

Question Paper Preview

Notations :

- 1.Options shown in green color and with ✓ icon are correct.
- 2.Options shown in red color and with ✗ icon are incorrect.

Question Paper Name:	PGT PHYSICS MALE 3rd July 2018
Subject Name:	PGT PHYSICS MALE
Creation Date:	2018-07-03 18:34:50
Duration:	180
Total Marks:	300
Display Marks:	Yes
Share Answer Key With Delivery Engine:	Yes
Actual Answer Key:	Yes
Calculator:	None
Magnifying Glass Required?:	No
Ruler Required?:	No
Eraser Required?:	No
Scratch Pad Required?:	No
Rough Sketch/Notepad Required?:	No
Protractor Required?:	No

Group Number :	1
Group Id :	16794357
Group Maximum Duration :	0
Group Minimum Duration :	0
Revisit allowed for view? :	No
Revisit allowed for edit? :	No
Break time:	0
Group Marks:	20

Mental Ability

Mental Ability

Section Id :	167943116
Section Number :	1
Section type :	Online
Mandatory or Optional:	Mandatory
Number of Questions:	20
Number of Questions to be attempted:	20
Section Marks:	20
Display Number Panel:	Yes
Group All Questions:	No

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Sub-Section Id: 167943298
Question Shuffling Allowed : Yes

Question Number : 1 Question Id : 1679435397 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Praveen says, "Madhan's sister is my father's only daughter". Which of the following is true about the relationship between Praveen and Madhan?

Options :

- ☐ They are cousins.
- ☐ Praveen is Madhan's nephew.
- ☒ They are real brothers.
- ☐ Praveen is Madhan's uncle.

Question Number : 2 Question Id : 1679435398 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Nandhini walks 20 m north, then she turns right and walks 30 m, then she turns right and walks 35 m, then she turns left and walks 15 m and then she again turns left and walks 15 m. In which direction is she walking now and how many metres away is she from her original position?

Options :

- ☐ East; 35 metres
- ☒ East; 45 metres
- ☐ West; 40 metres
- ☐ West; 45 metres

Question Number : 3 Question Id : 1679435399 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

You are given two statements and four conclusions. Read them carefully and choose the option that applies.

Statements:

- Some teachers are students.
- All students are boys.

Conclusions:

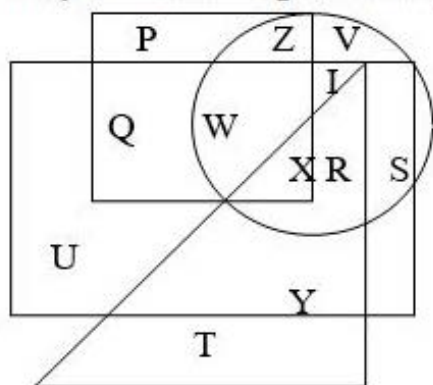
- I. All teachers are boys.
- II. Some boys are teachers.
- III. Some boys are students.
- IV. All students are teachers.

Options :

- ☐ Only conclusion I follows.
- ☒ Only conclusion II and III follow.
- ☐ Only conclusion IV follows.
- ☐ All conclusions follow.

Question Number : 4 Question Id : 1679435400 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct : 1 Wrong : 0.25

Study the following Venn diagram carefully and answer the question given below.



The square represents tennis players.
The rectangle represents actors.
The triangle represents rich persons.
The circle represents males.

Letter I represents:

Options :

- ☐ Male tennis players
- ☒ Male actors
- ☐ Male rich persons
- ☐ Tennis players who are also actors

Question Number : 5 Question Id : 1679435401 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct : 1 Wrong : 0.25

Select the option that is related to the third term in the same way as the second term is related to the first term.

Blacksmith : Anvil : : Carpenter : _____

Options :

✘ Knife

✔ Saw

✘ Spade

✘ Needle

Question Number : 6 Question Id : 1679435402 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Read the following table and choose the alternative that can best replace the sign‘?’.

11	8	361
15	6	441
12	?	484

Options :

✘ 9

✔ 10

✘ 12

✘ 13

Question Number : 7 Question Id : 1679435403 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Find the missing number in the below series.

1, 3, 7, 15, 31, 63, 127, 255, _____

Options :

✘ 501

✘ 505

✘ 510

✔ 511

Question Number : 8 Question Id : 1679435404 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

In a certain code language, if BROWN is written as DTQYP, then what will be the code of YELLOW in that same language?

Options :

☐ ZHNNQY

☐ ZGNNQY

☒ AGNNQY

☐ AGMNQY

Question Number : 9 Question Id : 1679435405 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

If in the English alphabet series, 'A' is written for 'A' and 'B'; 'B' is written for 'C' and 'D'; 'C' is written for 'E' and 'F'; 'D' is written for 'G' and 'H' and so on; then what will be the 5th letter from the right end of the new structure?

Options :

☒ I

☐ L

☐ K

☐ M

Question Number : 10 Question Id : 1679435406 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Read the situation below carefully and decide the best possible logical course of action.

Your cousin desires to take your dictionary, which was gifted to you by your late grandfather. You would:

Options :

☐ give it to him without a hitch.

☐ give it to him but bicker about it.

☐ refuse him blankly.

☒ tell him about the sentimental value of the dictionary to you.

Question Number : 11 Question Id : 1679435407 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Mukesh ranked 16th from the top and 25th from the bottom among those who have passed in the annual examination in a class. If 5 students failed in the annual examination, what was the total number of students in that class?

Options :

☐ 41

☒ 45

☐ 46

☐ 50

Question Number : 12 Question Id : 1679435408 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Three years ago, the average age of Neena's family of 4 members was 15 years. A baby having been born, the average age of the family is the same today. Find the present age of the baby.

Options :

☐ 2 years

☐ 2.5 years

☒ 3 years

☐ 4 years

Question Number : 13 Question Id : 1679435409 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Select the option that has the number of pairs sharing the same relationship as that exists between the number of pairs given below.

$$\frac{4}{15} : \frac{5}{24} : \text{_____} : \text{_____}$$

Options :

☐ $\frac{6}{36} : \frac{5}{24}$

☒ $\frac{8}{63} : \frac{9}{80}$

☐ $\frac{7}{49} : \frac{8}{63}$

✖ $\frac{9}{81} : \frac{10}{100}$

Question Number : 14 Question Id : 1679435410 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

You are given a statement and two courses of actions. Choose the correct comment about the courses of actions from the given options below.

Statement:

The sale of 'X' branded TV has gone down considerably, causing great concern to the company.

Courses of Action:

- I. The company should make a proper study of rival brands in the market.
- II. The price of the product should be reduced and the quality must be improved.

Options :

- ✔ Only course of action I logically follows.
- ✖ Only course of action II logically follows.
- ✖ Either course of action I or action II logically follows.
- ✖ Neither course of action I nor action II follows.

Question Number : 15 Question Id : 1679435411 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

In the question given below, there are two statements labelled as Assertion and Reason. Read them carefully and select the best option.

Assertion (A):

Many youngsters in our country are accepting jobs abroad.

Reason(R):

Persons with high technical skills have no scope in our country.

Options :

- ✔ A is true but R is false.
- ✖ A is false but R is true.
- ✖ Both A and R are true and R is the correct explanation of A.
- ✖ Both A and R are true and R is not the correct explanation of A.

Question Number : 16 Question Id : 1679435412 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Four years ago, the combined age of Harini and her mother was 44 years. Now, the ratio of their ages is 1 : 3. What is the present age of Harini's mother?

Options :

☐ 36 years

☐ 37 years

☒ 39 years

☐ 40 years

Question Number : 17 Question Id : 1679435413 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Read the following information carefully and answer the question given below.

L, M, N, O, P and Q are seated in a circle facing the centre. O is between Q and M. L is second to the left of O and second to the right of P.

Who among the following is facing O?

Options :

☐ L

☐ P

☐ M

☒ N

Question Number : 18 Question Id : 1679435414 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

One evening just before sunset, Kalai and Neela were talking to each other face to face. If Neela's shadow was exactly to her right side, which direction was Kalai facing?

Options :

☐ East

☐ West

☒ South

⌘ North

Question Number : 19 Question Id : 1679435415 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct : 1 Wrong : 0.25

Study the following table and choose the alternative that can best replace the sign ‘?’.

B3	E4	I7
L10	V5	A15
P9	Y11	?

Options :

⌘ I20

⌘ I21

✔ J20

⌘ J21

Question Number : 20 Question Id : 1679435416 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct : 1 Wrong : 0.25

Choose the option that shares the same relationship with the third term as shared by the second with the first term.

evtg : hsqj : : cxve : _____

Options :

⌘ futg

✔ fush

⌘ fsuh

⌘ fhus

General Awareness	
Group Number :	2
Group Id :	16794358
Group Maximum Duration :	0
Group Minimum Duration :	0
Revisit allowed for view? :	No
Revisit allowed for edit? :	No
Break time:	0
Group Marks:	20

General Awareness

Section Id :	167943117
Section Number :	1
Section type :	Online
Mandatory or Optional:	Mandatory
Number of Questions:	20
Number of Questions to be attempted:	20
Section Marks:	20
Display Number Panel:	Yes
Group All Questions:	No

Sub-Section Number:	1
Sub-Section Id:	167943299
Question Shuffling Allowed :	Yes

Question Number : 21 Question Id : 1679435417 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct : 1 Wrong : 0.25

Mahatma Gandhi started the Salt March on 12 March 1930 from:

Options :

- ☐ Champaran
- ☒ Sabarmati
- ☐ Sevagram
- ☐ Santiniketan

Question Number : 22 Question Id : 1679435418 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct : 1 Wrong : 0.25

Where did the infamous Jallianwala Bagh massacre take place in 1919?

Options :

- ☐ Ambala
- ☐ Pathankot
- ☒ Amritsar
- ☐ Lahore

Question Number : 23 Question Id : 1679435419 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

The Buddhist Council that led to the final division of Buddhism into two parts, Hinayana and Mahayana, was held at which of the following site?

Options :

✘ Rajagriha

✔ Kashmir

✘ Vaishali

✘ Pataliputra

Question Number : 24 Question Id : 1679435420 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

In which state is the Jaduguda uranium mine located?

Options :

✔ Jharkhand

✘ Bihar

✘ Madhya Pradesh

✘ Chhattisgarh

Question Number : 25 Question Id : 1679435421 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

On which river is the Yeldari Dam built?

Options :

✔ Purna

✘ Bhima

✘ Maval

✘ Mula

Question Number : 26 Question Id : 1679435422 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

An ordinance promulgated under Article 213 can be withdrawn by:

Options :

- ✗ the Chief Minister
- ✓ the Governor
- ✗ the Prime Minister
- ✗ the Attorney-General

Question Number : 27 Question Id : 1679435423 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct : 1 Wrong : 0.25

_____ presides over a joint sitting of both Houses of Parliament.

Options :

- ✓ The Speaker of the Lok Sabha
- ✗ The Chairman of the Rajya Sabha
- ✗ The President of India
- ✗ The Prime Minister of India

Question Number : 28 Question Id : 1679435424 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct : 1 Wrong : 0.25

Some members of the Legislative Council of a State are nominated by:

Options :

- ✓ the Governor
- ✗ the Chief Minister
- ✗ the Vice-President
- ✗ the Prime Minister

Question Number : 29 Question Id : 1679435425 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct : 1 Wrong : 0.25

Which among the following hubs are at the core of NITI Aayog's creation?

- (I) Team India Hub
- (II) Knowledge and Innovation Hub
- (III) Culture Hub

Options :

- ☐ Only I
- ☐ II and III
- ☐ I and III
- ☒ I and II

Question Number : 30 Question Id : 1679435426 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct : 1 Wrong : 0.25

Where was the Central Office of the RBI located when it was initially established?

Options :

- ☐ Mumbai
- ☐ Delhi
- ☒ Kolkata
- ☐ Chennai

Question Number : 31 Question Id : 1679435427 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct : 1 Wrong : 0.25

With which of the following instruments is the musician Tulsidas Borkar associated?

Options :

- ☐ Tabla
- ☐ Shehnai
- ☐ Flute
- ☒ Harmonium

Question Number : 32 Question Id : 1679435428 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct : 1 Wrong : 0.25

The renowned classical singer Uday Bhawalkar is an exponent of which form of Hindustani classical music?

Options :

- ☐ Tarana

☒ Dhruvad

☐ Thumri

☐ Ghazal

Question Number : 33 Question Id : 1679435429 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

To which state does the folk dancer Gulabi Sapera belong?

Options :

☒ Rajasthan

☐ Chhattisgarh

☐ Jharkhand

☐ Odisha

Question Number : 34 Question Id : 1679435430 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

The 2018 Commonwealth Games was hosted by _____.

Options :

☐ India

☒ Australia

☐ Pakistan

☐ United Kingdom

Question Number : 35 Question Id : 1679435431 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Who among the following is the only Indian to win an individual gold medal in Olympics?

Options :

☐ Leander Peas

☐ Saina Nehwal

✓ Abhinav Bindra

✗ Sushil Kumar

Question Number : 36 Question Id : 1679435432 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

The loudness of sound depends on:

Options :

✓ Amplitude

✗ Frequency

✗ Time period

✗ Altitude

Question Number : 37 Question Id : 1679435433 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Who among the following is the Managing Director of the IMF?

Options :

✗ Mark Wilson

✗ James Anding

✓ Christine Lagarde

✗ Trevor Bull

Question Number : 38 Question Id : 1679435434 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

World's smallest land fern named Malvi's adder's-tongue fern has been discovered in:

Options :

✓ Gujarat

✗ Madhya Pradesh

✗ Jharkhand

Goa

Question Number : 39 Question Id : 1679435435 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct : 1 Wrong : 0.25

What was the rank occupied by China in the list of top military spenders in the world in 2017?

Options :

3

7

2

9

Question Number : 40 Question Id : 1679435436 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct : 1 Wrong : 0.25

Indu Malhotra recently became the _____ woman Judge to be elevated directly from the Bar.

Options :

fifth

first

seventh

ninth

Arithmetic Ability

Group Number :	3
Group Id :	16794359
Group Maximum Duration :	0
Group Minimum Duration :	0
Revisit allowed for view? :	No
Revisit allowed for edit? :	No
Break time:	0
Group Marks:	20

Arithmetic Ability

Section Id :	167943118
Section Number :	1
Section type :	Online

Mandatory or Optional:	Mandatory
Number of Questions:	17
Number of Questions to be attempted:	17
Section Marks:	20
Display Number Panel:	Yes
Group All Questions:	No

Sub-Section Number:	1
Sub-Section Id:	167943300
Question Shuffling Allowed :	Yes

Question Number : 41 Question Id : 1679435437 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

When a number is divided successively by 4, 5 and 6, the remainders are 2, 3 and 5, respectively, and the last quotient is 7. If the same number is divided by 53, the remainder will be:

Options :

✖ 3

✖ 2

✖ 1

✔ 0

Question Number : 42 Question Id : 1679435438 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

The value of $\left(\frac{3}{11} \times 2.\bar{4} \times 0.\bar{6}\right) \times \left(\frac{0.1\bar{6}}{0.8\bar{3}}\right) \div \frac{0.\bar{09} \times 0.\bar{7}}{0.\bar{3} \times 0.25} \times 9$ is:

Options :

✖ $\frac{11}{60}$

✔ $\frac{11}{135}$

✖ $\frac{16}{165}$

✖ $\frac{16}{55}$

Question Number : 43 Question Id : 1679435439 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

If $\frac{8\sqrt{5}}{\sqrt{10}-\sqrt{2}} - \frac{5\sqrt{2}}{\sqrt{10}-\sqrt{5}} - \frac{3\sqrt{10}}{\sqrt{2}-\sqrt{5}} + \frac{1}{2-\sqrt{2}} = a + b\sqrt{2}$, then the value of $(15a - 2b)$ is:

Options :

✓ -6

✗ -3

✗ 3

✗ 6

Question Number : 44 Question Id : 1679435440 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

The value of $\frac{1\frac{1}{2} \text{ of } 2\frac{1}{4} \div 1\frac{1}{8} \times 2\frac{2}{5}}{\frac{3}{5} + \frac{2}{3}} \div \frac{2\frac{2}{3} \div \frac{3}{4} \text{ of } \frac{5}{6}}{\frac{2}{3} \div \frac{3}{4} \times \frac{5}{6}}$ lies between:

Options :

✗ 1 and 2

✗ 2 and 3

✓ 3 and 4

✗ 4 and 5

Question Number : 45 Question Id : 1679435441 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

A group of boys and girls took a test. If $\frac{2}{3}$ of the number of girls and $\frac{3}{5}$ of the number of boys passed the test and if an equal number of boys and girls passed the test, then what fraction of the total number of boys and girls passed the test?

Options :

✗ $\frac{5}{8}$

✓ $\frac{12}{19}$

✗ $\frac{7}{8}$

14
✖ 19

Question Number : 46 Question Id : 1679435442 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Three years earlier, the ratio of the ages of Sudha and Karan was 7 : 1. Three years hence, the ratio of the ages of Sudha and Karan will be 4 : 1. What will the ratio of the ages of Sudha and Karan 7 years from now?

Options :

✖ 7 : 2

✖ 9 : 2

✔ 13 : 4

✖ 15 : 4

Question Number : 47 Question Id : 1679435443 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

In an examination, A obtained 50% more marks than B, B got $16\frac{2}{3}\%$ less marks than C and C obtained $33\frac{1}{3}\%$ more marks than D. If A received 160 marks out of a total marks of 400, then what percentage of marks was obtained by D in the examination?

Options :

✔ 24

✖ 25

✖ 30

✖ 32

Question Number : 48 Question Id : 1679435444 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Neeraj sells an article after allowing a discount of 20% on its marked price. If he sells it after offering another discount of the same value, the selling price of the article becomes ₹ 540. What will be the selling price of the article if a single discount of 30% is given on its marked price?

Options :

✖ ₹ 560

✖ ₹ 580

✗ ₹ 600

✓ ₹ 630

Question Number : 49 Question Id : 1679435445 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct : 1 Wrong : 0.25

Surekha borrows a sum of ₹ 48,000 at 15% per annum, interest being compounded annually. She repays a certain amount at the end of 1 year and repays the balance amount of ₹ 36,570 at the end of the second year to clear the loan and interest. What amount did she pay at the end of the first year?

Options :

✗ ₹ 11,430

✓ ₹ 23,400

✗ ₹ 24,600

✗ ₹ 24,860

Question Number : 50 Question Id : 1679435446 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct : 1 Wrong : 0.25

If the LCM and HCF of the numbers 72, 120 and y are 3960 and 24 respectively, then the sum of the digits of the least value of y will be:

Options :

✗ 11

✓ 12

✗ 13

✗ 18

Question Number : 51 Question Id : 1679435447 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct : 1 Wrong : 0.25

The sum of certain 3-digit numbers is 270 and their HCF is 18. What is the LCM of all those numbers?

Options :

✗ 792

✗ 468

✖ 504

✔ 1008

Question Number : 52 Question Id : 1679435448 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

A sphere has a radius of $250\sqrt{3}$ cm. A large cube is fitted within it. Now, a large sphere is fitted within the cube. What is the ratio of the volume of the smaller sphere to that of the original sphere?

Options :

✖ $1 : 2\sqrt{3}$

✔ $1 : 3\sqrt{3}$

✖ $1 : 3$

✖ $1 : 2$

Question Number : 53 Question Id : 1679435449 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

The time taken by a person to row a certain distance downstream is $\frac{2}{3}$ of the time taken to row the same distance upstream. If the product of the speeds of the person and the current is numerically equal to 20 (when considered in km/h), then the difference between the speed of the person and that of the current (in km/h) is:

Options :

✖ $10\frac{1}{3}$

✔ 8

✖ $5\frac{1}{2}$

✖ 4

Question Number : 54 Question Id : 1679435450 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

A, B and C are three pipes attached to a tank. A can fill the tank in 10 minutes and B in 20 minutes, whereas C is a waste pipe that can empty a fully filled tank in $12\frac{1}{2}$ minutes. Pipes A and C are turned on at 9 a.m. but at 9:30 a.m. Pipe A is turned off and Pipe B is turned on. At what time will the tank be emptied?

Options :

✖ 9:40 a.m.

✖ 9:45 a.m.

✔ 9:50 a.m.

✖ 10:00 a.m.

Sub-Section Number: 2
Sub-Section Id: 167943301
Question Shuffling Allowed : Yes

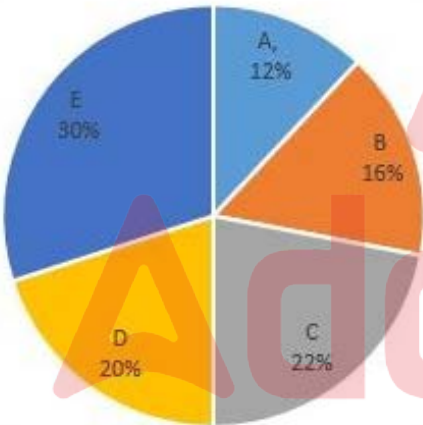
Question Id : 1679435451 Question Type : COMPREHENSION Sub Question Shuffling Allowed : Yes Group Comprehension Questions : No

Question Numbers : (55 to 56)

Question Label : Comprehension

Study the following pie chart and table and answer the questions that follow.

Percentage breakup of students in different schools



Total number of students = 7650

The following table shows the ratio of boys to girls in different schools.

School	Boys : Girls
A	9 : 8
B	11 : 13
C	6 : 5
D	8 : 7
E	3 : 2

Sub questions

Question Number : 55 Question Id : 1679435452 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct : 1 Wrong : 0.25

The total number of girls in schools A, B and C
is what per cent of the total number of students
in the five schools (correct to one decimal place)?

Options :

✗ 22.4%

✗ 26.6%

✓ 24.3%

✗ 24.8%

Question Number : 56 Question Id : 1679435453 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct : 1 Wrong : 0.25

The total number of boys in school E is equal to
the total number of girls in schools:

Options :

✗ A and D

✓ B and D

✗ B and C

✗ C and D

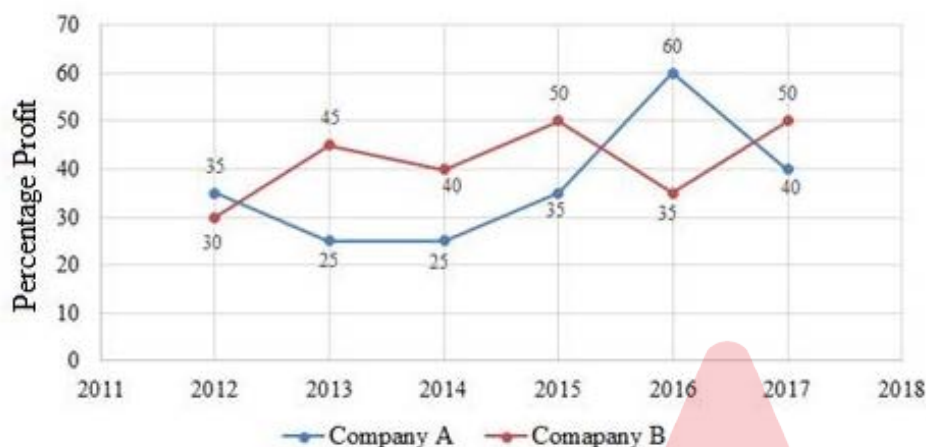
Sub-Section Number: 3
Sub-Section Id: 167943302
Question Shuffling Allowed : Yes

Question Id : 1679435454 Question Type : COMPREHENSION Sub Question Shuffling Allowed : Yes Group Comprehension
Questions : No
Question Numbers : (57 to 58)
Question Label : Comprehension

Study the following graph and answer the questions that follow:

Percentage profit earned by companies A and B over the years

$$\text{Percentage profit} = \frac{\text{Income} - \text{Expenditure}}{\text{Expenditure}} \times 100$$



Sub questions

Question Number : 57 Question Id : 1679435455 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

The ratio of expenditures of companies A and B in 2015 was 4 : 5. What was the ratio of their incomes in that year?

Options :

✗ 7 : 10

✗ 56 : 75

✗ 27 : 40

✓ 18 : 25

Question Number : 58 Question Id : 1679435456 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

If the expenditures of companies A and B in 2014 were equal and the total income of A and B was ₹ 318 crores, then what was the total expenditure (in ₹ crores) of the two companies in that year?

Options :

✓ 240

✖ 248

✖ 250

✖ 258

Sub-Section Number: 4
Sub-Section Id: 167943303
Question Shuffling Allowed : Yes

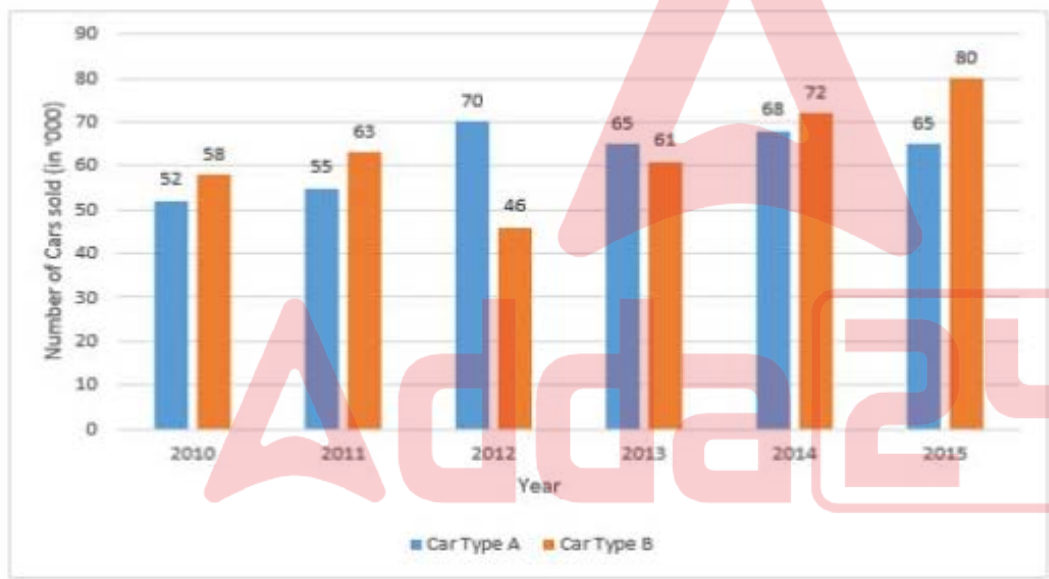
Question Id : 1679435457 Question Type : COMPREHENSION Sub Question Shuffling Allowed : Yes Group Comprehension Questions : No

Question Numbers : (59 to 60)

Question Label : Comprehension

Study the following bar graph and answer the question that follows:

Number of two types of cars sold by a company over the years



Sub questions

Question Number : 59 Question Id : 1679435458 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

In how many years will the sale of B type of cars be more than the average number of A type of cars per year sold by the company in the given years?

Options :

✖ 2 years

✔ 3 years

✖ 4 years

✖ 1 year

Question Number : 60 Question Id : 1679435459 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

The total number of A type of cars sold by the company in 2010, 2012 and 2014 is what per cent less than the total number of B type of cars sold in 2011, 2013 and 2015 (correct to one decimal place)?

Options :

✖ 5.8%

✖ 8.4%

✖ 7.2%

✔ 6.9%

General English

Group Number :	4
Group Id :	16794360
Group Maximum Duration :	0
Group Minimum Duration :	0
Revisit allowed for view? :	No
Revisit allowed for edit? :	No
Break time:	0
Group Marks:	20

General English

Section Id :	167943119
Section Number :	1
Section type :	Online
Mandatory or Optional:	Mandatory
Number of Questions:	16
Number of Questions to be attempted:	16
Section Marks:	20
Display Number Panel:	Yes
Group All Questions:	No

Sub-Section Id: 167943304
Question Shuffling Allowed : Yes

Question Number : 61 Question Id : 1679435460 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Choose the correct synonym of:

apology

Options :

☒ regret

☐ answer

☐ kindness

☐ denial

Question Number : 62 Question Id : 1679435461 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Choose the correct antonym of:

spiritual

Options :

☐ human

☐ heavenly

☒ material

☐ temporary

Question Number : 63 Question Id : 1679435462 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Choose the correct antonym of the underlined word to fill in the blank.

We expected to buy the plot at a good discount but it turned out to be available at a _____ as it was a corner plot.

Options :

☐ surplus

☐ growth

✖ deficit

✔ premium

Question Number : 64 Question Id : 1679435463 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Fill in the blank with the correct word:

The Manager was busy in an urgent meeting with _____ M.P. from Odisha who wanted to discuss a new project in his state.

Options :

✖ a

✖ someone

✔ an

✖ any

Question Number : 65 Question Id : 1679435464 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Fill in the blank with the appropriate word:

We _____ to cancel the meeting as it is raining hard for the last 3 hours.

Options :

✖ having

✖ has

✔ have

✖ going

Question Number : 66 Question Id : 1679435465 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Fill in the blank with the appropriate word(s):

The participants gave _____ beautiful performance that it was difficult to decide whose performance was the best.

Options :

✔ such a

✗ so

✗ such

✗ too

Question Number : 67 Question Id : 1679435466 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

In the following sentence four words or phrases have been underlined. One of them is incorrect. Choose the INCORRECT word or phrase from the given options.

When you talk on the telephone, the quality of your voice and your ability to express yourself clear and concise are very important.

Options :

✗ on the telephone

✗ quality of

✗ to express yourself

✓ clear and concise

Question Number : 68 Question Id : 1679435467 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

In the following sentences four words or phrases have been underlined. One of them is incorrect. Choose the INCORRECT word or phrase from the given options.

Behaviour problems among school children are on the increasing. It has therefore become mandatory for every school to keep a school counsellor to counsel students going through stress.

Options :

✓ on the increasing

✗ become mandatory

✗ to keep

✗ going through stress

Question Number : 69 Question Id : 1679435468 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Choose the passive voice form of the given sentence.

My employers treated me with great respect as I was hard working and efficient.

Options :

- ☐ I was being treated with great respect by my employers as I was hard working and efficient.
- ☐ My employers were treating me well as I was hard working and efficient.
- ☒ I was treated with great respect by my employers as I was hard working and efficient.
- ☐ My employers said they treated me with great respect as I was hard working and efficient.

Question Number : 70 Question Id : 1679435469 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Choose the most appropriate indirect speech for the following sentence:

Savita said to her son, "Be careful not to use your mobile while you are driving. It can be very dangerous".

Options :

- ☒ Savita advised her son to be careful not to use his mobile while he was driving as it could be very dangerous.
- ☐ Savita was advising her son to be careful not to use his mobile while he was driving as it could be very dangerous.
- ☐ Her son was advised by Savita to be careful not to use his mobile while he was driving as it could be very dangerous.
- ☐ Savita has advised her son to be careful not to use his mobile while he is driving as it can be very dangerous.

Question Number : 71 Question Id : 1679435470 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Choose the best option to combine the given sentences:

It rained heavily yesterday. The weather is still very hot and unpleasant.

Options :

- ☐ It rained heavily yesterday even though the weather is hot and pleasant.
- ☐ In case it rained heavily yesterday the weather is very hot and unpleasant.
- ☒ Although it rained heavily yesterday, the weather is very hot and unpleasant.
- ☐ Since it rained heavily yesterday the weather is very hot and unpleasant.

Question Number : 72 Question Id : 1679435471 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct : 1 Wrong : 0.25

Choose the sentence that is correctly punctuated:

Options :

- ☒ The airhostess said to Ratna, "Please switch off your mobile immediately. We are about to take off."
- ☐ The airhostess said to Ratna please switch off your mobile immediately. We are about to take off.
- ☐ The airhostess said to Ratna "Please switch off your mobile immediately. We are about to take off."
- ☐ The airhostess said to Ratna "please switch off your mobile immediately we are about to take off."

Question Number : 73 Question Id : 1679435472 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct : 1 Wrong : 0.25

Choose the word that is correctly spelt:

Options :

- ☐ bankwet
- ☐ architechture
- ☐ accidetally
- ☒ correspondence

Question Number : 74 Question Id : 1679435473 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct : 1 Wrong : 0.25

Fill in the blank with the appropriate words:

The _____ in my life came when I earned a scholarship for higher education and worked very hard to get a degree in Management.

Options :

- ☐ bed of roses
- ☐ makeover
- ☒ turning point
- ☐ pull through

Question Number : 75 Question Id : 1679435474 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct : 1 Wrong : 0.25

Fill in the blank with the appropriate words:

The oratorical skills she displayed in her _____ impressed the audience.

Options :

- ✓ maiden speech
- ✗ crocodile’s tears
- ✗ leap in the dark
- ✗ left handed compliment

Sub-Section Number: 2
Sub-Section Id: 167943305
Question Shuffling Allowed : Yes

Question Id : 1679435475 Question Type : COMPREHENSION Sub Question Shuffling Allowed : Yes Group Comprehension
Questions : No
Question Numbers : (76 to 80)
Question Label : Comprehension

On the basis of your reading of the following passage answer the questions given:

The education that has prevailed in the past is insufficient, incomplete and superficial. It only creates people who can earn their livelihood but it does not give any insight into living itself. It is not only incomplete, it is harmful too — because it is based on competition. Any type of competition is violent deep down and creates people who are unloving. Their whole effort is to be achievers — of name, fame and all kinds of ambitions. That destroys their joys; that destroys their friendliness. Education up to now has been goal-oriented: learning is not important; what is important is the examination that will come a year later. It makes the future more important than the present.

There should not be any kind of examination as part of education, but every-day, every-hour observation by the teachers. Nobody fails, nobody passes. So, examinations will not have any place. That will change the whole perspective from the future to the present.

I divide education into five dimensions. The first is informative, like history, geography, etc. which can be dealt with by television and computer together. The second part should be sciences. They can be imparted by television and computer too.

And the third will be what is missing in present-day education, the art of living. People have taken it for granted that they know what love is. They don't know. . . and by the time they know, it is too late. Every child should be helped to transform his anger, hatred and jealousy into love. The fourth dimension should be of art and creativity: painting, music, craftsmanship, pottery — anything that is creative. And the fifth dimension should be the art of dying. In this fifth dimension will be all the meditations, so that you can know there is no death, so that you can become aware of an eternal life inside you.

Sub questions

Question Number : 76 Question Id : 1679435476 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct : 1 Wrong : 0.25

What is the problem with education today?

Options :

✗ It lays a lot of stress on learning.

✗ Students compete to do better and achieve their goals.

✓ It has surface value but is not complete.

✘ People learn skills to earn their living.

Question Number : 77 Question Id : 1679435477 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

The impact of too much competition is that students learn to be:

Options :

✘ joyful

✔ violent

✘ friendly

✘ creative

Question Number : 78 Question Id : 1679435478 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

‘**That** will change the whole perspective from the future to the present.’ What does that refer to?

Options :

✔ Doing away with exams

✘ Everyone passing

✘ No one failing

✘ Thinking about the present

Question Number : 79 Question Id : 1679435479 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

‘And the fifth dimension should be the art of dying.’ This implies that students should be taught _____.

Options :

✘ how to do meditation and die

✘ about the suffering caused by death

✔ about life being everlasting

✘ how to live a long life

Question Number : 80 Question Id : 1679435480 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

What message does the writer convey through this article?

Options :

✘ Education must give students a lot of information and increase their well-being.

✘ Students must learn to become great scientists and historians.

✔ Education must create true understanding of life and death.

✘ Students must have a sense of pride in learning many things.

Group Number :	5
Group Id :	16794361
Group Maximum Duration :	0
Group Minimum Duration :	0
Revisit allowed for view? :	No
Revisit allowed for edit? :	No
Break time:	0
Group Marks:	20

General Hindi

Section Id :	167943120
Section Number :	1
Section type :	Online
Mandatory or Optional:	Mandatory
Number of Questions:	16
Number of Questions to be attempted:	16
Section Marks:	20
Display Number Panel:	Yes
Group All Questions:	No

Sub-Section Number: 1
Sub-Section Id: 167943306
Question Shuffling Allowed : Yes

Question Id : 1679435481 Question Type : COMPREHENSION Sub Question Shuffling Allowed : Yes Group Comprehension Questions : No

Question Numbers : (81 to 85)

Question Label : Comprehension

निम्नलिखित गद्यांश को पढ़कर पूछे गए प्रश्नों के उत्तर लिखिए।

राजनीति ने भ्रष्टाचार का पूरा-पूरा साथ दिया है। आज राजनेताओं की पूरी पीढ़ी ही भ्रष्ट है। सत्ता पाने के बाद हमारे नेताओं को यह आशंका सताती रहती है कि पता नहीं फिर उन्हें यह सत्ता-सुख नसीब हो या न हो, इसलिए ये अधिक-से-अधिक धन एकत्रित कर लेना चाहती हैं। भारत सरकार ने भ्रष्टाचार के उन्मूलन के लिए 'आचार-संहिता' तैयार की। काम-काज योजना का ऐलान हुआ है। मगर परिणाम कुछ भी नहीं, क्योंकि सुधार घर से आरंभ होता है। आज हमारे देश के कर्णधार नेता लंबे-लंबे भाषण झाड़ते हैं, बड़ी-बड़ी घोषणाएँ करते हैं, परंतु इसका कोई असर नहीं होता। भ्रष्टाचार को रोकने के लिए जहाँ हमारे नेताओं को "पर उपदेश कुशल बहुतेरे" की नीति को त्यागना पड़ेगा, वहाँ नागरिकों को भी आत्म-संयम से काम लेना होगा। आज नैतिकता को बढ़ावा देने की आवश्यकता है। सरकार का कर्तव्य है कि वह निष्पक्ष व्यक्तियों की जाँच समिति बनाए, जो सबसे पहले बड़े लोगों पर आरोपों की जाँच करें। भ्रष्टाचार की जड़ें हमारे जीवन के प्रत्येक क्षेत्र में फैल चुकी हैं। इस रोग के निदान के लिए आवश्यक है कि समाज को आर्थिक विषमता के जाल से निकला जाए।

Sub questions

Question Number : 81 Question Id : 1679435482 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

भ्रष्टाचार को बढ़ावा दिया है:

Options :

✗ समाज ने

✓ राजनीति ने

✖ शिक्षा ने

✖ विदेशों ने

Question Number : 82 Question Id : 1679435483 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

‘उन्मूलन’ शब्द का अर्थ है:

Options :

✖ मूल भाव

✓ जड़ से उखाड़ना

✖ ऊँचे मूल्य

✖ रोकना

Question Number : 83 Question Id : 1679435484 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

सरकार ने तैयार की है:

Options :

✓ आचार संहिता

✖ सदाचार समिति

✖ आचरण पद्धति

✖ वैचारिक शुद्धि

Question Number : 84 Question Id : 1679435485 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

भाषण झाड़ते हैं, ... घोषणाएँ करते हैं, ... वाक्य
में है:

Options :

✖ करुणा

✓ आक्रोश

✗ भर्त्सना

✗ विलाप

Question Number : 85 Question Id : 1679435486 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

भ्रष्टाचार फैल चुका है:

Options :

✗ राजनीति में

✗ अफसरशाही में

✗ ठेकेदारी में

✓ प्रत्येक क्षेत्र में

Sub-Section Number:

2

Sub-Section Id:

167943307

Question Shuffling Allowed :

Yes

Question Number : 86 Question Id : 1679435487 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

निम्नलिखित में से तत्सम शब्द छाँटिए:

Options :

✗ हाथ

✗ गात

✓ वर्षा

✗ प्यास

Question Number : 87 Question Id : 1679435488 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

निम्नलिखित शब्दों में से तद्रव शब्द चुनिए:

Options :

- ✗ नग्न
- ✗ पत्र
- ✓ अँगूठा
- ✗ मित्र

Question Number : 88 Question Id : 1679435489 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

‘कनकलता’ शब्द में कौन सा समास है?

Options :

- ✗ अव्ययीभाव
- ✓ कर्मधारय
- ✗ द्विगु
- ✗ बहुब्रीहि

Question Number : 89 Question Id : 1679435490 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

‘अच्छिन्त’ शब्द में संधि है:

Options :

- ✓ संजन संधि
- ✗ विसर्ग संधि
- ✗ यण् संधि
- ✗ वृद्धि संधि

Note: For this question, discrepancy is found in question/answer. So, this question is ignored for all candidates.

Question Number : 90 Question Id : 1679435491 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

‘साधु’ शब्द का बहुवचन (अविभक्तिक) बनेगा:

Options :

- ☒ साधु
- ☐ साधू
- ☐ साधुओं
- ☐ साधुओ

Question Number : 91 Question Id : 1679435492 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

सदा बहुवचन में प्रयुक्त होने वाला शब्द है:

Options :

- ☐ राजा
- ☐ दादा
- ☒ होश
- ☐ घर

Question Number : 92 Question Id : 1679435493 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

निम्नलिखित में से कौन सा शब्द भाववाचक संज्ञा है?

Options :

- ☐ इतिहास
- ☐ संसार
- ☒ वात्सल्य
- ☐ मानव

Question Number : 93 Question Id : 1679435494 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

‘पुत्री’ शब्द का पर्यायवाची नहीं है:

Options :

- ✖ तनया
- ✖ आत्मजा
- ✓ बलिका
- ✖ सुता

Question Number : 94 Question Id : 1679435495 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

‘डपटना’ शब्द का विलोम होता है:

Options :

- ✖ प्यार
- ✓ पुचकारना
- ✖ झगड़ना
- ✖ फटकारना

Question Number : 95 Question Id : 1679435496 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

‘वह स्त्री जिसे पति छोड़ दे’ कहलाती है:

Options :

- ✖ परित्याग
- ✓ परित्यक्ता
- ✖ परिग्रह
- ✖ विग्रह

Question Number : 96 Question Id : 1679435497 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

कौन सा शब्द पुल्लिंग है?

Options :

- ✖ उपलब्धि
- ✖ सूचना
- ✖ सेना
- ✔ दोष

Question Number : 97 Question Id : 1679435498 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

निम्नलिखित में से कौन सा वाक्य शुद्ध है?

Options :

- ✔ कृपया आप ही बताएँ।
- ✖ मुझसे यह काम संभव नहीं हो सकता।
- ✖ मैंने सूई कैंची और पुस्तकें मोल लिए हैं।
- ✖ उसके चाचा को लड़की हुई है।

Question Number : 98 Question Id : 1679435499 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

सकर्मक क्रिया वाला वाक्य है:

Options :

- ✔ मैं पढ़ूँगा।
- ✖ वह सो रही है।
- ✖ वह नहीं चढ़ेगा।
- ✖ तू क्यों शर्माता है।

Question Number : 99 Question Id : 1679435500 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct : 1 Wrong : 0.25

‘प्रतिष्ठा नष्ट होने’ पर मुहावरा है:

Options :

- ✓ नाक कटना
- ✗ नाक रगड़ना
- ✗ नाक पर मक्खी न बैठने देना
- ✗ नाक में दम करना

Question Number : 100 Question Id : 1679435501 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct : 1 Wrong : 0.25

‘डोंग हाँकना’ के लिए लोकोक्ति है:

Options :

- ✓ अधजल गगरी छलकत जाए
- ✗ आँख का अंधा नाम नयनसुख
- ✗ आगे नाथ न पीछे पगहा
- ✗ अंधों में काना राजा

Subject Related

Group Number :	6
Group Id :	16794362
Group Maximum Duration :	0
Group Minimum Duration :	0
Revisit allowed for view? :	No
Revisit allowed for edit? :	No
Break time:	0
Group Marks:	20

Subject Related

Section Id :	167943121
Section Number :	1
Section type :	Online

Mandatory or Optional:	Mandatory
Number of Questions:	20
Number of Questions to be attempted:	20
Section Marks:	20
Display Number Panel:	Yes
Group All Questions:	No

Sub-Section Number:	1
Sub-Section Id:	167943308
Question Shuffling Allowed :	Yes

Question Number : 101 Question Id : 1679435502 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct : 1 Wrong : 0.25

If L and R denote inductance and resistance, respectively, then the dimension of L/R is given by:

Options :

☐ $M^{\circ}L^{\circ}T^{\circ}$

☒ $M^{\circ}L^{\circ}T$

☐ MLT°

☐ $ML^{\circ}T$

Question Number : 102 Question Id : 1679435503 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct : 1 Wrong : 0.25

In an intrinsic semiconductor relation between number of free electrons (n_e) in conduction band and holes (n_h) in valence band is given by:

Options :

☒ $n_e = n_h$

☐ $n_e > n_h$

☐ $n_e < n_h$

☐ $n_e = 2n_h$

Question Number : 103 Question Id : 1679435504 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct : 1 Wrong : 0.25

In an unbiased p – n junction diode, the location of Fermi level in p and n region:

Options :

- ✔ Is at the same height
- ✘ In p it is higher than n
- ✘ In n it is higher than p
- ✘ In both it is in the valence band

Question Number : 104 Question Id : 1679435505 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct : 1 Wrong : 0.25

Following is the truth table for a certain GATE. Identify the gate.

Input		Output
A	B	C
0	0	0
1	0	1
0	1	1
1	1	0

- Options :
- ✘ AND
 - ✘ OR
 - ✘ NAND
 - ✔ Exclusive OR

Question Number : 105 Question Id : 1679435506 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct : 1 Wrong : 0.25

In an optical fiber, the refractive index of core remains constant for:

- Options :
- ✔ Step index fiber
 - ✘ GRIN fiber
 - ✘ Single mode
 - ✘ Multi-mode fiber

Question Number : 106 Question Id : 1679435507 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

The refractive index of core and cladding for a step index fiber is 1.52 and 1.41 respectively. Its critical angle at core cladding boundary is:

Options :

✓ 66.06°

✗ 68.06°

✗ 67.06°

✗ 65.06°

Note: For this question, discrepancy is found in question/answer. So, this question is ignored for all candidates.

Question Number : 107 Question Id : 1679435508 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

The light gathering power in optical fiber is represented by:

Options :

✓ Acceptance angle

✗ Core

✗ Cladding

✗ Sheath

Question Number : 108 Question Id : 1679435509 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

The refractive index values of core and cladding for a step index fiber are 1.52 and 1.41 respectively. Its numerical aperture is:

Options :

✗ 0.468

✓ 0.568

✗ 0.668

✗ 0.348

Question Number : 109 Question Id : 1679435510 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Diffraction pattern differs from interference pattern at:

Options :

- ☒ Intensity of first order maximum
- ☐ Number of minima
- ☐ Spacing between consecutive maxima
- ☐ Number of maxima

Note: For this question, discrepancy is found in question/answer. So, this question is ignored for all candidates.

Question Number : 110 Question Id : 1679435511 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

The resolving power of a diffraction grating is:

Options :

- ☒ Directly proportional to the order of the spectrum
- ☐ Inversely proportional to the order of the spectrum
- ☐ Twice the order of the spectrum
- ☐ Half of the order of the spectrum

Question Number : 111 Question Id : 1679435512 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

The phenomena of total internal reflection is used in:

Options :

- ☐ Diffraction grating
- ☐ Optical resonator
- ☐ Laser
- ☒ Optical fiber

Question Number : 112 Question Id : 1679435513 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

In terms of path difference, phase difference is given by:

Options :

- ☐ $\sqrt{2} \times (\text{path difference})$
- ☐ $1.41 \times (\text{path difference})$
- ☐ $0.41 \times (\text{path difference})$
- ☒ $\frac{2\pi}{\lambda} (\text{path difference})$

Question Number : 113 Question Id : 1679435514 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Anti-reflecting coating makes use of:

Options :

- ☐ Polarization
- ☐ Diffraction
- ☒ Interference in thin films
- ☐ Newton's law

Question Number : 114 Question Id : 1679435515 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

In Newton's ring experiment, the diameter of dark ring is proportional to:

Options :

- ☐ Natural numbers
- ☐ Odd natural numbers
- ☐ Even natural numbers
- ☒ Square roots of natural numbers

Question Number : 115 Question Id : 1679435516 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

In Newton's rings experiment, the diameter of bright ring is proportional to:

Options :

- ✖ Natural numbers
- ✖ Odd natural numbers
- ✖ Even natural numbers
- ✔ Square roots of odd natural numbers

Question Number : 116 Question Id : 1679435517 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

The ratio of intensities of two waves that produce interference pattern is 16 : 1. Deduce the ratio of maximum intensities in fringe system.

Options :

- ✖ 16:1
- ✔ 25:9
- ✖ 16:9
- ✖ 25:1

Question Number : 117 Question Id : 1679435518 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Fraunhofer and Fresnel Diffractions differ in:

Options :

- ✔ Distance between slit and source
- ✖ Distance between two sources
- ✖ Phase difference between incident and diffracted rays
- ✖ Path difference between incident and diffracted rays

Question Number : 118 Question Id : 1679435519 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

For Young's double slit experiment, we make use of the technique called:

Options :

- ✔ Division of wave front

- ✖ Division of amplitude
- ✖ Division of incident ray
- ✖ Multiple reflection

Question Number : 119 Question Id : 1679435520 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct : 1 Wrong : 0.25

In an optical microscope, the objective lens produces:

Options :

- ✔ An enlarged real image
- ✖ An enlarged virtual image
- ✖ A diminished virtual image
- ✖ A diminished real image

Question Number : 120 Question Id : 1679435521 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct : 1 Wrong : 0.25

If the square of the diameter of the 5th dark ring in Newton's rings is 5 mm, then for the 10th dark ring, it will be:

Options :

- ✖ 5 mm
- ✔ 10 mm
- ✖ 1.41 mm
- ✖ 0.707 mm

Subject Related

Group Number :	7
Group Id :	16794363
Group Maximum Duration :	0
Group Minimum Duration :	0
Revisit allowed for view? :	No
Revisit allowed for edit? :	No
Break time:	0
Group Marks:	20

	Subject Related
Section Id :	167943122
Section Number :	1
Section type :	Online
Mandatory or Optional:	Mandatory
Number of Questions:	20
Number of Questions to be attempted:	20
Section Marks:	20
Display Number Panel:	Yes
Group All Questions:	No

Sub-Section Number:	1
Sub-Section Id:	167943309
Question Shuffling Allowed :	Yes

Question Number : 121 Question Id : 1679435522 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

In Newton’s ring experiment, if an oil is inserted between plano convex lens and plane glass plate, the diameter of the n^{th} dark ring will:

Options :

✔ Reduce

✘ Remain same

✘ Change unpredictably

✘ Increase

Question Number : 122 Question Id : 1679435523 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

In Newton’s rings experiment, if the plano convex lens is lifted up by $\lambda/4$ distance, where λ = wavelength of incident light, the effect on ring structure will be as follows:

Options :

✘ The rings will disappear

✘ The central dark spot will increase in size

✔ The central spot will become bright

✘ The pattern will remain unchanged

Question Number : 123 Question Id : 1679435524 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

The correct form of Snell's law is:

Options :

☐ $\sin i / \sin r = n_1 / n_2$

☒ $\sin i / \sin r = n_2 / n_1$

☐ $\sin r = n_1 / n_2$

☐ $\sin i = n_2 / n_1$

Question Number : 124 Question Id : 1679435525 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Circularly polarised light is represented by:

Options :

☐ $x^2 + y^2 = z^2$

☐ $x^2 + y^2 = y^2$

☒ $x^2 + y^2 = A^2$

☐ $x^2 + y^2 = z^2 + B$

Question Number : 125 Question Id : 1679435526 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

According to Malu's Law, the intensity of polarised light emerging through the analyser varies with the angle θ as:

Options :

☒ $I_0 \cos^2 \theta$

☐ $I_0 \sin^2 \theta$

☐ $I_0 \cos \theta$

☐ $(I_0 \cos^2 \theta) / 2$

Question Number : 126 Question Id : 1679435527 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Brewster's law in terms of refractive index μ and i_p , the angle of incidence at which maximum polarization is observed, is expressed as:

Options :

☐ $\mu = \sin i_p$

☐ $\mu = \cos i_p$

☒ $\mu = \tan i_p$

☐ $\mu = \cot i_p$

Question Number : 127 Question Id : 1679435528 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

How much phase change is introduced by a quarter wave plate between ordinary and extra ordinary rays?

Options :

☐ π

☒ $\pi/2$

☐ 2π

☐ $\pi/4$

Question Number : 128 Question Id : 1679435529 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

For Fresnel type of diffraction, the wave front required is:

Options :

☒ Cylindrical

☐ Plane

☐ Triangular

☐ Square

Question Number : 129 Question Id : 1679435530 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

For Fraunhofer type of diffraction, the wave front required is:

Options :

- ☐ Cylindrical
- ☒ Plane
- ☐ Triangular
- ☐ Square

Question Number : 130 Question Id : 1679435531 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

If mobility of electron and holes is depicted by μ_e and μ_h respectively, then which of the following is true?

Options :

- ☐ $\mu_e = \mu_h$
- ☐ $\mu_e < \mu_h$
- ☒ $\mu_e > \mu_h$
- ☐ $\mu_e = 2 \mu_h$

Question Number : 131 Question Id : 1679435532 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Current gain in CE configuration of a transistor is:

Options :

- ☐ Less than one
- ☐ Between 0 and 1
- ☒ Around 100
- ☐ Negative

Question Number : 132 Question Id : 1679435533 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

The best assumption of Current gain in CB configuration of a transistor is:

Options :

✖ 0.01

✔ 0.98

✖ 1.98

✖ 2

Question Number : 133 Question Id : 1679435534 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

When used as a voltage regulator, a Zener diode should be:

Options :

✖ Forward biased

✔ Reverse biased

✖ Either forward or reverse biased

✖ Unbiased

Question Number : 134 Question Id : 1679435535 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

In a transistor, the base current has its value of the order of:

Options :

✖ Milliamperes

✔ Microamperes

✖ Kiloamperes

✖ Amperes

Question Number : 135 Question Id : 1679435536 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

For transistor as an amplifier, we make use of ____ region on its characteristics.

Options :

✔ active

- ✗ cut off
- ✗ saturation
- ✗ break down

Question Number : 136 Question Id : 1679435537 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

To make a transistor work as an amplifier, we connect it as:

Options :

- ✗ Collector forward bias
- ✓ Collector reverse bias
- ✗ Emitter reverse bias
- ✗ Base grounded

Question Number : 137 Question Id : 1679435538 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

With reference to a collector, an emitter is:

Options :

- ✗ Equally doped
- ✗ Lightly doped
- ✓ Heavily doped
- ✗ Half doped

Question Number : 138 Question Id : 1679435539 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

A zener diode is popular as a/an:

Options :

- ✗ Rectifier
- ✓ Regulator

✖ Amplifier

✖ Detector

Question Number : 139 Question Id : 1679435540 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct : 1 Wrong : 0.25

In saturation region on transistor characteristics, collector offers:

Options :

✖ High resistance

✔ Low resistance

✖ Medium resistance

✖ Zero resistance

Question Number : 140 Question Id : 1679435541 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct : 1 Wrong : 0.25

Reverse bias for a p-n junction is preferred in:

Options :

✖ Rectifier

✖ Transistor

✔ Photodiode

✖ Amplifier

Subject Related	
Group Number :	8
Group Id :	16794364
Group Maximum Duration :	0
Group Minimum Duration :	0
Revisit allowed for view? :	No
Revisit allowed for edit? :	No
Break time:	0
Group Marks:	20

Section Id :	167943123
Section Number :	1
Section type :	Online
Mandatory or Optional:	Mandatory
Number of Questions:	20
Number of Questions to be attempted:	20
Section Marks:	20
Display Number Panel:	Yes
Group All Questions:	No

Sub-Section Number:	1
Sub-Section Id:	167943310
Question Shuffling Allowed :	Yes

Question Number : 141 Question Id : 1679435542 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct : 1 Wrong : 0.25

The Fermi level for an extrinsic 'n' type semiconductor:

Options :

- ☐ Lies mid-way between the valence band and conduction band
- ☒ Lies towards the conduction band
- ☐ Lies towards the valence band
- ☐ Does not exist

Question Number : 142 Question Id : 1679435543 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct : 1 Wrong : 0.25

A solar cell requires:

Options :

- ☐ Forward external bias
- ☐ Reverse external bias
- ☒ Zero bias
- ☐ Coupled bias

Question Number : 143 Question Id : 1679435544 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct : 1 Wrong : 0.25

With increase in temperature, for n type semiconductor, what is true with the Fermi level?

Options :

- ✗ It reaches the conduction band
- ✗ It reaches the valence band
- ✓ It reaches the centre of the forbidden energy band gap
- ✗ It disappears

Question Number : 144 Question Id : 1679435545 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

With increase in temperature, for p type semiconductor, what is true with regard to the Fermi level?

Options :

- ✗ It reaches the conduction band
- ✗ It reaches the valence band
- ✓ It reaches the centre of the forbidden energy band gap
- ✗ It disappears

Question Number : 145 Question Id : 1679435546 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

In a bridge rectifier, the rectification efficiency is around:

Options :

- ✗ 60%
- ✗ 70%
- ✓ 80%
- ✗ 90%

Question Number : 146 Question Id : 1679435547 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

To explain the operation of BJT, we need to consider:

Options :

- ✗ Majority carriers

- ☐ Minority carriers
- ☒ Both majority and minority carriers
- ☐ Neither majority nor minority carriers

Question Number : 147 Question Id : 1679435548 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

To represent the symbol of BJT, we use arrow head on:

Options :

- ☒ Emitter
- ☐ Collector
- ☐ Base
- ☐ Both collector and base

Question Number : 148 Question Id : 1679435549 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Output characteristics of transistor in CE mode represent resistance that is of the value:

Options :

- ☒ High
- ☐ Medium
- ☐ Low
- ☐ Zero

Question Number : 149 Question Id : 1679435550 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Input characteristics of transistor in CE mode represents resistance that is of value:

Options :

- ☐ High
- ☐ Medium

✓ Low

✗ Zero

Question Number : 150 Question Id : 1679435551 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

When transistor is used as a switch, we make use of the following regions' operation:

Options :

✗ Active and saturation

✓ Saturation and cutoff

✗ Cut off and active

✗ Cut off and break down

Question Number : 151 Question Id : 1679435552 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Mho is associated with a unit of:

Options :

✗ Resistance

✓ Conductance

✗ Specific resistance

✗ emf

Question Number : 152 Question Id : 1679435553 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

When the temperature of a copper wire is increased, its resistance will:

Options :

✓ Increase

✗ Decrease

✗ Remain unaffected

✗ Disappear

Question Number : 153 Question Id : 1679435554 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

If a wire of resistance $2 R \Omega$, with uniform cross-section, is cut into two halves and the end points are joined together, the equivalent resistance obtained between these two points is:

Options :

☐ $R \Omega$

☐ $2 R \Omega$

☒ $R/2 \Omega$

☐ $R/4 \Omega$

Question Number : 154 Question Id : 1679435555 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

When resistances are connected in series combination:

Options :

☐ Current remains same and voltage remains same

☐ Current is divided and voltage remains same

☒ Current remains same and voltage is divided

☐ Both current and voltage are divided

Question Number : 155 Question Id : 1679435556 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

We divide a piece of copper wire into ten equal parts. These parts are connected in parallel. The equivalent resistance of this combination will be equal to original resistance multiplied by a factor of:

Options :

☐ $1/10$

☒ $1/100$

☐ 1

☐ 10

Question Number : 156 Question Id : 1679435557 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

In domestic wiring, all the appliances are connected in:

Options :

- ☐ Series
- ☒ Parallel
- ☐ Random
- ☐ Series-parallel

Question Number : 157 Question Id : 1679435558 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Power is also defined as the rate of transfer "X" with respect to time the best choice of X is:

Options :

- ☐ Charge
- ☐ Current
- ☒ Energy
- ☐ Voltage

Question Number : 158 Question Id : 1679435559 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

A "Y" branch is the one that can be removed from the circuit without affecting the circuit. An appropriate choice for "Y" is:

Options :

- ☐ Shunt
- ☐ Series
- ☒ Redundant
- ☐ Parallel

Question Number : 159 Question Id : 1679435560 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Kirchhoff's current law is used for obtaining unknown _____ in the circuit.

Options :

☒ current

☐ voltage

☐ power

☐ resistance

Question Number : 160 Question Id : 1679435561 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

According to Kirchhoff's voltage law, the algebraic sum of the voltage around a closed loop in a circuit must be:

Options :

☒ Zero

☐ Negative

☐ Positive

☐ Unknown

Group Number :

Group Id :

Group Maximum Duration :

Group Minimum Duration :

Revisit allowed for view? :

Revisit allowed for edit? :

Break time:

Group Marks:

Subject Related

9

16794365

0

0

No

No

0

20

Subject Related

Section Id :

167943124

Section Number :

1

Section type :

Online

Mandatory or Optional:

Mandatory

Number of Questions:

20

Number of Questions to be attempted:

20

Section Marks:

20

Display Number Panel:

Yes

Group All Questions:

No

Sub-Section Number: 1
Sub-Section Id: 167943311
Question Shuffling Allowed : Yes

Question Number : 161 Question Id : 1679435562 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

A piece of silver wire has a resistance of $1\ \Omega$. What will be the resistance of manganin wire of one third the length and one third the diameter, if the resistivity of manganin is 30 times that of silver?

Options :

- ☐ $30\ \Omega$
- ☒ $90\ \Omega$
- ☐ $1\ \Omega$
- ☐ $0.09\ \Omega$

Question Number : 162 Question Id : 1679435563 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Out of the following, which one shows increase with the rise in temperature?

Options :

- ☐ Resistance only and not the resistivity
- ☐ Resistivity only and not the resistance
- ☒ Resistivity and resistance both
- ☐ Resistance and conductance both

Question Number : 163 Question Id : 1679435564 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

1 unit on the electricity bill represents:

Options :

- ☒ 1 kWh
- ☐ 1 kW
- ☐ 1 J
- ☐ 1 J/s

Question Number : 164 Question Id : 1679435565 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct : 1 Wrong : 0.25

In a four-band resistor, the last color indicates:

Options :

- ☐ Digit
- ☐ Multiplier
- ☒ Tolerance
- ☐ Power

Question Number : 165 Question Id : 1679435566 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct : 1 Wrong : 0.25

First three colors on a four-band resistor are yellow, violet and orange. The resistance value is:

Options :

- ☐ 37 k Ω
- ☒ 47 k Ω
- ☐ 57 k Ω
- ☐ 47 Ω

Question Number : 166 Question Id : 1679435567 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct : 1 Wrong : 0.25

When we see only three color bands on a resistor, its tolerance is:

Options :

- ☐ 10%
- ☒ 20%
- ☐ 30%
- ☐ 40%

Question Number : 167 Question Id : 1679435568 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct : 1 Wrong : 0.25

To convert a galvanometer to read current in a circuit, we connect:

Options :

- ☒ A small resistance in parallel with it
- ☐ A high resistance in parallel with it
- ☐ A small resistance in series with it
- ☐ A high resistance in series with it

Question Number : 168 Question Id : 1679435569 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

If we plot a graph for V (voltage across resistor) vs current I passing through a resistor, the slope of this graph represents:

Options :

- ☒ Resistance
- ☐ Conductance
- ☐ Potential difference
- ☐ Power

Question Number : 169 Question Id : 1679435570 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

If we plot a graph for V (voltage across resistor) vs current I passing through a resistor, the nature of this graph will be:

Options :

- ☒ A straight line with positive slope
- ☐ A straight line with negative slope
- ☐ A straight line parallel to x axis
- ☐ A straight line parallel to y axis

Question Number : 170 Question Id : 1679435571 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

In case of a metal wire, if we reduce its temperature while maintaining constant voltage across it, the current passing through it will::

Options :

- ☐ Decrease
- ☒ Increase
- ☐ Remain unchanged
- ☐ Show unpredictable behavior

Question Number : 171 Question Id : 1679435572 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

The operation of an alternator is based upon the principle of:

Options :

- ☐ Mutual inductance
- ☒ Electromagnetic induction
- ☐ Displacement current
- ☐ Hysteresis

Question Number : 172 Question Id : 1679435573 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

The unit of angular velocity used to describe an ac signal is:

Options :

- ☐ Cycles/sec
- ☐ Radians
- ☒ Radians/sec
- ☐ Cycles.sec

Question Number : 173 Question Id : 1679435574 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

In case of electromagnetic induction, Lenz's law represents the conservation of:

Options :

- ☐ Charge

✓ Energy

✗ Momentum

✗ Mass

Question Number : 174 Question Id : 1679435575 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

The unit of magnetic flux is:

Options :

✗ Tesla

✓ Weber

✗ Weber/m²

✗ Ohm

Question Number : 175 Question Id : 1679435576 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Impedance is a:

Options :

✗ Real quantity

✗ Imaginary quantity

✓ Complex quantity

✗ Scalar quantity

Question Number : 176 Question Id : 1679435577 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

The reactance offered by an inductor is given by:

Options :

✓ $2\pi fL (\Omega)$

✗ $2\pi fL (\Omega^{-1})$

✖ $1/2\pi fL (\Omega)$

✖ $1/2\pi fC(\Omega)$

Question Number : 177 Question Id : 1679435578 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

The phase difference between current and voltage in a pure resistive circuit is:

Options :

✖ π

✔ 0°

✖ 2π

✖ 90°

Question Number : 178 Question Id : 1679435579 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

The phase difference between current and voltage in a pure inductive circuit is:

Options :

✖ π

✖ 0°

✖ 2π

✔ 90°

Question Number : 179 Question Id : 1679435580 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

The phase difference between current and voltage in a pure capacitive circuit is:

Options :

✖ π

✖ 0°

✖ 2π

✔ 90°

Question Number : 180 Question Id : 1679435581 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Which of the following cannot store energy?

Options :

✓ Resistor

✗ Inductor

✗ Capacitor

✗ Battery

Subject Related

Group Number :	10
Group Id :	16794366
Group Maximum Duration :	0
Group Minimum Duration :	0
Revisit allowed for view? :	No
Revisit allowed for edit? :	No
Break time:	0
Group Marks:	20

Subject Related

Section Id :	167943125
Section Number :	1
Section type :	Online
Mandatory or Optional:	Mandatory
Number of Questions:	20
Number of Questions to be attempted:	20
Section Marks:	20
Display Number Panel:	Yes
Group All Questions:	No

Sub-Section Number:	1
Sub-Section Id:	167943312
Question Shuffling Allowed :	Yes

Question Number : 181 Question Id : 1679435582 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Inductive reactance for dc is:

Options :

- ☐ Infinite
- ☒ Zero
- ☐ Anything between zero and infinite
- ☐ Negative

Question Number : 182 Question Id : 1679435583 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Capacitive reactance for dc is:

Options :

- ☒ Infinite
- ☐ Zero
- ☐ Anything between zero and infinite
- ☐ Negative

Question Number : 183 Question Id : 1679435584 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

In a series LRC resonance circuit, the voltage drop across resistance is equal to:

Options :

- ☒ Supply voltage
- ☐ Voltage across L
- ☐ Voltage across C
- ☐ Zero

Question Number : 184 Question Id : 1679435585 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

In a series LRC resonance circuit, the magnitude of voltage drop across L is equal to:

Options :

- ☐ Supply voltage

☐ Voltage across R

☒ Voltage across C

☐ Zero

Question Number : 185 Question Id : 1679435586 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

At resonance, impedance of series LRC circuit is equal to its:

Options :

☒ R

☐ L

☐ C

☐ Reactance

Question Number : 186 Question Id : 1679435587 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

For a series LRC circuit, X_L vs frequency graph is:

Options :

☒ Straight line with positive slope

☐ Straight line with negative slope

☐ Parallel to x axis

☐ Parallel to y axis

Question Number : 187 Question Id : 1679435588 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

For a series LRC circuit, X_C vs frequency graph is:

Options :

☐ Straight line with positive slope

☐ Straight line with negative slope

✗ Parallel to x axis

✓ Hyperbolic

Question Number : 188 Question Id : 1679435589 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

A series LRC circuit magnifies the following at resonance:

Options :

✓ Voltage

✗ Current

✗ Resistance

✗ Impedance

Question Number : 189 Question Id : 1679435590 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

According to Faraday's law of electromagnetic induction, an emf is induced in a conductor whenever it:

Options :

✗ Lies in magnetic field

✓ Cuts magnetic flux

✗ Moves parallel to the direction of magnetic field

✗ Lies parallel to magnetic field

Question Number : 190 Question Id : 1679435591 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Correct choice of units for L and X_L are:

Options :

✗ Henry and Farad

✗ Farad and Ohm

✓ Henry and Ohm

✖ Farad and Volt

Question Number : 191 Question Id : 1679435592 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Correct choice of units for C and X_C are:

Options :

✖ Henry and Farad

✔ Farad and Ohm

✖ Henry and Ohm

✖ Farad and Volt

Question Number : 192 Question Id : 1679435593 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Which one of the following has its operation independent of frequency?

Options :

✖ Inductor

✖ Capacitor

✔ Resistor

✖ AC voltage source

Question Number : 193 Question Id : 1679435594 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Which one of the following transformer has its output voltage greater than its input?

Options :

✔ Step up

✖ Step down

✖ Isolation

✖ Ideal

Question Number : 194 Question Id : 1679435595 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct : 1 Wrong : 0.25

Total loss in a transformer is the sum of:

Options :

✘ Copper and iron

✔ Hysteresis and Eddy current

✘ Iron and Eddy current

✘ Copper and hysteresis

Question Number : 195 Question Id : 1679435596 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct : 1 Wrong : 0.25

Which Kind of loss in transformers is independent of frequency

Options :

✘ Iron

✔ Copper

✘ Total

✘ Hysteresis

Question Number : 196 Question Id : 1679435597 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct : 1 Wrong : 0.25

When the frequency applied to a series LRC circuit is increased, the impedance of the circuit:

Options :

✘ Decreases

✘ Increases

✘ First increases and then decreases after reaching a maximum value

✔ First decreases and then increases after reaching a minimum value

Question Number : 197 Question Id : 1679435598 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct : 1 Wrong : 0.25

When the frequency applied to a series LRC circuit is increased, the current of the circuit:

Options :

- ☐ Decreases
- ☐ Increases
- ☐ First decreases and then increases after reaching a minimum value
- ☒ First increases and then decreases after reaching a maximum value

Question Number : 198 Question Id : 1679435599 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Correct unit of electromotive force is:

Options :

- ☐ Joule
- ☐ Newton
- ☐ Coulomb
- ☒ Volt

Question Number : 199 Question Id : 1679435600 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

In India, electric power is distributed with frequency of:

Options :

- ☐ 40 Hz
- ☒ 50 Hz
- ☐ 60 Hz
- ☐ 70 Hz

Question Number : 200 Question Id : 1679435601 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

If an alternating current is represented by $i = 10 \sin 314t$, where t is in seconds, then its frequency is around:

Options :

- ☐ 40 Hz

✔ 50 Hz

✘ 60 Hz

✘ 70 Hz

Subject Related	
Group Number :	11
Group Id :	16794367
Group Maximum Duration :	0
Group Minimum Duration :	0
Revisit allowed for view? :	No
Revisit allowed for edit? :	No
Break time:	0
Group Marks:	20

Subject Related	
Section Id :	167943126
Section Number :	1
Section type :	Online
Mandatory or Optional:	Mandatory
Number of Questions:	20
Number of Questions to be attempted:	20
Section Marks:	20
Display Number Panel:	Yes
Group All Questions:	No

Sub-Section Number:	1
Sub-Section Id:	167943313
Question Shuffling Allowed :	Yes

Question Number : 201 Question Id : 1679435602 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct : 1 Wrong : 0.25

Unit of work function on the equation of photo electric effect is:

Options :
✘ Newton

✘ Watt

✔ Electron Volt

✘ Volt

Question Number : 202 Question Id : 1679435603 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Which statement(s), of the following, with regard to Einstein's prediction based upon photoelectric effect is true:

1. Energy was given to electromagnetic waves in separate quanta
2. Energy was carried by these waves in separate quanta
3. Energy in light is spread out on wavefronts

Options :

☐ 1 only

☐ 2 only

☒ 1 and 2 both

☐ 3 only

Question Number : 203 Question Id : 1679435604 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

The rest mass of photon is:

Options :

☒ 0

☐ Negligible

☐ 1

☐ Negative

Question Number : 204 Question Id : 1679435605 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Highest energy photons are produced by:

Options :

☐ Visible light

☐ Ultra violet light

☐ X-rays

✓ Gamma rays

Question Number : 205 Question Id : 1679435606 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

If the energy of an electron in the square well with width 3 Å for $n=1$ is 0.067×10^{-17} J, then for $n=2$ it will be:

Options :

✓ 0.268×10^{-17} J

✗ 0.134×10^{-17} J

✗ 0.603×10^{-17} J

✗ 0.468×10^{-17} J

Question Number : 206 Question Id : 1679435607 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

In a nuclear fission reactor, to slow down fast neutrons, we use:

Options :

✗ Control rods

✓ Moderator

✗ Coolant

✗ Air

Question Number : 207 Question Id : 1679435608 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

In a nuclear fission reactor, to control the fission rate, we use:

Options :

✓ Control rods

✗ Moderator

✗ Coolant

✗ Air

Question Number : 208 Question Id : 1679435609 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct : 1 Wrong : 0.25

For the purpose of particle acceleration, a linear accelerator uses:

Options :

- ☒ Static electric field
- ☐ Static magnetic field
- ☐ Laser radiation
- ☐ Combination of electric and magnetic field

Question Number : 209 Question Id : 1679435610 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct : 1 Wrong : 0.25

In order to achieve a self-sustained chain reaction, there exists a critical value that is defined in terms of _____ of nucleus.

Options :

- ☐ Temperature
- ☐ momentum
- ☒ size
- ☐ charge

Question Number : 210 Question Id : 1679435611 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct : 1 Wrong : 0.25

Hall effect can help to determine the following parameter:

Options :

- ☒ Mobility
- ☐ Mass
- ☐ Radius
- ☐ Charge

Question Number : 211 Question Id : 1679435612 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct : 1 Wrong : 0.25

A device that counts individual particles but cannot measure their energy is:

Options :

- ☐ Electroscopes
- ☐ Ionization chamber
- ☒ Geiger counter
- ☐ Cloud chamber

Question Number : 212 Question Id : 1679435613 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

The customary unit for nuclear cross-section is:

Options :

- ☐ amu
- ☒ barn
- ☐ eV
- ☐ Angstrom

Question Number : 213 Question Id : 1679435614 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Wave particle duality can be experimentally verified by the following experiment:

Options :

- ☒ Davisson Germer
- ☐ Rutherford gold leaf
- ☐ Double slit
- ☐ Hall effect

Note: For this question, discrepancy is found in question/answer. So, this question is ignored for all candidates.

Question Number : 214 Question Id : 1679435615 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Liquid drop model could not explain fission in:

Options :

✖ ^{235}U

✖ ^{239}Pu

✔ ^{243}Am

✖ ^{140}Ce

Question Number : 215 Question Id : 1679435616 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Owing to which of the following reactions do we receive energy from the Sun?

Options :

✖ Fission

✔ Fusion

✖ Chemical

✖ Electrostatic

Question Number : 216 Question Id : 1679435617 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Relative permeability of vacuum is:

Options :

✖ $4\pi \times 10^{-7}$

✔ 1

✖ 0

✖ 1 H/m

Question Number : 217 Question Id : 1679435618 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

For two parallel wires, separation d carrying current I_a and I_b in the same direction will have the force on a length of L of either wire is

Options :

✔ $(\mu_0 L I_a I_b) / 2\pi d$ attraction

- ✗ $(\mu_0 L I_a I_b) / \pi d$ attraction
- ✗ $(\mu_0 L I_a I_b) / 2\pi d$ Repulsion
- ✗ $(\mu_0 L I_a I_b) / \pi d$ Repulsion

Question Number : 218 Question Id : 1679435619 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Which of the following is a disadvantage of cyclotron?

Options :

- ✗ For higher values of energy, the path requires smaller radius
- ✓ For higher values of energy, the path requires larger radius
- ✗ For higher values of energy, the charge on particle must be simultaneously increased
- ✗ For higher values of energy, the charge on particle must be simultaneously decreased

Question Number : 219 Question Id : 1679435620 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Synchrotron addresses which of the following problems related to cyclotron when circulating proton reaches closer to velocity of light?

Options :

- ✗ Increasing radius
- ✗ Smaller radius
- ✓ Decrease in the frequency of revolution
- ✗ Increase in the frequency of revolution

Question Number : 220 Question Id : 1679435621 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Magnetic field strength in AT/m at the centre of a square coil with side 2 m and carrying current 1 amp is:

Options :

- ✓ $\frac{\sqrt{2}}{\pi}$

☒ $\frac{1}{\pi}$

☒ $\frac{\pi}{\sqrt{2}}$

☒ $\pi/2$

Subject Related

Group Number :	12
Group Id :	16794368
Group Maximum Duration :	0
Group Minimum Duration :	0
Revisit allowed for view? :	No
Revisit allowed for edit? :	No
Break time:	0
Group Marks:	20

Subject Related

Section Id :	167943127
Section Number :	1
Section type :	Online
Mandatory or Optional:	Mandatory
Number of Questions:	20
Number of Questions to be attempted:	20
Section Marks:	20
Display Number Panel:	Yes
Group All Questions:	No

Sub-Section Number:	1
Sub-Section Id:	167943314
Question Shuffling Allowed :	Yes

Question Number : 221 Question Id : 1679435622 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

1 C = ‘X’ times e, where e is charge on an electron.

Options :

☒ $X= 6.25 \times 10^{18}$

☒ $X= 1.25 \times 10^{18}$

✗ $X = 1.6 \times 10^{-19}$

✗ $X = 1.6 \times 10^{-18}$

Question Number : 222 Question Id : 1679435623 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Coulomb's law, $F = \frac{k(q_1 q_2)}{r^2}$, has its form very much similar to:

Options :

✓ Newton's gravitational force

✗ Ohm's law

✗ Snell's Law

✗ Moseley's Law

Question Number : 223 Question Id : 1679435624 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

In Coulomb's law, $F = \frac{k(q_1 q_2)}{r^2}$, constant k is expressed as (consider air as the medium):

Options :

✓ $\frac{1}{(4\pi\epsilon_0)}$

✗ $\frac{1}{(2\pi\epsilon_0)}$

✗ $(4\pi\epsilon_0)$

✗ $(4\pi\epsilon_0)^2$

Question Number : 224 Question Id : 1679435625 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Principle of superposition can be applied to:

Options :

✗ Electrostatic forces only

✖ Electric fields only

✔ Electrostatic forces and electric field both

✖ Electric charge only

Question Number : 225 Question Id : 1679435626 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

If you double the distance of a point from a dipole, the electric field drops by a factor of:

Options :

✖ 2

✖ 4

✔ 8

✖ 10

Question Number : 226 Question Id : 1679435627 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Electric field at a point that is located at the centre of a ring is:

Options :

✔ 0

✖ 1

✖ 2

✖ 3

Question Number : 227 Question Id : 1679435628 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

You should reject which of the following statements for a charge described in terms of charge on electron (e)

Options :

✖ $q = -2e$

✔ $q = -2.1e$

✗ $q = 3e$

✗ $q = 100e$

Question Number : 228 Question Id : 1679435629 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Specific charge on electron is:

Options :

✓ $-1.6 \times 10^{-19} \text{ C}$

✗ $1.6 \times 10^{-19} \text{ C}$

✗ $1.76 \times 10^{12} \text{ C/kg}$

✗ $9.1 \times 10^{-31} \text{ kg}$

Note: For this question, discrepancy is found in question/answer. So, this question is ignored for all candidates.

Question Number : 229 Question Id : 1679435630 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Two small identical conducting spheres have charges of $2 \times 10^{-9} \text{ C}$ and $-0.5 \times 10^{-9} \text{ C}$, respectively, and are 4 cm apart. Let's say the force is F_1 . Now they are brought in touch and then again separated by 4 cm, by applying the force F_2 . The relation between F_1 and F_2 is given by:

Options :

✗ $F_1 = F_2$

✗ $F_1 = 2F_2$

✗ $F_1 < F_2$

✓ $F_1 > F_2$

Question Number : 230 Question Id : 1679435631 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

1 volt =

Options :

✗ $1\text{N}/1\text{C}$

✓ $1\text{J}/1\text{C}$

✖ 1J/1N

✖ 1C/1N

Question Number : 231 Question Id : 1679435632 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

1 eV =

Options :

✔ $1.6 \times 10^{-19} \text{J}$

✖ $8.854 \times 10^{19} \text{J}$

✖ $1.6 \times 10^{19} \text{C}$

✖ $1.6 \times 10^{-19} \text{V}$

Question Number : 232 Question Id : 1679435633 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Gauss's law can be best compared with:

Options :

✖ Ohm's law

✔ Coulomb's law

✖ Snell's law

✖ Stoke's law

Question Number : 233 Question Id : 1679435634 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Value of capacitance depends on:

Options :

✔ Geometry of the plates forming capacitor

✖ Potential difference

✖ Charge

✖ Electric field intensity

Question Number : 234 Question Id : 1679435635 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

The equivalent of a series of capacitances is always:

Options :

✖ Greater than the greatest capacitance in the series

✔ Less than the least capacitance in the series

✖ Equal to the summation of all the capacitances in series

✖ Equal to the least value of capacitance in series

Question Number : 235 Question Id : 1679435636 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

A capacitor consists of two:

Options :

✖ Insulators separated by a conductor

✔ Conductors separated by an insulator

✖ Insulators separated by a dielectric

✖ Insulators separated by insulator

Question Number : 236 Question Id : 1679435637 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

A capacitor that stores energy of 0.5 J, and has capacitance of $1 \mu\text{F}$, has potential difference of ____ across it.

Options :

✔ 1000 V

✖ 100 V

✖ 1 V

✖ 10 V

Question Number : 237 Question Id : 1679435638 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Electric field intensity inside a hollow spherical capacitor is:

Options :

- ☒ 0
- ☐ 1 N/C
- ☐ 2 N/C
- ☐ 3 N/C

Question Number : 238 Question Id : 1679435639 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

A 50 μF capacitor is connected across 220 V supply. What charge does it take to if the voltage is increased to 400 V?

Options :

- ☒ $20 \times 10^{-3} \text{ C}$
- ☐ $10 \times 10^{-3} \text{ C}$
- ☐ $30 \times 10^{-3} \text{ C}$
- ☐ $40 \times 10^{-3} \text{ C}$

Question Number : 239 Question Id : 1679435640 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Which of the following does not represent an error while describing errors?

Options :

- ☒ Fundamental error
- ☐ Instrumental error
- ☐ Systematic error
- ☐ Random error

Question Number : 240 Question Id : 1679435641 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Which one out of below mentioned units is not a fundamental unit?

Options :

✖ Mole

✖ Candela

✔ Newton

✖ Second

Subject Related

Group Number :	13
Group Id :	16794369
Group Maximum Duration :	0
Group Minimum Duration :	0
Revisit allowed for view? :	No
Revisit allowed for edit? :	No
Break time:	0
Group Marks:	20

Subject Related

Section Id :	167943128
Section Number :	1
Section type :	Online
Mandatory or Optional:	Mandatory
Number of Questions:	20
Number of Questions to be attempted:	20
Section Marks:	20
Display Number Panel:	Yes
Group All Questions:	No

Sub-Section Number:	1
Sub-Section Id:	167943315
Question Shuffling Allowed :	Yes

Question Number : 241 Question Id : 1679435642 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

If length “L” , force “F” and time “T” are taken as fundamental quantities, dimensional equation of mass is given by:

Options :

✔ $[L^{-1}F^1T^2]$

✗ $[L^{-1}F^1T^1]$

✗ $[L^{-1}F^3T^2]$

✗ $[L^{-1}F^2T^2]$

Question Number : 242 Question Id : 1679435643 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

If length "L", force "F" and time "T" are taken as fundamental quantities, dimensional equation of density is given by:

Options :

✗ $[L^{-1}F^2T^2]$

✗ $[L^{-1}F^1T^2]$

✗ $[L^{-1}F^1T^1]$

✓ $[L^{-4}F^1T^2]$

Question Number : 243 Question Id : 1679435644 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

The effect of errors on reading of an instrument cannot be minimized by:

Options :

✓ Using an instrument whose least count is as small as possible

✗ Using an instrument whose least count is as large as possible

✗ Taking large number of readings

✗ Taking large magnitude of quantity

Question Number : 244 Question Id : 1679435645 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Vernier caliper is showing +0.07 mm when jaws are just closed. Hence to obtain actual reading of a radius of sphere:

Options :

✓ We should subtract 0.07 mm from mean reading

- ✗ We should add 0.07 mm to the mean reading
- ✗ We should divide the mean reading by 0.07 mm
- ✗ We should multiply the mean reading by 0.07 mm

Question Number : 245 Question Id : 1679435646 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

If described in terms of base units, 1 watt =

Options :

- ✗ $1 \text{ kg.s}^2/\text{m}^2$
- ✗ $1 \text{ kg.m}^2/\text{s}^2$
- ✓ $1 \text{ kg.m}^2/\text{s}^3$
- ✗ $1 \text{ kg}^2.\text{m}^2/\text{s}^2$

Question Number : 246 Question Id : 1679435647 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Light year is a unit that is used to represent:

Options :

- ✗ Time
- ✓ Length
- ✗ Angle
- ✗ Mass

Question Number : 247 Question Id : 1679435648 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Choose the physical quantity, from the following, that is not defined in terms of force per unit area.

Options :

- ✗ Pressure

✖ Stress

✔ Strain

✖ Young's modulus

Question Number : 248 Question Id : 1679435649 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Choose the physical quantity that is unit-less.

Options :

✖ Pressure

✖ Stress

✔ Strain

✖ Young's modulus

Question Number : 249 Question Id : 1679435650 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Which physical quantity does not have its unit as Pascal?

Options :

✖ Pressure

✖ Stress

✔ Strain

✖ Young's modulus

Question Number : 250 Question Id : 1679435651 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Consider the density of wood as 0.5 gm/cc in the CGS system of units. Its value in MKS unit is given by:

Options :

✔ 500

✖ 5000

✖ 50

✖ 0.5

Question Number : 251 Question Id : 1679435652 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

To accelerate a 2.0 kg mass by 4 m/sec^2 , we need a force of:

Options :

✖ 6 N

✔ 8 N

✖ 2 N

✖ 16 N

Question Number : 252 Question Id : 1679435653 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Inertial frame of reference is where Newton's ____ law holds good.

Options :

✔ first

✖ second

✖ third

✖ fourth

Question Number : 253 Question Id : 1679435654 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

P and Q are two mutually perpendicular vectors, where $|P| = 4 \text{ N}$ and $|Q| = 3 \text{ N}$. Then $|P+Q| = ?$

Options :

✖ 7 N

✔ 5 N

✖ 6 N

✖ 25 N

Question Number : 254 Question Id : 1679435655 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

The scalar product of two vectors has a magnitude that is proportional to (consider θ as angle between two vectors):

Options :

☐ $\sec\theta$

☒ $\cos\theta$

☐ $\operatorname{cosec}\theta$

☐ $\sin\theta$

Question Number : 255 Question Id : 1679435656 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Equal vectors have:

Options :

☐ Equal magnitude

☐ Equal directions

☒ Equal magnitude and directions

☐ Equal magnitudes but different directions

Question Number : 256 Question Id : 1679435657 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

For $\theta = 180^\circ$, $A \cdot B = ?$ (consider θ as angle between two vectors):

Options :

☐ AB

☐ BA

☐ 0

☒ $-AB$

Question Number : 257 Question Id : 1679435658 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

If a body is taken on the surface of the Earth and then on the Moon, which of the following is true?

Options :

- ☒ The mass of the body is same on the Earth and Moon
- ☐ The mass of the body is reduced on the Moon
- ☐ The mass of the body is increased on the Moon
- ☐ The weight of the body is same on the Earth and the Moon

Question Number : 258 Question Id : 1679435659 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

When a rocket is fired from the Earth:

Options :

- ☐ The law of conservation of energy is used
- ☒ The law of conservation of linear momentum is used
- ☐ The law of conservation of charge is used
- ☐ The Ohm's law is followed

Question Number : 259 Question Id : 1679435660 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Which of the following is true with regard to the force of friction?

Options :

- ☒ Static friction > kinetic friction > rolling friction
- ☐ Static friction < kinetic friction < rolling friction
- ☐ Static friction > kinetic friction < rolling friction
- ☐ Static friction < kinetic friction > rolling friction

Question Number : 260 Question Id : 1679435661 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Change in the KE of a particle is =

Options :

- ✓ Net work done on the particle
- ✗ Net work done by the particle
- ✗ Change in the momentum
- ✗ Change in the velocity

Subject Related	
Group Number :	14
Group Id :	16794370
Group Maximum Duration :	0
Group Minimum Duration :	0
Revisit allowed for view? :	No
Revisit allowed for edit? :	No
Break time:	0
Group Marks:	20

Subject Related	
Section Id :	167943129
Section Number :	1
Section type :	Online
Mandatory or Optional:	Mandatory
Number of Questions:	20
Number of Questions to be attempted:	20
Section Marks:	20
Display Number Panel:	Yes
Group All Questions:	No

Sub-Section Number:	1
Sub-Section Id:	167943316
Question Shuffling Allowed :	Yes

Question Number : 261 Question Id : 1679435662 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

1 kilowatt-hour =

Options :

- ✓ 3.60 MJ
- ✗ 3.60 J

✖ 3.6 kJ

✖ 3.6 mJ

Question Number : 262 Question Id : 1679435663 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Which of the below is an example of conservative force?

Options :

✖ Block sliding on across a floor that is not frictionless

✔ Gravitational force

✖ Body that is heated up

✖ Body that is thrown up

Question Number : 263 Question Id : 1679435664 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

During adiabatic process, the change in entropy is:

Options :

✖ Positive

✖ Negative

✔ Zero

✖ +10%

Question Number : 264 Question Id : 1679435665 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

In an ideal engine:

Options :

✔ All processes are reversible and no wasteful energy transfer occurs

✖ All processes are irreversible and no wasteful energy transfer occurs

✖ All processes are reversible and some wasteful energy transfer occurs

- ✗ All processes are irreversible and some wasteful energy transfer occurs

Question Number : 265 Question Id : 1679435666 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

A refrigerator is a device that uses work to transfer energy:

Options :

- ✓ From a low temperature reservoir to a high temperature reservoir
- ✗ From a high temperature reservoir to a low temperature reservoir
- ✗ From a low temperature reservoir to a low temperature reservoir
- ✗ From a high temperature reservoir to a high temperature reservoir

Question Number : 266 Question Id : 1679435667 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

One mole is:

Options :

- ✗ One of the SI units and represents the number of atoms in 12 g sample of Hydrogen
- ✗ Not an SI unit and represents the number of atoms in 12 g sample of Hydrogen
- ✓ One of the SI units and represents the number of atoms in 12 g sample of Carbon-12
- ✗ Not an SI unit and represent the number of atoms in 12 g sample of Hydrogen

Question Number : 267 Question Id : 1679435668 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

A harmonic motion is represented by $x = 0.1 \sin (1000t + 0.1)$. Its period of oscillation is:

Options :

- ✗ $\pi/100$ sec
- ✗ $\pi/200$ sec
- ✓ $\pi/500$ sec
- ✗ $\pi/1000$ sec

Question Number : 268 Question Id : 1679435669 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

A harmonic motion is represented by $x = 0.1 \sin(1000t + 0.1)$. Its frequency of oscillation is:

Options :

- ☒ 500/ π Hz
- ☐ 1000/ π Hz
- ☐ 200/ π Hz
- ☐ 300/ π Hz

Question Number : 269 Question Id : 1679435670 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Total energy of a particle performing SHM is:

Options :

- ☐ Minimum at extreme points
- ☐ Maximum at extreme points
- ☐ Minimum at mean point
- ☒ The same at every point

Question Number : 270 Question Id : 1679435671 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

For a particle performing SHM, a particle is:

Options :

- ☐ Always accelerated
- ☒ Alternately accelerated and retarded
- ☐ Always retarded
- ☐ Neither accelerated nor retarded

Question Number : 271 Question Id : 1679435672 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

In which of the following oscillators the amplitude varies with time?

Options :

- ☒ Damped oscillator
- ☐ Forced oscillator
- ☐ Undamped Oscillator
- ☐ Natural oscillator

Question Number : 272 Question Id : 1679435673 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

In simple pendulum:

Options :

- ☐ The radial component of gravitational force gives the restoring force and the tangential component gives the centripetal acceleration
- ☒ The radial component of gravitational force gives the centripetal acceleration and the tangential component gives the restoring force
- ☐ Oscillatory behavior cannot be resolved into components
- ☐ The oscillatory behavior is only due to the back and forth motion of the system

Question Number : 273 Question Id : 1679435674 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

The elastic constant that deals with volumetric strain is:

Options :

- ☐ Young's modulus
- ☒ Bulk modulus
- ☐ Modulus of rigidity
- ☐ Poisson's ratio

Question Number : 274 Question Id : 1679435675 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

The reciprocal of the bulk modulus is called as:

Options :

- ☐ Elasticity
- ☒ Compressibility
- ☐ Elastic limit
- ☐ Modulus of rigidity

Question Number : 275 Question Id : 1679435676 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Hooke's law gives relation between:

Options :

- ☒ Stress and strain
- ☐ Mass and velocity
- ☐ Force and acceleration
- ☐ Potential energy and height

Question Number : 276 Question Id : 1679435677 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Centre of mass:

Options :

- ☐ Is always inside the body
- ☐ Is always at the upper surface of the body
- ☐ Is always at the lower surface of the body
- ☒ Need not lie within the body

Question Number : 277 Question Id : 1679435678 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

If a system is isolated so that no external force acts on the system, then:

Options :

- ✗ The linear momentum remains zero
- ✗ The linear moment remains negative
- ✗ The linear moment remains positive
- ✓ The linear moment remains unchanged

Question Number : 278 Question Id : 1679435679 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

The net torque acting on the rigid body is represented as:

Options :

- ✗ Summation of rotational inertia and of the body and angular acceleration
- ✗ Subtraction of rotational inertia and of the body and angular acceleration
- ✓ Multiplication of rotational inertia and of the body and angular acceleration
- ✗ Division of rotational inertia and of the body and angular acceleration

Question Number : 279 Question Id : 1679435680 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

On comparing pure translation with pure rotation, the term equivalent to mass is:

Options :

- ✗ Angular velocity
- ✗ Angular acceleration
- ✓ Rotational Inertia
- ✗ Energy

Question Number : 280 Question Id : 1679435681 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Angular displacement is:

Options :

- ✓ Positive for counter-clockwise rotation

- ✖ Positive for clockwise rotation
- ✖ Negative for counter-clockwise rotation
- ✖ Zero for clockwise rotation

	Subject Related
Group Number :	15
Group Id :	16794371
Group Maximum Duration :	0
Group Minimum Duration :	180
Revisit allowed for view? :	No
Revisit allowed for edit? :	No
Break time:	0
Group Marks:	20

	Subject Related
Section Id :	167943130
Section Number :	1
Section type :	Online
Mandatory or Optional:	Mandatory
Number of Questions:	20
Number of Questions to be attempted:	20
Section Marks:	20
Display Number Panel:	Yes
Group All Questions:	No

Sub-Section Number:	1
Sub-Section Id:	167943317
Question Shuffling Allowed :	Yes

Question Number : 281 Question Id : 1679435682 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct : 1 Wrong : 0.25

What is a frequent situation that adolescents face with parents nowadays?

- Options :
- ✖ competition for resources at home
 - ✔ violating each other’s expectation
 - ✖ prioritising parents over friends

✖ managing the finances at home

Question Number : 282 Question Id : 1679435683 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Which of the following schemes was launched as a Centrally Sponsored Scheme on 15th August 1995, with a view towards enhancing enrolment, retention and attendance and simultaneously improving nutritional levels among children?

Options :

✔ Mid Day Meal Scheme

✖ The State Resource Centre(s)

✖ Jan Shikshan Sansthan

✖ Sarva Shiksha Abhiyan

Question Number : 283 Question Id : 1679435684 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Which of these is NOT a level in affective domain?

Options :

✔ Articulates

✖ Organises

✖ Values

✖ Responds

Question Number : 284 Question Id : 1679435685 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Identify the learner from the given description:

Varun enjoys reading and benefits from written notes. He learns more from the words on the page and he can excel in traditional examinations.

Options :

✖ Visual / Non-verbal Learning style

✔ Visual / Verbal Learning style

✖ Tactile Learning style

✘ Auditory Learning style

Question Number : 285 Question Id : 1679435686 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Which term is best used to describe the natural ability to learn a language without considering the intelligence, motivation and interest?

Options :

✔ Language aptitude

✘ Language attitude

✘ Language exactitude

✘ Language attribute

Question Number : 286 Question Id : 1679435687 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Which skill is being identified as the skill to develop in students to interpret or analyse while teaching history to the students?

Options :

✘ Ability to participate constructively as a member or leader in group discussions

✔ Recognition of the need to change as a normal process through which existence is improved

✘ Respect for accomplishments of man throughout history in solving problems

✘ Respect for the democracy of decision making

Question Number : 287 Question Id : 1679435688 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

A concept concerned with the relative equality in terms of numbers and proportions of women, men, girls and boys is known as:

Options :

✘ Gender equality

✘ Gender equity

✔ Gender parity

✘ Gender sensitivity

Question Number : 288 Question Id : 1679435689 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Which subject would be part of both social science and sciences?

Options :

✔ Management commerce

✘ Anthropology

✘ Biology

✘ Law

Note: For this question, discrepancy is found in question/answer. So, this question is ignored for all candidates.

Question Number : 289 Question Id : 1679435690 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

In a particular Mathematics class, a student can perform oral and written calculations with speed and ease. Which stage of cognitive domain is the student exhibiting?

Options :

✘ Knowledge

✘ Understanding

✘ Application

✔ Skill

Question Number : 290 Question Id : 1679435691 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

A teacher wants to make the students of class IX understand the impacts of demonetization on the common people. Which of these would be the best practice to impart of doing that?

Options :

✔ Constructing a questionnaire and conducting a survey

✘ Instructing students to read newspapers daily, and make a project on it with clippings of newspaper articles

✘ Instructing students to have a group discussion

✘ Instructing students to write an essay on it

Question Number : 291 Question Id : 1679435692 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Which of these examples does NOT integrate art, dance, music, craft with other subjects?

Options :

✘ Students manipulate a wallpaper design to practice common geometric motions such as rotation and reflection.

✘ Students learn a social science lesson by creating new portraits that reveal clues to the lives of their subjects through clothing, expressions, and background.

✘ Seventh graders combine science, dance, language and arts, as they compare the anatomy of a frog and a human being.

✓ Seventh graders watch an audio visual cross legged and cross armed to learn about good behaviors of an adolescent, at a community hall.

Question Number : 292 Question Id : 1679435693 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Which of these is NOT a major aspect of playwriting?

Options :

✘ Theme

✘ Genre

✘ Plot

✓ Cliché

Question Number : 293 Question Id : 1679435694 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Which of these is NOT a blog tool?

Options :

✘ Edublog

✘ Blogger

✘ Live journal

✓ Post date

Question Number : 294 Question Id : 1679435695 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Which of these is NOT an internet protocol?

Options :

- ☐ IP
- ☐ FTP
- ☐ HTTP
- ☒ DCP

Question Number : 295 Question Id : 1679435696 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Which of the following options gives the correct order of the components of motivation?

Options :

- ☒ Need leads to a drive, drive with incentive leads to consummatory activity.
- ☐ Drive leads to need, drive with incentive leads to consummatory activity.
- ☐ Need leads to a drive, drive without incentive leads to consummatory activity.
- ☐ Drive leads to need, drive without incentive leads to consummatory activity.

Question Number : 296 Question Id : 1679435697 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Which assessment method is useful for guidance and counseling students?

Options :

- ☐ Art work of students
- ☐ Simulations
- ☐ Research papers
- ☒ Psychological assessment

Question Number : 297 Question Id : 1679435698 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Which of these is NOT a key characteristic of assessment for learning?

Options :

- ☒ Learning objectives are minimally shared with students
- ☐ Students involved in their own assessment
- ☐ Teacher provides constructive feedback
- ☐ Teacher makes her expectations clear to her learners

Question Number : 298 Question Id : 1679435699 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Which of these tools is NOT a teacher evaluating tool?

Options :

- ☐ Students' performance
- ☐ Classroom observation
- ☒ Students' assessment
- ☐ Work Appraisals by management

Question Number : 299 Question Id : 1679435700 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Which of these is the most vital factor for accomplishing the inclusive education goals?

Options :

- ☐ Better community
- ☐ Good activities
- ☐ Good management
- ☒ Better attitudes and positive mindset of teachers

Question Number : 300 Question Id : 1679435701 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Which of these is NOT a complex task for a teacher teaching in an inclusive education system?

Options :

- ✗ Identifying the instructional strategy to be used for all children
- ✗ Developing the curriculum with an aim towards specific outcomes
- ✗ Understanding the specific learning needs of all students

✓ Accomodating the thought/idea that differently-abled children (children with special needs) can be made a part of a normal classroom

