନ୍ୟାୟ+ଉଚିତ

4. ନ୍ୟାୟ+ଚିତ

Question ID : 16794326213  
 Status : Answered  
 Chosen Option : 3

Q.3  
 2 ସଦାଶିବ ମିଶ୍ର ଭାରତ ସରକାରଙ୍କ ଠାରୁ କେଉଁ ଉପାଧି ଲାଭ କରିଥିଲେ ?

- Ans
- 1. ପଦ୍ମଶ୍ରୀ
  - 2. ପଦ୍ମ ବିଭୂଷଣ
  - 3. ଭାରତ ରତ୍ନ
  - 4. ପଦ୍ମଭୂଷଣ

Question ID : 16794326208  
 Status : Not Answered  
 Chosen Option : --

Q.3  
 3 ଦ୍ଵିରୁଦ୍ଧ ଶବ୍ଦଟି ବାଛି ଲେଖ ।

- Ans
- 1. ଲଗାଲଗି
  - 2. ହଣାହାଣି
  - 3. ପିଟାପିଟି
  - 4. କାନେକାନେ

Question ID : 16794326220  
 Status : Answered  
 Chosen Option : 4

Q.3  
 4 “ମୋ ଜୀବନ ପଛେ ନକେଁ ପଡ଼ିଥାଉ” – କେଉଁ କବିଙ୍କର ଲେଖା ?

- Ans
- 1. ଭଦ୍ର କବି ଦୀନକୃଷ୍ଣ ଦାସ
  - 2. ଭଦ୍ର କବି ଭଦ୍ରଚରଣ
  - 3. ସନୁ କବି ଭୀମଭୋଇ
  - 4. ଭଦ୍ର କବି ମଧୁସୂଦନ

Question ID : 16794326211  
 Status : Not Answered  
 Chosen Option : --

Q.3  
 5 ଅଶିକ୍ଷିତ - କି ସମାସ ?

- Ans
- 1. ଚ୍, ପୁରୁଷ
  - 2. କର୍ମଧାରୟ
  - 3. ବହୁରୁଦ୍ଧି
  - 4. ଦ୍ଵୟ

Status : Answered  
Chosen Option : 1

Q.3  
6 ଶୁଣିବାର ଇଚ୍ଛା - ଏକ ପଦରେ ପ୍ରକାଶ କର ?

- Ans
- 1. ଶୁଣୁଷା
  - 2. ଶ୍ରୀବଣେଇ
  - 3. ଶୁଣୁଷା
  - 4. ଶ୍ରୀବଣେଇ

Question ID : 16794326218  
Status : Answered  
Chosen Option : 1

Q.3  
7 ଓଡ଼ିଆରେ ବଚନ କେତେ ପ୍ରକାର ?

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

Question ID : 16794326219  
Status : Answered  
Chosen Option : 1

Q.3  
8 ମୁହଁ ଦେବା ରୁଚିବିର ଅର୍ଥ କ'ଣ ?

- Ans
- 1. ନେହୁରା ଛେବା
  - 2. ପ୍ରତିଶୋଧ ନେବା
  - 3. ପ୍ରଶ୍ରୟ ଦେବା
  - 4. ଅମାନ୍ୟ କରିବା

Question ID : 16794326222  
Status : Answered  
Chosen Option : 3

Q.3  
9 ମଧୁସୂଦନ ରାଓ କେଉଁ ଧର୍ମରେ ଦୀକ୍ଷିତ ହୋଇଥିଲେ ?

- Ans
- 1. ହିନ୍ଦୁ
  - 2. ଖ୍ରୀଷ୍ଟିଆନ୍
  - 3. ବ୍ରାହ୍ମ
  - 4. ଇସଲାମ

Q.4 ଯୋଦ୍ଧାଗେ - କେଉଁ ଅର୍ଥକୁ ପୂଜାଶ କରେ ?

- Ans
- 1. ଅତି ଆନନ୍ଦରେ
  - 2. ଅତି ଯତ୍ନରେ
  - 3. ଅତି ସ୍ନେହରେ
  - 4. ଅତି ଘୃଣାରେ

Question ID : 16794326214  
Status : Not Answered  
Chosen Option : --

Section : Current Affairs & Reasoning

Q.1 Who was the chief guest of the 15<sup>th</sup> Pravasi Bharatiya Diwas Convention in Varanasi on 22 January, 2019?

- Ans
- 1. James Hawkins
  - 2. Himanshu Gulati
  - 3. Kanwaljit Singh Bakshi
  - 4. Pravind Jugnauth

Question ID : 16794326247  
Status : Answered  
Chosen Option : 4

Q.2 Who has been awarded with the prestigious Saraswati Samman, 2018?

- Ans
- 1. K Siva Reddy
  - 2. Padma Sachdev
  - 3. Mahabaleshwar Sail
  - 4. Sitanshu Yashaschandra

Question ID : 16794326234  
Status : Answered  
Chosen Option : 4

Q.3 The 73<sup>rd</sup> Session of the United Nations' General Assembly was held at \_\_\_\_\_ in September 2018.

- Ans
- 1. Washington
  - 2. London
  - 3. New York
  - 4. Vienna

Question ID : 16794326249  
Status : Answered  
Chosen Option : 4

Q.4 Which of the following is a benefit under the Pradhan Mantri Jan-Dhan Yojana for account holder?

- Ans
- 1. Availability of Personal loan

- 2. Availability of Credit Card facility
- 3. Life cover of ₹ 30,000/- payable on death of the beneficiary
- 4. Availability of overdraft facility of ₹ 50000/-

Question ID : 16794326241  
Status : Not Answered  
Chosen Option : --

Q.5 Which was the India's largest ever delegation of athletes sent to the Olympics?

- Ans
- 1. 2016 Rio Olympics
  - 2. 2004 Athens Olympics
  - 3. 2008 Beijing Olympics
  - 4. 2012 London Olympics

Question ID : 16794326223  
Status : Not Answered  
Chosen Option : --

Q.6 Which country honoured President Ram Nath Kovind with its highest civilian award the Grand Order of the King of Tomislav?

- Ans
- 1. Bolivia
  - 2. Chile
  - 3. Croatia
  - 4. Ukraine

Question ID : 16794326232  
Status : Answered  
Chosen Option : 3

Q.7 Which women wrestler won the gold medal in Asian Games, 2018 and becomes first Indian woman wrestler to win Asian Games gold medal?

- Ans
- 1. Kavita Devi
  - 2. Vinesh Phogat
  - 3. Sakshi Malik
  - 4. Babita Kumari

Question ID : 16794326225  
Status : Answered  
Chosen Option : 2

Q.8 Which wrestler won India's first gold in the Asian Games, 2018?

- Ans
- 1. Yogeshwar Dutt
  - 2. Sushil Kumar
  - 3. Bajrang Punia
  - 4. Sangram Singh

Question ID : 16794326227  
Status : Answered  
Chosen Option : 3

Q.9 Which of the following has conferred with the Padma Bhushan Award, 2019 for contribution in Literature & Education (Journalism)?

- Ans
- 1. Kuldip Nayar
  - 2. Mihir Bose
  - 3. Ravish Kumar
  - 4. Javed Anand

Question ID : 16794326229  
Status : Not Answered  
Chosen Option : --

Q.10 Which novel won the Sahitya Akademi Awards, 2018 for Hindi language?

- Ans
- 1. Paarijat
  - 2. Vishw Mithak Sarit Sagar
  - 3. Post Box No. 203- Naala Sopara
  - 4. Miljul Man

Question ID : 16794326230  
Status : Not Answered  
Chosen Option : --

Q.11 India attained \_\_\_\_\_ place in the World Bank's Doing Business Report, 2018.

- Ans
- 1. 130<sup>th</sup>
  - 2. 77<sup>th</sup>
  - 3. 67<sup>th</sup>
  - 4. 110<sup>th</sup>

Question ID : 16794326246  
Status : Answered  
Chosen Option : 2

Q.12 Which is the minimum assured pension under Pradhan Mantri Shram Yogi Maandhan for each subscriber after attaining the age of 60 years?

- Ans
- 1. ₹ 4000 per month
  - 2. ₹ 3000 per month
  - 3. ₹ 2400 per month
  - 4. ₹ 3600 per month

Question ID : 16794326245

Chosen Option : 2

Q.1 Prime Minister of India launched India's first semi-high speed train in 2019 was initially called as \_\_\_\_\_.

3

- Ans
- 1. Bharat Express
  - 2. Vaayuman Express
  - 3. Vande Express
  - 4. Train 18

Question ID : 16794326239

Status : Answered

Chosen Option : 4

Q.1 How many foreign satellites were launched with India's HysIS satellite from, Sriharikota by ISRO on 29 November, 2018?

4

- Ans
- 1. 31
  - 2. 28
  - 3. 30
  - 4. 29

Question ID : 16794326250

Status : Answered

Chosen Option : 2

Q.1 Which team won the Prestigious Ranji Trophy, 2018-19?

5

- Ans
- 1. Vidarbha
  - 2. Railways
  - 3. Saurashtra
  - 4. Rajasthan

Question ID : 16794326228

Status : Answered

Chosen Option : 1

Q.1 Which of the following game will be making its Olympic debut in 2020?

6

- Ans
- 1. Water Polo
  - 2. Women's Boxing
  - 3. Table Tennis (Men's Single)
  - 4. Karate

Question ID : 16794326224

Status : Not Answered

Chosen Option : --

Q.1 Which of the following literary work won the Man Booker International Prize, 2018?

7

- Ans
- 1. American Pastoral

- 2. A Horse Walks into a Bar
- 3. Flights
- 4. The Vegetarian

Question ID : 16794326231  
Status : Not Answered  
Chosen Option : --

Q.1  
8 Who has been appointed as new Chief of the Indian Naval Staff in March 2019?

- Ans
- 1. M.A. Hampiholi
  - 2. M.S. Pawar
  - 3. Bimal Verma
  - 4. Karambir Singh

Question ID : 16794326235  
Status : Answered  
Chosen Option : 4

Q.1  
9 Who is the Managing Director and Chief Executive Officer of the Bombay Stock Exchange as on March 2019?

- Ans
- 1. Sumit Bose
  - 2. Ashishkumar Chauhan
  - 3. Umakant Jayaram
  - 4. Dr. Sriprakash Kothari

Question ID : 16794326244  
Status : Answered  
Chosen Option : 1

Q.2  
0 Which of the following software is unveiled by the Indian Railways to monitor railway punctuality, earnings etc. in November 2018?

- Ans
- 1. eDrishti
  - 2. eNetra
  - 3. eRaileye
  - 4. eRailmitra

Question ID : 16794326236  
Status : Answered  
Chosen Option : 1

Q.2  
1 The Swachh Bharat Mission aims to achieve a Swachh Bharat by \_\_\_\_\_.

- Ans
- 1. 2019
  - 2. 2022
  - 3. 2020
  - 4. 2024



Question ID : 16794326240  
Status : Not Answered  
Chosen Option : --

Q.2 The Prime Minister of \_\_\_\_\_, Dr. Ibrahima Kassory Fofana visited India from 16 March to 25 March, 2019.

2

- Ans
- 1. Sudan
  - 2. Guinea
  - 3. Morocco
  - 4. Egypt

Question ID : 16794326248  
Status : Answered  
Chosen Option : 2

Q.2 Which Indian Bank closed six foreign branches in June 2018?

3

- Ans
- 1. Punjab National Bank
  - 2. State Bank of India
  - 3. HDFC Bank
  - 4. ICICI Bank

Question ID : 16794326243  
Status : Not Answered  
Chosen Option : --

Q.2 The National Payments Corporation of India (NPCI) unveiled new version of BHIM app as \_\_\_\_\_ in August 2018.

4

- Ans
- 1. BHIM UPI 2.0
  - 2. BHIM UPI 1.9
  - 3. BHIM UPI 2.1
  - 4. BHIM UPI 2.5

Question ID : 16794326242  
Status : Not Answered  
Chosen Option : --

Q.2 Which of the following tennis player won the Australian Open, 2019 (Women's Single)?

5

- Ans
- 1. Caroline Wozniacki
  - 2. Petra Kvitova
  - 3. Sarena Williams
  - 4. Naomi Osaka

Question ID : 16794326226  
Status : Answered  
Chosen Option : 4

Q.2 Which Polar Satellite Launch Vehicle was used by ISRO in successfully launching of HysIS satellite from Sriharikota on 29 November, 2018?

6

- Ans
- 1. PSLV-C38
  - 2. PSLV-C40
  - 3. PSLV-C42
  - 4. PSLV-C43

Question ID : 16794326237  
Status : Answered  
Chosen Option : 4

Q.2 Which space research organization launched NepaliSat-1, Nepal's own satellite, on April, 2019?

7

- Ans
- 1. ISRO
  - 2. China National Space Administration (CNSA)
  - 3. NASA
  - 4. European Space Agency

Question ID : 16794326251  
Status : Answered  
Chosen Option : 3

Q.2 In February 2019, India withdraws the 'Most Favoured Nation' Status from \_\_\_\_\_.

8

- Ans
- 1. Afghanistan
  - 2. Pakistan
  - 3. Myanmar
  - 4. China

Question ID : 16794326252  
Status : Answered  
Chosen Option : 2

Q.2 How many personalities have been conferred with the Padam Vibhushan, 2019?

9

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

Question ID : 16794326233  
Status : Answered  
Chosen Option : 1

Q.3 The Government of \_\_\_\_\_ has announced setting up of a new Adhyatmik Vibhag (spiritual department) in December,

0

2018

- Ans
- 1. Madhya Pradesh
  - 2. Himachal Pradesh
  - 3. Uttarakhand
  - 4. Rajasthan

Question ID : 16794326238  
Status : Answered  
Chosen Option : 1

Q.3  
1 What would be the missing term in the following series?

O, R, U, ?, A, D

- Ans  1. X  
 2. T  
 3. J  
 4. E

Question ID : 16794326255  
Status : Answered  
Chosen Option : 1

Q.3  
2 Sagar is studying Engineering. One day after returning from college, he places all his nine books on his study table piled one over the other in the following order

Nine books are kept one over other on the table counting from the top, the second, fifth and sixth books are on Aerodynamics. Two books on Aerodynamics are between two books on Basic Electronics. One book of Aerodynamics is between two books on Mechanics while the book on the top of the book of Computer Programing is a book of Basic Electronics and the book on the top of the book of Environmental studies is a book of Computer programing. Then which book is Third from bottom?

- Ans  1. Computer programing  
 2. Aerodynamics  
 3. Basic Electronics  
 4. Mechanics

Question ID : 16794326260  
Status : Not Attempted and Marked For Review  
Chosen Option : --

Q.3  
3 Identify the analogues word to replace '?' as per the relation of first given pair of words?

Furniture : Wood :: Sack : ?

- Ans  1. Gold  
 2. Pulp  
 3. Crude  
 4. Jute

Question ID : 16794326265  
Status : Answered  
Chosen Option : 4

Q.3  
4 Which of the conclusions can be concluded on the basis of given statements?

Statement:

All the Right angled Triangles are Equilateral Triangles. All the Equilateral Triangles are Scalene Triangles.

Conclusions:

1. Some Equilateral Triangles are not Right angled Triangles.
2. Some Scalene Triangles are not Right angled triangles

- Ans  1. Only conclusion (1) follow

- 2. Both (1) & (2) follow
- 3. Only conclusion (2) follows
- 4. Either (1) or (2) follows

Question ID : 16794326269  
 Status : Answered  
 Chosen Option : 2

Q.3  
 5 Choose the word which is least like others in the group

- Ans
- 1. Ottawa
  - 2. Tokyo
  - 3. Italy
  - 4. Jakarta

Question ID : 16794326267  
 Status : Answered  
 Chosen Option : 3

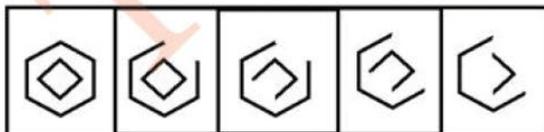
Q.3 Parimala's Yoga center gives 30% concession in the monthly fee to those belonging to any of the following categories

- 6
- (i) college students of age group 19 to 26 years
  - (ii) unemployed youth of age group 25 years to 40 years
  - (iii) senior citizens of age 50 years and above
  - (iv) Service men/ex-servicemen of police/Defence forces.
  - (v) Sons and daughters of freedom fighters.
  - (vi) Extra 20% discount for the customers who subscribe annual package.
- Swathi seeks herself to be healthy and fit. She is 24 years old medical student. She wants to join Yoga. If she subscribes for monthly package of ₹ 6000/-. How much concession she gets for her package.

- Ans
- 1. ₹ 1200/-
  - 2. ₹ 1800/-
  - 3. ₹ 600/-
  - 4. ₹ 3600/-

Question ID : 16794326270  
 Status : Answered  
 Chosen Option : 2

Q.3  
 7 Identify the rule that the following figure series follows from the options:



- Ans
- 1. Number of sides of an outer polygon reducing in each stage
  - 2. Number of sides of an outer and inner polygon reducing in each alternative stage
  - 3. Each sub part of the figure is becoming closer and closer
  - 4. Number of sides of an inner polygon reducing in each stage

Status : Answered  
Chosen Option : 2

Q.3 What would be the angle difference between the hour hand and minutes hand if the time is 3 O' clock in the morning?  
8

- Ans
- 1.  $180^\circ$
  - 2.  $45^\circ$
  - 3.  $90^\circ$
  - 4.  $270^\circ$

Question ID : 16794326259  
Status : Answered  
Chosen Option : 3

Q.3 Three words given below have something common among themselves. Out of given four alternatives choose the most appropriate description about these words.  
9

Karate, Boxing, Judo

- Ans
- 1. They are names of the fruits
  - 2. They are the names of important players of the games
  - 3. They are the names of martial arts
  - 4. They are the names of countries

Question ID : 16794326266  
Status : Answered  
Chosen Option : 3

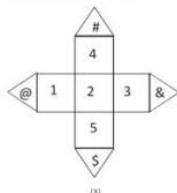
Q.4 What would be the next term in the following series?  
0

4, 4, 8, 24, 96, 480, ?

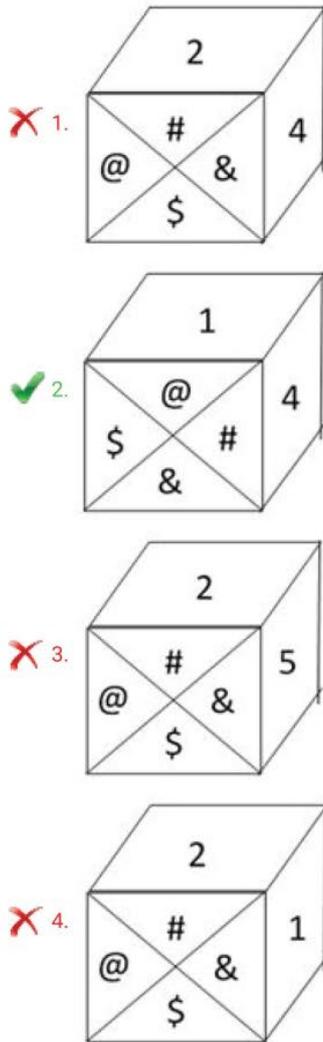
- Ans
- 1. 2750
  - 2. 2456
  - 3. 3200
  - 4. 2880

Question ID : 16794326254  
Status : Not Attempted and Marked For Review  
Chosen Option : --

Q.4 A paper as shown in the figure(X) is folded in the form of a cube, then which of the options could represent visible faces of the cube formed?  
1



Ans



Question ID : 16794326274  
 Status : Answered  
 Chosen Option : 2

Q.4  
 2 Which of the two conclusions can be concluded on the basis of given statements?

Which of the conclusions can be concluded on the basis of given statements?

Statement:

All the Rectangles are Squares. All the Squares are Parallelograms.

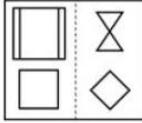
Conclusions:

1. All the Rectangles are Parallelograms.
2. All the Squares are Rectangles

- Ans
- ✓ 1. Only conclusion (1) follow
  - ✗ 2. Both (1) & (2) follow
  - ✗ 3. Either (1) or (2) follows
  - ✗ 4. Only conclusion (2) follows

Q.4 How would the pattern appear when the transparent sheet is folded at the dotted line?

3



Ans

- ✗ 1.
- ✗ 2.
- ✓ 3.
- ✗ 4.

Question ID : 16794326282  
 Status : Answered  
 Chosen Option : 3

Q.4 Prabavati has ₹ 11,200/- in the denominations of ₹ 100/-, ₹ 200/-, ₹ 500/- and ₹ 2000/- notes. The number of notes of each denomination is equal. What would be the total number of ₹ 200/- notes she has?

4

- ✗ 1. 16
- ✗ 2. 12
- ✗ 3. 8
- ✓ 4. 4

Question ID : 16794326272  
 Status : Answered  
 Chosen Option : 4

Q.4 In a certain coding language, the words are written as below

5

SPARE =15,  
 ELECTION = 24,  
 TALL=12

Then what would be the code for FIR?

- ✗ 1. 12
- ✗ 2. 10

- ✓ 3. 9
- ✗ 4. 6

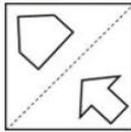
Question ID : 16794326262  
Status : Not Attempted and Marked For Review  
Chosen Option : --

Q.4 In a certain coding language, the word PETROL is written as NCRPMJ and HEAT is written as FCYR, then how the word NEGLECT be written in that coding system?

- Ans
- ✗ 1. JPUITCA
  - ✓ 2. LCEJCAR
  - ✗ 3. CJLMERD
  - ✗ 4. BJKNOPC

Question ID : 16794326263  
Status : Answered  
Chosen Option : 2

Q.4 How would the pattern appear when the transparent sheet is folded at the dotted line?



Ans

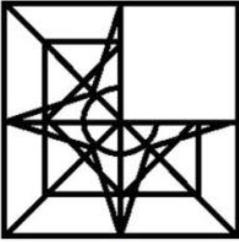
- ✗ 1.
- ✗ 2.
- ✗ 3.
- ✓ 4.

Question ID : 16794326281  
Status : Answered  
Chosen Option : 4

Q.4  
8



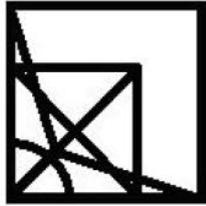
Select a figure from amongst the four alternatives which when placed in the blank space of figure (X) would complete the pattern.



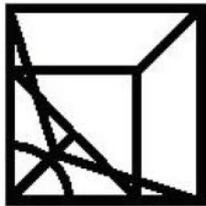
(X)

Ans

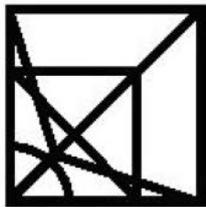
✗ 1.



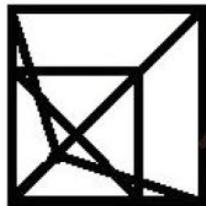
✗ 2.



✓ 3.



✗ 4.



Question ID : 16794326277

Status : Answered

Chosen Option : 3

Q.4 In a certain world, if usual South East becomes East then what would be West of that world in our normal sense?

Ans

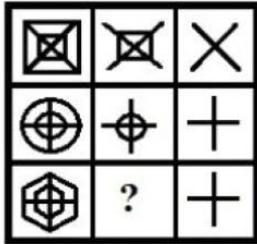
✓ 1. 25th

✗ 2. 27th

✗ 3. 24th

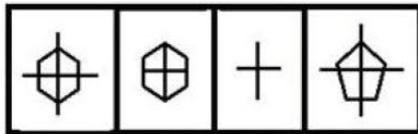
✗ 4. 20th

0 Which of the answer figures completes the following given figure matrix?



(X)

Answer Figures Set:



A

B

C

D

- Ans  1. A  
 2. B  
 3. C  
 4. D

Question ID : 16794326280  
 Status : Answered  
 Chosen Option : 1

Q.5 In a certain code TORTOISE is written as DRHNSQNS. Then how the word ELEPHANT be written in that coding system?

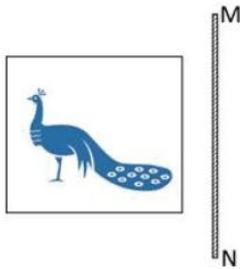
- Ans  1. SMZGODKD  
 2. MBGCLAOK  
 3. MUCPQVRG  
 4. GVCPRCK

Question ID : 16794326264  
 Status : Answered  
 Chosen Option : 1

Q.5 In a certain world, If South East becomes East then what would be West in that world?

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

3 Identify the mirror image for the following figure where MN represents the mirror:

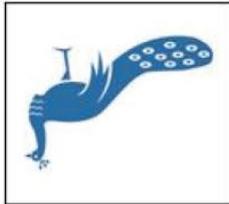


Ans

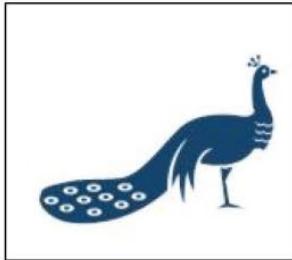
X 1.



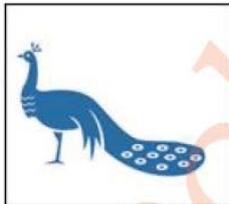
X 2.



✓ 3.



X 4.



Question ID : 16794326279  
Status : Answered  
Chosen Option : 3

Q.5 4 What would be the next term in the following series?

4, 16, 40, 76, 124, ?

Ans

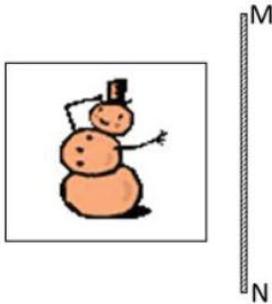
X 1. 186

X 2. 190

✓ 3. 184

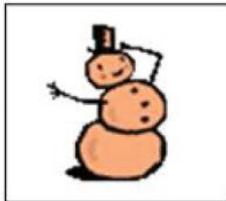
X 4. 180

Q.5 Identify the mirror image for the following figure where MN represents the mirror:

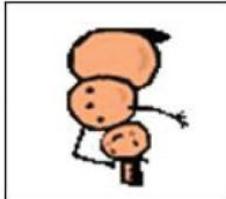


Ans

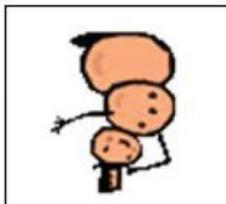
✓ 1.



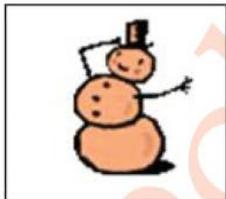
✗ 2.



✗ 3.



✗ 4.



Question ID : 16794326278

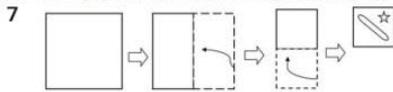
Status : Answered

Chosen Option : 1

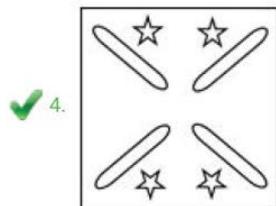
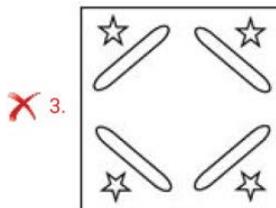
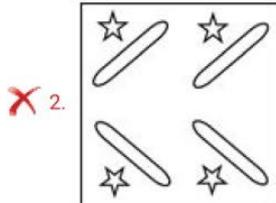
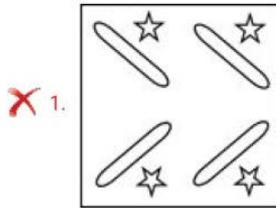
Q.5 What would be eighth letter to the left from twenty second letter of English alphabetical letters?

- ✗ 1. O
- ✗ 2. P
- ✗ 3. M
- ✓ 4. N

Q.5 If the paper is folded and cut as per the shape given below, what would be the result look like after unfolding the paper?



Ans



Question ID : 16794326275  
 Status : Answered  
 Chosen Option : 4

Q.5 An apple costs ₹ 26/- each and an orange each costs ₹ 15/- . If Ramraj spends ₹ 142/- on these fruits, then the number of oranges he purchased would be:

- 8
- Ans
- ✓ 1. 6
  - ✗ 2. 4
  - ✗ 3. 9
  - ✗ 4. 5

Question ID : 16794326271  
 Status : Answered  
 Chosen Option : 1

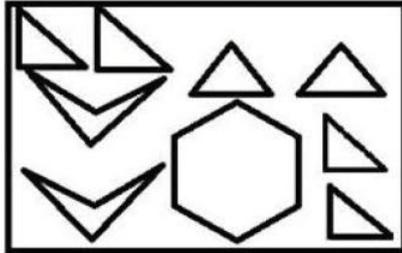
Q.5 Shalini ranked tenth from top and twenty sixth from the bottom in a class. How many students are there in the class?

- 9
- Ans
- ✓ 1. 35
  - ✗ 2. 34
  - ✗ 3. 33

X 4. 36

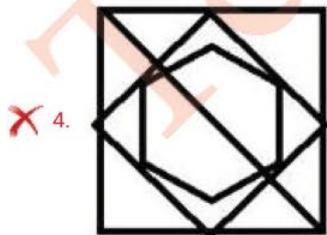
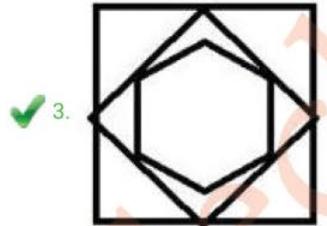
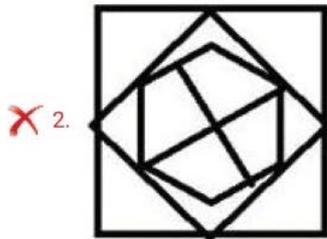
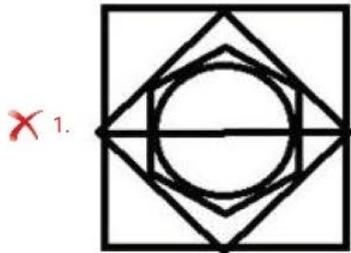
Question ID : 16794326256  
Status : Answered  
Chosen Option : 1

Q.6 Find out which of the figures can be formed from the pieces given in figure X:



(X)

Ans



Question ID : 16794326273  
Status : Not Answered  
Chosen Option : --

Two equal charges of charge 'Q' placed in a distance. Another charge 'q' placed exactly at midpoint of these two charges. Consider the system is in equilibrium, then the value of 'q' is:

Ans

✓ 1.  $-\frac{Q}{4}$

✗ 2.  $-\frac{Q}{2}$

✗ 3.  $\frac{Q}{2}$

✗ 4.  $\frac{Q}{4}$

Question ID : 16794326332

Status : Not Attempted and Marked For Review

Chosen Option : --

Q.2 A stationary man observes that the frequency ratio of the horn of the car travelling along a road is 3/2 as it passes. The velocity of sound in air is 350 m/s. The speed of the car is:

Ans

✗ 1. 525 m/s

✗ 2. 233.3 m/s

✗ 3. 35 m/s

✓ 4. 70 m/s

Question ID : 16794326327

Status : Answered

Chosen Option : 2

Q.3 Consider a parallel plate capacitor 'C<sub>1</sub>'. The energy stored in it is 'E'. If an identical uncharged capacitor 'C<sub>2</sub>' is connected and kept in contact for some time and removed. Then the energy stored in 'C<sub>2</sub>' is:

Ans

✗ 1.  $\frac{E^2}{2}$

✗ 2. E

✓ 3.  $\frac{E}{4}$

✗ 4.  $\frac{E}{2}$

Question ID : 16794326334

Status : Answered

Chosen Option : 3

Q.4 According to Huygens – Fresnel principle (where  $\lambda$  is wavelength, d is diameter of pin hole and distance between pin hole to screen is D)

A. The condition for observing Fresnel diffraction is  $\frac{d^2}{D\lambda} \ll 1$

B. A diffraction pattern formed on the screen is a Fresnel diffraction, when a cylindrical wave front strikes the straight edge.

Ans

✓ 1. Only B is correct

✗ 2. A and B both are correct

3. Only A is correct
4. A and B both are not correct

Question ID : 16794326366  
 Status : Answered  
 Chosen Option : 3

Q.5 A charge 'Q' is moving with velocity 'v' in presence of electric field 'E' and magnetic field 'B'. The total force on 'Q' is:

- Ans  1.  $Q(v + B \times E)$
2.  $Q(v \times B + E)$
3.  $v(Q + B \times E)$
4.  $v(Q \times B + E)$

Question ID : 16794326346  
 Status : Answered  
 Chosen Option : 2

Q.6 The magnetic moment of an electron revolving around the central nucleus and having the magnitude of the angular momentum 'L' is:

- Ans  1.  $\frac{e}{2m} L$
2.  $\frac{e}{8m} L$
3.  $\frac{e}{m} L$
4.  $\frac{e}{4m} L$

Question ID : 16794326349  
 Status : Answered  
 Chosen Option : 1

Q.7 Consider a thick spherical shell of radius 'r'. The charge density of the shell is  $k/r^2$  ( $a \leq r \leq b$ ). The electric field in the region  $r < a$  is:

- Ans  1.  $\frac{k}{\epsilon_0} \frac{b-a}{r^2}$
2.  $\frac{k}{\epsilon_0} \frac{a}{r^2}$
3.  $\frac{k}{\epsilon_0} \frac{r-a}{r^2}$
4. Zero

Question ID : 16794326330  
 Status : Answered  
 Chosen Option : 4

Q.8



On a horizontal surface, Three identical cubes are placed. To arrange them one on the other, the minimum amount of work done is: (consider mass of each cube is 'm' and side 'L')

Ans

1.  $\frac{mgL}{3}$

2.  $\frac{mgL}{6}$

3.  $\frac{mgL}{9}$

4.  $3mgL$

Question ID : 16794326299  
Status : Answered  
Chosen Option : 4

Q.9 The inductive reactance is, when a pure inductor of 0.7 H is connected to a source of 440V. (The frequency of the source is 36 Hz).

Ans

1. 79

2. 316

3. 158

4. 70

Question ID : 16794326356  
Status : Answered  
Chosen Option : 3

Q.1 A plain concave lens is made of a material of refractive index is  $\frac{5}{7}$ . If the radius of curvature is 50 cm, then the focal length of the lens in air is:

Ans

1. 17.8 m

2. 178 m

3. 0.178 m

4. 1.78 m

Question ID : 16794326360  
Status : Answered  
Chosen Option : 4

Q.1 A. For measuring light intensity, photodiodes are preferably used in reverse bias

1

B. Due to the photo-effects, the fractional change in the minority carrier dominated reverse bias current is more easily measurable than the fractional change in the forward bias current.

Ans

1. Only A is correct

2. Only B is correct

3. A is correct and B is not perfect explanation for A

4. A is correct and B is perfect explanation for A

Question ID : 16794326377

Q.1  $y(x,t) = 0.7 \sin(15x - 2t)$  is a wave travelling along a string. The frequency of the wave is:  
2

- Ans
- 1. 3.2 Hz
  - 2. 3.2 kHz
  - 3. 0.32 Hz
  - 4. 0.32 kHz

Question ID : 16794326322

Status : Answered

Chosen Option : 3

Q.1 The ratio of amplitudes of a light waves producing interference is 7 : 3. The ratio of the maximum and minimum intensity of interference fringes is:  
3

- Ans
- 1. 25 : 4
  - 2. 5 : 16
  - 3. 4 : 5
  - 4. 5 : 4

Question ID : 16794326364

Status : Answered

Chosen Option : 1

Q.1 Consider waves produced by the vibrations of two particles. For these particles, the relation between time and displacement are  
4

$$y_1 = 0.18 \sin 2\pi(0.9t + \phi_1) \text{ and } y_2 = 0.04 \sin 2\pi(0.02t + \phi_2)$$

Then, the ratio between the intensity of the waves is:

- Ans
- 1. 18 : 4
  - 2. 81 : 4
  - 3. 81 : 2
  - 4. 18 : 2

Question ID : 16794326326

Status : Answered

Chosen Option : 2

Q.1 A ray of light incident on a side of glass prism at an angle  $\pi/3$ . The other side of the prism is polished with metal. After reflection, the light is subsequently reflected from the polished face and then retraces its path. If the refracting angle of the prism is  $\pi/6$ , then the refractive index of the prism is:  
5

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

Q.1 A body is moving with a speed 300 km/h in a circular path. In half of the revolution, the change in velocity is:  
6

- Ans
- 1. 600 km/h
  - 2. 300 km/h
  - 3. 75 km/h
  - 4. 150 km/h

Question ID : 16794326291  
Status : Answered  
Chosen Option : 1

Q.1 A conducting wire of resistance  $36 \Omega$ , cut into 12 equal pieces. 6 of them are connected in parallel and 6 are in series. If these two combinations are connected in series, then the effective resistance is:  
7

- Ans
- 1.  $37/2 \Omega$
  - 2.  $37/24 \Omega$
  - 3.  $37/36 \Omega$
  - 4.  $37/72 \Omega$

Question ID : 16794326339  
Status : Answered  
Chosen Option : 1

Q.1 NCF-2005 refers to six validities of a good science curriculum. There is a statement given below. Which of these  
8

validities does this statement refer to?  
Statement: At the secondary stage, the ability of logical thinking and abstract reasoning develops. Therefore, children are introduced to draw ray diagrams explaining formation of images using different types of lenses and mirrors.

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

Question ID : 16794326378  
Status : Answered  
Chosen Option : 4

Q.1 The peak value of voltage in an AC circuit is 325V. Then, the effective voltage is:  
9

- Ans
- 1. 230 V
  - 2. 163 V
  - 3. 325 V
  - 4. 320 V

✓ 1.  $\frac{qB}{2\pi m}$

✗ 2.  $\frac{qB}{\pi m}$

✗ 3.  $\frac{qB}{8\pi m}$

✗ 4.  $\frac{qB}{4\pi m}$

Question ID : 16794326347

Status : Answered

Chosen Option : 1

Q.2 Using Einstein's mass – energy equivalence, the amount of energy liberated is, if in a particular nuclear reaction the mass defect is 0.4365 g.

- Ans
- ✗ 1.  $1.1 \times 10^7 \text{ J}$
- ✓ 2.  $1.1 \times 10^7 \text{ kWh}$
- ✗ 3.  $3.9 \times 10^7 \text{ J}$
- ✗ 4.  $3.9 \times 10^7 \text{ kWh}$

Question ID : 16794326375

Status : Answered

Chosen Option : 2

Q.2 The intensities due to two coherent monochromatic light sources placed at two vertices of equilateral triangle are  $4 \text{ Wm}^{-2}$  and  $9 \text{ Wm}^{-2}$  respectively at the third vertex. The resultant intensity due to both the sources at the third vertex is:

- Ans
- ✗ 1.  $5 \text{ Wm}^{-2}$
- ✗ 2.  $13 \text{ Wm}^{-2}$
- ✗ 3.  $97 \text{ Wm}^{-2}$
- ✓ 4.  $25 \text{ Wm}^{-2}$

Question ID : 16794326367

Status : Answered

Chosen Option : 1

Q.2 The particle which has the shortest de Broglie wavelength, if they have same Kinetic energy.

- Ans
- ✓ 1.  $\alpha$  – particle
- ✗ 2.  $\beta$  - particle
- ✗ 3. Electron
- ✗ 4. Proton

Q.2 What is the diameter of the Sun, if the angular diameter of the sun is  $9.31 \times 10^{-3}$  rad and the distance of the Sun from the Earth is:

1.496  $\times 10^{11}$  m.

- Ans
- 1.  $1.39 \times 10^9$  m
  - 2.  $139 \times 10^9$  m
  - 3.  $13.9 \times 10^9$  m
  - 4.  $1.496 \times 10^{11}$  m

Question ID : 16794326285  
Status : Not Answered  
Chosen Option : --

Q.2 In a hydrogen atom, the electron is in first excited state. The ground state energy of hydrogen atom is -13.6 eV. Its excitation energy is:

- Ans
- 1. - 3.4 eV
  - 2. 10.2 eV
  - 3. 3.4 eV
  - 4. -10.2 eV

Question ID : 16794326372  
Status : Answered  
Chosen Option : 1

Q.2 For a Simple Harmonic Oscillator

- A. The phase difference between velocity and acceleration is  $\pi/2$   
B. The phase difference between acceleration and displacement is  $\pi/4$

- Ans
- 1. Only A is correct
  - 2. A and B both are not correct
  - 3. Only B is correct
  - 4. A and B both are correct

Question ID : 16794326319  
Status : Answered  
Chosen Option : 2

Q.2 Consider a linear harmonic oscillator of force constant 3600 N/m and amplitude 0.4 m. If, the total mechanical energy is 368 J then, its maximum K. E. is:

- Ans
- 1. 308 J
  - 2. 368 J
  - 3. 360 J
  - 4. 288 J

- Ans  1.  $56/23 \Omega$   
 2.  $72/23 \Omega$   
 3.  $112/23 \Omega$   
 4.  $96/23 \Omega$

Question ID : 16794326337  
Status : Answered  
Chosen Option : 1

Q.2 This is an instructional strategy of ICON model where learner access background information. Identify:  
9

- Ans  1. Contextualization  
 2. Multiple Interpretation  
 3. Collaboration  
 4. Interpretation Construction

Question ID : 16794326381  
Status : Answered  
Chosen Option : 1

Q.3 Consider a spherical glass surface with refractive index 3 and radius of curvature 40 cm in air. From a distance 80 cm, a  
0 light from a point source falls on it. The image formed at a distance from the glass source in the direction of incident light is:

- Ans  1. 60 cm  
 2. 30 cm  
 3. 80 cm  
 4. 15 cm

Question ID : 16794326359  
Status : Answered  
Chosen Option : 3

Q.3 A capacitor (15F) is charged to 4V and isolated. Then connected to uncharged 45F capacitor in parallel. The decrease in  
1 the energy of the system is:

- Ans  1. 30 J  
 2. 60 J  
 3. 45 J  
 4. 90 J

Question ID : 16794326331  
Status : Answered  
Chosen Option : 4

Q.3 From the ceiling a mass 5 kg is suspended with a rope of length 2 m. At midpoint of the rope a force of 30 N is applied  
2 in horizontal direction. In equilibrium, what is the angle the rope makes with the vertical? ( $g = 10 \text{ m s}^{-2}$ )

- Ans  1.  $25^\circ$   
 2.  $38^\circ$   
 3.  $31^\circ$

✗ 4.  $40^\circ$

Question ID : 16794326294  
Status : Answered  
Chosen Option : 2

Q.3  
3 When a Zener diode used as a voltage regulator:

- A. Zener diode is forward biased  
B. The current through the load is much larger than the current through Zener diode.

Ans ✓ 1. A and B both are not correct

✗ 2. Only B is correct

✗ 3. A and B both are correct

✗ 4. Only A is correct

Question ID : 16794326376  
Status : Answered  
Chosen Option : 1

Q.3  
4 Match the following:

a) $V > E$	e) Cell in open circuit
b) $V = E$	f) Discharging cell
c) $V < E$	g) Cell short circuited
d) $V = 0$	h) Charging cell

Ans ✗ 1. a-h, b-e, c-g, d-f

✗ 2. a-h, b-f, c-e, d-g

✗ 3. a-h, b-g, c-f, d-e

✓ 4. a-h, b-e, c-f, d-g

Question ID : 16794326341  
Status : Answered  
Chosen Option : 3

Q.3  
5 Consider a substance of mass 'm'.  $\Delta Q$  is the heat required to change its temperature by  $\Delta T$ . The Specific heat capacity is given by:

Ans ✗ 1.  $S = m \frac{\Delta Q}{\Delta T}$

✓ 2.  $S = \frac{1}{m} \frac{\Delta Q}{\Delta T}$

✗ 3.  $S = \frac{1}{m} \frac{\Delta T}{\Delta Q}$

✗ 4.  $S = m \frac{\Delta T}{\Delta Q}$

Q.3  
6 m/BQ has the same dimensions as:

(where m, Q and B are mass, charge and magnetic induction respectively)

- Ans
- 1. Time
  - 2. Mass
  - 3. Length
  - 4. Velocity

Question ID : 16794326284  
Status : Answered  
Chosen Option : 1

Q.3  
7 The balancing length of a cell which is connected to potentiometer is 196 cm. It's balancing length changes by 20 cm, when an external resistance of  $30\ \Omega$  is connected to the cell in parallel. The internal resistance of the cell is:

- Ans
- 1.  $3.4\ \Omega$
  - 2.  $34\ \Omega$
  - 3.  $0.34\ \Omega$
  - 4.  $30\ \Omega$

Question ID : 16794326344  
Status : Not Attempted and Marked For Review  
Chosen Option : --

Q.3  
8 At constant volume, temperature of gas of 5 moles is changed from 300 K to 380 K. If change in internal energy is 160 J, then at constant volume the total heat capacity (J/K) of the gas is:

- Ans
- 1. 0.2
  - 2. 2
  - 3. 0.5
  - 4. 0.25

Question ID : 16794326318  
Status : Answered  
Chosen Option : 2

Q.3  
9 The number of turns in a primary of a transformer is 500. If the ac voltage is increased from 240 V to 3600 V, then the number of turns in the secondary is:

- Ans
- 1. 1728
  - 2. 333
  - 3. 33
  - 4. 7500

Question ID : 16794326358  
Status : Answered  
Chosen Option : 4

Q.4  
0 If the vertical component of the earth's magnetic field is same as the horizontal component. Then, the angle of dip at that place is:

- Ans
- 1. 0



✓ 2.  $\frac{\pi}{4}$

✗ 3.  $\frac{\pi}{3}$

✗ 4.  $\frac{\pi}{2}$

Question ID : 16794326352  
Status : Answered  
Chosen Option : 1

- Q.4  
1 A. Hooke's law is valid only in the non – linear part of the stress – strain curve  
B. The Young's modulus and Shear modulus are relevant for solids and liquids  
C. Bulk modulus is relevant for solids, liquids and gases

- Ans ✗ 1. Only B is correct  
✗ 2. Only A is correct  
✗ 3. B and C both are correct  
✓ 4. Only C is correct

Question ID : 16794326310  
Status : Answered  
Chosen Option : 3

- Q.4  
2 Cyclotron frequency is:  
A. Independent of particle speed  
B. Independent of particle radius  
C. Independent of magnetic field

- Ans ✗ 1. Only A is correct  
✗ 2. Only B and C are correct  
✗ 3. Only A and C are correct  
✓ 4. Only A and B are correct

Question ID : 16794326348  
Status : Answered  
Chosen Option : 4

- Q.4  
3 Two interfering waves of intensities  $I$  and  $3I$  produce interference at two points with phase angles  $\pi/6$  and  $\pi/3$  respectively. The difference between the intensities at these two points is:

- Ans ✗ 1.  $\left[1 - \frac{1}{\sqrt{3}}\right] I$   
✓ 2.  $3 \left[1 - \frac{1}{\sqrt{3}}\right] I$   
✗ 3.  $3 \left[3 - \frac{1}{\sqrt{3}}\right] I$

$$\times 4. \left[ 3 - \frac{1}{\sqrt{3}} \right] I$$

Question ID : 16794326368  
 Status : Not Answered  
 Chosen Option : --

Q.4 A laser produces monochromatic light of frequency  $3.25 \times 10^{12}$  Hz. The number of photons emitted by the source per second is, If the power emitted is  $7.74 \times 10^{-5}$  W (Plank's constant  $h = 6.63 \times 10^{-34}$  Js)

- Ans
- 1.  $7.6 \times 10^{16}$
  - 2.  $3.6 \times 10^{16}$
  - 3.  $5.4 \times 10^{16}$
  - 4.  $2.8 \times 10^{16}$

Question ID : 16794326369  
 Status : Answered  
 Chosen Option : 4

Q.4 A collar of 4 kg mass is attached to a spring (spring constant = 1600 N/m). It slides over a horizontal rod without friction and displaced by 40 cm from its position and released. Then, the period of oscillation is:

- Ans
- 1. 0.314 sec
  - 2. 31.4 sec
  - 3. 0.0314 sec
  - 4. 3.14 sec

Question ID : 16794326321  
 Status : Answered  
 Chosen Option : 2

Q.4 A bullet moving with a velocity 250 cm/s. It penetrates into a wooden block and after travelling 5cm inside it comes to rest. What velocity it needed to travel 8 cm in the same block?

- Ans
- 1. 316.23 cm/s
  - 2. 287.72 cm/s
  - 3. 320.5 cm/s
  - 4. 256.23 cm/s

Question ID : 16794326288  
 Status : Answered  
 Chosen Option : 1

Q.4 In a string, a transverse harmonic disturbance is produced. The wave velocity is 10 m/s. If the maximum transverse acceleration and maximum transverse velocity are  $120 \text{ m/s}^2$  and 6 m/s, then the waveform is:

- Ans
- 1.  $0.3 \sin (20t \pm 1.2x + \phi)$
  - 2.  $0.1 \sin (20t \pm 2x + \phi)$
  - 3.  $0.3 \sin (20t \pm 2x + \phi)$
  - 4.  $0.1 \sin (20t \pm 1.2x + \phi)$

Question ID : 16794326324  
Status : Answered  
Chosen Option : 3

Q.4 A particle performs uniform circular motion with an angular momentum 'L'. If the Kinetic energy is doubled and angular frequency is halved, its angular momentum becomes:

Ans

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

2.  $\frac{L}{4}$

3. 4L

4. 2L

Question ID : 16794326305  
Status : Answered  
Chosen Option : 3

Q.4 A straight wire of length 2m and mass 100g carries current 10A is suspended in midair by a uniform horizontal magnetic field. The magnitude of the magnetic field is:

Ans

1. 0.49 T

2. 4.9 T

3. 0.049 T

4. 49 T

Question ID : 16794326345  
Status : Answered  
Chosen Option : 3

Q.5 Consider a simple pendulum, while measuring 'g', a positive error is 2% in length of pendulum and a negative error is 3% in time period. Percentage error in value of 'g' is:

Ans

1. 7%

2. 8%

3. 5%

4. 1%

Question ID : 16794326287  
Status : Answered  
Chosen Option : 1

Q.5 This method is commonly thought of as a hand on and minds on approach to teach science where in students have the opportunity to gain some experience with phenomena associated with their course of study. In this method either student participate alone or in small groups. The students learn by actual doing rather than my observing the experiments. Identify:

Ans

1. Laboratory method

2. Observation method

3. Project method

4. Problem solving method

Status : Answered  
Chosen Option : 4

Q.5 Three objects each of mass 6 kg are placed on the positive x-axis at 1m, 2m, and 3m from the origin. Another object of 2 6 kg mass kept at the origin. The magnitude of resultant gravitational force on the object kept at origin is:

- Ans
- 1. 36 G
  - 2. 49 G
  - 3. 64 G
  - 4. Zero

Question ID : 16794326306  
Status : Answered  
Chosen Option : 2

Q.5 Internal resistances of two cells with same e.m.f. are ' $R_1$ ' and ' $R_2$ '. These two cells are connected to an external 3 resistance ' $R_3$ ' in series. If the potential difference across the first cell is zero, then the value of external resistance is:

- Ans
- 1.  $R_2 - R_1$
  - 2.  $R_1 + R_2$
  - 3.  $R_1 - R_2$
  - 4.  $R_1/R_2$

Question ID : 16794326342  
Status : Not Attempted and Marked For Review  
Chosen Option : --

Q.5 For a particle, the period for performing linear Simple Harmonic Motion is 18 sec. What is the time taken to it to make 4 displacement equal to half of its amplitude?

- Ans
- 1. 9 sec
  - 2. 6 sec
  - 3. 5 sec
  - 4. 3 sec

Question ID : 16794326320  
Status : Answered  
Chosen Option : 4

Q.5 A satellite of mass 400 kg revolves in an orbit of average radius  $5R/3$  around the earth where radius of earth is  $R$ . If the 5 gravitational pull on a mass of 1 kg on the earth is 10 N, then the pull on the satellite is:  
( $g = 10 \text{ m s}^{-2}$ )

- Ans
- 1. 1640 N
  - 2. 1440 N
  - 3. 1600 N
  - 4. 600 N

Consider two thin spherical shells of radius ' $r_1$ ' and ' $r_2$ ' ( $r_1 < r_2$ ). The charges of the shells  $r_1$  and  $r_2$  are ' $q$ ' and ' $-q$ ' respectively. The energy stored is:

Ans

✓ 1.  $\frac{1}{4\pi\epsilon_0} \frac{q^2}{2} \left[ \frac{1}{r_1} - \frac{1}{r_2} \right]$

✗ 2.  $\frac{1}{4\pi\epsilon_0} \frac{q^2}{2} \left[ \frac{1}{r_2} - \frac{1}{r_1} \right]$

✗ 3.  $\frac{1}{4\pi\epsilon_0} \frac{q^2}{4} \left[ \frac{1}{r_2} - \frac{1}{r_1} \right]$

✗ 4.  $\frac{1}{4\pi\epsilon_0} \frac{q^2}{4} \left[ \frac{1}{r_1} - \frac{1}{r_2} \right]$

Question ID : 16794326335  
Status : Answered  
Chosen Option : 1

Q.5 The ratio of radii of fragments, when a nucleus at rest breaks into two pieces which travel with velocities 8 : 27.

7

Ans

✓ 1. 3 : 2

✗ 2. 3 : 1

✗ 3. 2 : 3

✗ 4. 1 : 3

Question ID : 16794326374  
Status : Answered  
Chosen Option : 1

Q.5 The packing fraction of deuteron is (in a.m.u), if the true mass of deuteron is 2.0141 u.

8

Ans

✓ 1.  $7.05 \times 10^{-3}$

✗ 2.  $7.05 \times 10^{-2}$

✗ 3.  $7.05 \times 10^{-4}$

✗ 4.  $7.05 \times 10^{-5}$

Question ID : 16794326371  
Status : Answered  
Chosen Option : 3

Q.5 A string of length 0.48 m and mass  $4 \times 10^{-3}$  kg is clamped at its ends. The string is under tension of 80 N, then the speed of transverse waves is:

9

Ans

✗ 1. 64.5 m/s

✗ 2. 72.5 m/s

✓ 3. 98 m/s

✗ 4. 44.7 m/s

Question ID : 16794326395

Q.6 Consider a thin uniform semi circular disc of radius R. Calculate the distance of centre of mass from its centre:  
0

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

Question ID : 16794326303  
Status : Not Answered  
Chosen Option : --

Q.6 In a uniform magnetic field of 0.3 T, a metal disc of radius 0.5 m is rotated about its natural axis with 50 rps with its plane perpendicular to the field. The induced e.m.f. across the radius of the disc is (in volts).  
1

- Ans
1.  $0.0375 \pi$
2.  $3.75 \pi$
3.  $0.375 \pi$
4.  $37.5 \pi$

Question ID : 16794326353  
Status : Answered  
Chosen Option : 2

Q.6 The number of nuclei of two radioactive materials A and B having decay constants  $3\lambda$  and  $7\lambda$  respectively is same. After a time of  $1/2\lambda$ , the ratio of the number of nuclei for material B to A is:  
2

- Ans
1.  $e^{-2\lambda}$
2.  $e$
3.  $e^{-2}$
4.  $e^{-2/\lambda}$

Question ID : 16794326373  
Status : Answered  
Chosen Option : 3

Q.6 A ball dropped from height 'h', at the same time another ball is thrown up from ground. The ball which is thrown up reaches a height 8h. At what time these two balls cross each other?  
3

- Ans
1.  $\sqrt{\frac{h}{4g}}$
2.  $\sqrt{\frac{h}{16g}}$

3.  $\sqrt{\frac{h}{8g}}$

4.  $\sqrt{\frac{h}{g}}$

Question ID : 16794326289  
Status : Not Answered  
Chosen Option : --

Q.6 Four rods of different radii ( $r$ ) and different length ( $l$ ) are used to connect two reservoirs of heat with same temperature difference. The material is same for all these rods.

Arrange the following with increasing order according to conduction of heat.

- a)  $r = 3 \text{ cm}, l = 2 \text{ m}$   
b)  $r = 2 \text{ cm}, l = 3 \text{ m}$   
c)  $r = 4 \text{ cm}, l = 3 \text{ m}$   
d)  $r = 3 \text{ cm}, l = 4 \text{ m}$

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

Question ID : 16794326314  
Status : Answered  
Chosen Option : 4

Q.6  
5 Speed of light in medium is given by:  
(where  $\mu$  and  $\epsilon$  are permeability and permittivity respectively)

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

Question ID : 16794326283  
Status : Answered  
Chosen Option : 1

Q.6 A total charge of One micro coulomb is divided into two charges. The ratio of their charges is 3 : 5. These two charges placed such a way that the distance between two charges is 2m. The electric force between them is  $(\frac{1}{4\pi\epsilon_0} = 8.99 \times 10^9 \text{ Nm}^2/\text{C}^2)$ .

- Ans  1.  $0.53 \times 10^{-3} \text{ N}$   
 2.  $0.263 \times 10^{-3} \text{ N}$

3.  $1.054 \times 10^{-3} \text{ N}$

4.  $2.107 \times 10^{-3} \text{ N}$

Question ID : 16794326329

Status : Answered

Chosen Option : 1

Q.6 Consider a body of mass 3 kg. Its escape velocity on a planet is 300 m/sec. Then the Gravitational Potential energy of the body at the planet is:

Ans  1.  $-450 \text{ kJ}$

2.  $-135 \text{ kJ}$

3.  $-450 \text{ J}$

4.  $-135 \text{ J}$

Question ID : 16794326309

Status : Answered

Chosen Option : 3

Q.6 The efficiency of the Carnot engine between the temperatures 480 K to 330 K and 'x' K to 550 K is same. The value of 'x' is:

Ans  1. 750

2. 870

3. 850

4. 800

Question ID : 16794326317

Status : Answered

Chosen Option : 4

Q.6 The refractive index of a material of a convex lens of focal length 10 cm is  $\frac{5}{2}$ . Its focal length is increased by 20 cm, when it is placed in liquid. The refractive index of the liquid is:

Ans  1.  $\frac{5}{2}$

2.  $\frac{5}{3}$

3.  $\frac{5}{4}$

4.  $\frac{7}{5}$

Question ID : 16794326361

Status : Answered

Chosen Option : 4

Q.7 The dipole moment of the earth, if the magnetic field at the equator is  $8 \times 10^{-5} \text{ T}$ . (Consider radius of the earth is  $6.4 \times 10^6 \text{ m}$  and  $\mu_0/4\pi = 10^{-7}$ )

Ans  1.  $2.1 \times 10^{23} \text{ A m}^2$

2.  $2.1 \times 10^{22} \text{ A m}^2$

3.  $1.05 \times 10^{23} \text{ A m}^2$

4.  $1.05 \times 10^{22} \text{ A m}^2$





Status : Not Attempted and Marked For Review  
Chosen Option : --

Q.7  
1 A body is rotating with 300 rpm. The Kinetic Energy of the body is 376.8 J. Then its angular momentum is:

- Ans
- 1. 24 Js
  - 2. 26 Js
  - 3. 28 Js
  - 4. 21 Js

Question ID : 16794326304  
Status : Answered  
Chosen Option : 1

Q.7  
2 Consider a cube of side 'a' and length of the diagonal of side 'a' is  $\sqrt{3}a$ . At each corner of the cube a charge 'q' is placed. The potential at the centre of the cube is:

- Ans
- 1.  $\frac{4q}{3\pi\epsilon_0 a^2}$
  - 2.  $\frac{4q}{\sqrt{3}\pi\epsilon_0 a}$
  - 3.  $\frac{4q}{\sqrt{3}\pi\epsilon_0 a^2}$
  - 4.  $\frac{4q}{3\pi\epsilon_0 a}$

Question ID : 16794326333  
Status : Answered  
Chosen Option : 2

Q.7  
3 A spherical black body of radius 4 cm at temperature 300 K radiates 240 W power. If the temperature halved and radius doubled, then the power radiated by it is:

- Ans
- 1. 40 W
  - 2. 60 W
  - 3. 50 W
  - 4. 20 W

Question ID : 16794326313  
Status : Answered  
Chosen Option : 2

Q.7  
4 If  $T_1$  is the temperature of the surrounding medium and  $T_2$  is the temperature of the body, then Newton's law of cooling is:

- Ans
- 1.  $\frac{dQ}{dt} = -K(T_1 - T_2)$
  - 2.  $\frac{dQ}{dt} = -K(T_2 - T_1)$

3.  $\frac{dQ}{dt} = -K / (T_1 - T_2)$

4.  $\frac{dQ}{dt} = -K / (T_2 - T_1)$

Question ID : 16794326312

Status : Answered

Chosen Option : 1

Q.7 The refractive index of glass of a thin equiconvex lens of focal length 15 cm is  $\frac{4}{3}$ . When it placed in a liquid it acts as a concave lens of focal length 45 cm. The refractive index of the liquid is:

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

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

3.  $\frac{5}{6}$

4.  $\frac{6}{5}$

Question ID : 16794326363

Status : Not Attempted and Marked For Review

Chosen Option : --

Q.7 A bomb of mass 'm' explodes into two fragments of masses ' $m_1$ ' and ' $m_2$ ' when it is moving in a parabolic path. If  $m_1 = m_2$ , the acceleration of the centre of mass of the fragments, when both are in air equal to:

Ans  1. g

2.  $\frac{g}{2}$

3. Zero

4. 2g

Question ID : 16794326302

Status : Answered

Chosen Option : 1

Q.7 1 unified atomic mass unit = ?

Ans  1.  $1.66 \times 10^{-27}$  kg

2.  $1.66 \times 10^{-24}$  kg

3.  $1.66 \times 10^{-26}$  kg

4.  $1.66 \times 10^{-25}$  kg

Question ID : 16794326286

Status : Answered

Chosen Option : 1

Q.7 Consider a planet with radius 0.8 times and density is same that of the earth. The gravitational acceleration on the surface of the planet is:

Ans  1. g

2. 1.6 g

3. 0.4 g

4. 0.8 g

Question ID : 16794326307

Status : Answered

Chosen Option : 2

Q.7 A sinusoidal voltage is applied to a series LCR circuit. If the frequency is 30 Hz,  $L = 32\text{mH}$ ,  $C = 1769\ \mu\text{F}$  and  $R = 4\ \Omega$ , then the Impedance of the circuit is:

Ans  1.  $4\ \Omega$

2.  $16\ \Omega$

3.  $12\ \Omega$

4.  $5\ \Omega$

Question ID : 16794326357

Status : Not Attempted and Marked For Review

Chosen Option : --

Q.8 A solenoid of 5000 turns and of cross sectional area  $3 \times 10^{-4}\ \text{m}^2$  is placed in an external magnetic field  $141.4 \times 10^{-4}\ \text{T}$  with its axis at  $45^\circ$ . The torque it experiences is  $0.05\ \text{Nm}$ . If, it has the same magnetic moment as a bar magnet, then the current flowing through it is:

Ans  1. 0.33 A

2. 3.3 A

3. 33 A

4. 0.03 A

Question ID : 16794326350

Status : Not Attempted and Marked For Review

Chosen Option : --

Q.8 Consider a body of mass 'm' collides with another body at rest of mass 'm/3'. If the collision is inelastic, then the fraction of the initial kinetic energy transformed into heat during the collision is:

Ans  1. 0.2

2. 0.1

3. 0.25

4. Zero

Question ID : 16794326301

Status : Answered

Chosen Option : 2

Q.8 This is one of the Steps in lesson planning (Herbartian steps) where the new ideas must be related with daily life situation by citing suitable examples and drawing comparison with related concepts. This step is important as principles are established:

Ans  1. Association

2. Generalization

3. Presentation

4. Application

Question ID : 16794326380

Status : Answered

Chosen Option : 3

Q.8 Consider an object of mass 12 kg. It moving with velocity 60 m/s along a straight line. At a point P, a force of 36 N  
3 applied on the body in opposite to its direction of motion. The time taken to it to again reach that point P is:

- Ans
- ✓ 1. 40 sec
  - ✗ 2. 12 sec
  - ✗ 3. 20 sec
  - ✗ 4. 36 sec

Question ID : 16794326293

Status : Answered

Chosen Option : 3

Q.8 In an inelastic collision:  
4

- A. Momentum is conserved but K.E. is not conserved
- B. Momentum is not conserved but K.E. is conserved
- C. Momentum and K.E. both are conserved
- D. Momentum and K.E. both are not conserved

- Ans
- ✗ 1. Only B is correct
  - ✓ 2. Only A is correct
  - ✗ 3. Only C is correct
  - ✗ 4. Only D is correct

Question ID : 16794326300

Status : Answered

Chosen Option : 2

Q.8 Arrange the following vectors in the increasing order of their magnitude.  
5

- a)  $3i - 3j$
- b)  $4j + 2j + k$
- c)  $i - j + k$
- d)  $4j - 5k$

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



Q.8 The balancing lengths of two cells which are connected in the secondary circuit of a potentiometer are 98 cm and 136 cm respectively. If the e.m.f. of the first cells is 460 mV then, the e.m.f. of the second cell is:

- Ans
- 1. 6.4 V
  - 2. 0.64 V
  - 3. 64 V
  - 4. 640 V

Question ID : 16794326343  
Status : Answered  
Chosen Option : 2

Q.8 This assessment is used to evaluate the effectiveness of instructional programming content, methods, sequence, and pace. Identify from the given options.

- Ans
- 1. Norm referenced assessment
  - 2. Formative assessments
  - 3. Summative assessment
  - 4. Diagnostic assessment

Question ID : 16794326382  
Status : Not Attempted and Marked For Review  
Chosen Option : --

Q.8 When a current changes at a steady rate from 7A to 4A, an e.m.f. of 12V is produced by self-inductance in 38 microseconds. Then, the value of self-inductance is (in H).

- Ans
- 1. 12
  - 2.  $12 \times 10^{-3}$
  - 3.  $12 \times 10^{-6}$
  - 4. 1.2

Question ID : 16794326354  
Status : Answered  
Chosen Option : 3

Q.8 A conducting wire of length 'L' and resistance  $12 \Omega$  is stretched uniformly till its length to '2L'. The new resistance of the wire is:

- Ans
- 1.  $36 \Omega$
  - 2.  $24 \Omega$
  - 3.  $48 \Omega$
  - 4.  $12 \Omega$

Question ID : 16794326338  
Status : Answered  
Chosen Option : 3

Q.9 A straight line of length 2 m carries a uniform line charge  $\lambda$ . The electric field at a distance 'x' above the midpoint of the straight line is:

- Ans
- 1.  $\frac{1}{4\pi\epsilon_0} \frac{\lambda}{\sqrt{x^2 + 1}}$

✗ 2.  $\frac{1}{4\pi\epsilon_0} \frac{\lambda}{x\sqrt{x^2+1}}$

✓ 3.  $\frac{1}{4\pi\epsilon_0} \frac{2\lambda}{x\sqrt{x^2+1}}$

✗ 4.  $\frac{1}{4\pi\epsilon_0} \frac{2\lambda}{\sqrt{x^2+1}}$

Question ID : 16794326328

Status : Answered

Chosen Option : 4

Q.9 The temperature of the filament of a flash light at 5.4 V and 0.36 A is 480 °C. If the resistance of the filament at 0 °C is 8 Ω, then the temperature coefficient of resistance is:

Ans ✗ 1.  $0.18 \times 10^{-3} \text{K}^{-1}$

✗ 2.  $108 \times 10^{-3} \text{K}^{-1}$

✗ 3.  $18 \times 10^{-3} \text{K}^{-1}$

✓ 4.  $1.8 \times 10^{-3} \text{K}^{-1}$

Question ID : 16794326340

Status : Answered

Chosen Option : 3

Q.9 According to First law of Thermodynamics:

2

A. It defines the internal energy function

B. It does not tell about the efficiency with which heat can be converted into work

C. It tells about the direction of heat flow

Ans ✗ 1. Only C is correct

✗ 2. Only B is correct

✓ 3. Only A and B are correct

✗ 4. Only A is correct

Question ID : 16794326315

Status : Answered

Chosen Option : 4

Q.9 The diameter of an objective of a telescope is 30 inch. From a star a wavelength of 1524 Å light is coming. The limit of resolution of the telescope is (in radians).

3

Ans ✓ 1.  $2.4 \times 10^{-7}$

✗ 2.  $4.0 \times 10^{-7}$

✗ 3.  $4.8 \times 10^{-7}$

✗ 4.  $3.6 \times 10^{-7}$

Question ID : 16794326365

Status : Not Answered

Q.9  
4 Match the following:

- |  |                            |
|--|----------------------------|
| a) Projectile motion                               | 1. Acceleration of gravity |
| b) Newton's first law                              | 2. Recoil of gun           |
| c) Newton's second law and motion in two direction | 3. Definition of inertia   |
| d) Newton's third law                              | 4. Measurement of force    |

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

Question ID : 16794326296  
Status : Answered  
Chosen Option : 1

Q.9  
5 Power dissipated by a 18 kΩ resistor, if the current is 0.3 A:

- Ans
- ✓ 1. 1.62 kW
  - ✗ 2. 1.62 W
  - ✗ 3. 5.4 W
  - ✗ 4. 5.4 kW

Question ID : 16794326336  
Status : Answered  
Chosen Option : 1

Q.9  
6 Under centripetal force ( $k/r^2$ ), a particle of mass 'm' is moving in a horizontal circle with radius 'r'.

Match the following:

- |                     |                          |
|---------------------|--------------------------|
| 1. Potential energy | a. $\frac{k}{2r}$        |
| 2. Angular momentum | b. $\frac{-k}{r}$        |
| 3. Kinetic energy   | c. $\sqrt{\frac{km}{r}}$ |
| 4. Linear momentum  | d. $\sqrt{kmr}$          |

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

Question ID : 16794326295

Chosen Option : 4

Q.9 An object projected with an angle  $45^\circ$  to the horizontal and velocity  $\sqrt{2gh}$ . It clears two walls of equal height and separated with distance 'h'. The time taken for the object to travel between these two walls is:

Ans

✓ 1.  $\sqrt{\frac{h}{g}}$

✗ 2.  $\sqrt{\frac{h}{2g}}$

✗ 3.  $\sqrt{\frac{2h}{g}}$

✗ 4.  $\sqrt{2gh}$

Question ID : 16794326292

Status : Answered

Chosen Option : 1

Q.9 Match the following:

a) Adiabatic	e) Temperature constant
b) Isothermal	f) Volume constant
c) Isobaric	g) No heat flow between system and surroundings
d) Isochoric	h) Pressure constant

Ans

✗ 1. a-e, b-f, c-g, d-h

✓ 2. a-g, b-e, c-h, d-f

✗ 3. a-e, b-f, c-h, d-g

✗ 4. a-e, b-h, c-f, d-g

Question ID : 16794326316

Status : Answered

Chosen Option : 2

Q.9 A force is conservative if,

9

A. Work done by it on an object is path dependent.

B. The work done by the force is zero for an arbitrary closed path taken by the object such that it returns to its initial position.

Ans

✓ 1. Only B is correct

✗ 2. A and B both are not correct

✗ 3. A and B both are correct



4. Only A is correct

Question ID : 16794326297  
Status : Answered  
Chosen Option : 1

**Q.1** Two springs are stretched by the same force. The force constant of the first spring ( $K_1$ ) is greater than the second spring ( $K_2$ ). Then the work done is:

- Ans**
- 1. Zero
  - 2. More in spring  $K_2$
  - 3. Same in both springs
  - 4. More in spring  $K_1$