Andhra Pradesh State Council of Higher Education

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Civil Engineering

Group Number :	1
Group Id :	62321724
Group Maximum Duration :	0
Group Minimum Duration :	180
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Group Marks:	180
Revisit allowed for group Instructions? :	Yes
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Minimum Instruction Time:	0

Teaching and Research Aptitude

Section Id :	62321747
Section Number :	1
Section type :	Online
Mandatory or Optional:	Mandatory
Number of Questions:	82
Number of Questions to be attempted:	82
Section Marks:	90
Display Number Panel:	Yes
Group All Questions:	No

Sub-Section Number:	1
Sub-Section Id:	623217139
Question Shuffling Allowed :	Yes

Question Number : 1 Question Id : 6232174164 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical
Wrong Marks : 0

A teacher meeting his students for the first time should

Options :

1. start teaching without caring interest

2. develop rapport with the students

3. give broad outline of the subject

4. develop rapport with the students and give broad outline of the subject

Question Number : 2 Question Id : 6232174165 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

All of the following statements regarding a teacher are correct except that he/she is.......

Options :

1. friend, guide and philosopher

2. the leader of the class

3. the facilitator for effective learning

4. pouring the knowledge what she/he knows

Question Number : 3 Question Id : 6232174166 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

The first and necessary step in the teaching is

Options :

1. organizing teaching-learning material

2. knowing the background of students

3. knowing the subject well

4. planning before hand

The development of a student's personality is affected mostly by

Options :

1. teaching methods

2. subject-matter

3. relationship between teacher and student

4. student's knowledge

The best method of teaching for different concepts is

Options :

1. Dolton method

2. Heuristic method

3. Lecture method

4. Personalized method

**Question Number : 6 Question Id : 6232174169 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Wrong Marks : 0**

Students can have direct experience in classroom teaching at the level of

Options :

1. Symbolic

2. Iconic

3. Enactive

4. Didactic

**Question Number : 7 Question Id : 6232174170 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Wrong Marks : 0**

If a teacher adopts religious teaching in the classroom, it amounts to

Options :

1. against the constitution

2. correct according to his religion

3. not against national spirit

4. not against the code of ethics

**Question Number : 8 Question Id : 6232174171 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Wrong Marks : 0**

If a student becomes unconscious suddenly in the classroom, what you do is

Options :

1. making arrangement to send him home

2. giving first-aid to him

3. report to the principal's office

4. contact the parents of the student

Question Number : 9 Question Id : 6232174172 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

Teacher's professionalism may be assessed in terms of all the following commitments

except

Options :

1. commitment to the parents and community

2. commitment to the religion and caste

3. commitment to the work and student

4. commitment to colleagues and office staff

Question Number : 10 Question Id : 6232174173 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

A statistical hypothesis is

Options :

1. a statement reported to population parameter

2. a statement related to research problem

3. a statement made by principal investigator

4. a statement related to statistic

Question Number : 11 Question Id : 6232174174 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical
Wrong Marks : 0

In a Research Report, Research gap analysis comes

Options :

1. after literature survey

2. before literature survey

3. after collection of data

4. after the research methodology

Question Number : 12 Question Id : 6232174175 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical
Wrong Marks : 0

Review of literature from general to specific is called

Options :

1. Inductive

2. Deductive

3. Chronological

Question Number : 13 Question Id : 6232174176 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical
Wrong Marks : 0

Research design does not contain the following aspect.

Options :

1. The nature of data required

2. The type of data collection method

3. Type of techniques used for analysis

4. Need for the study

Question Number : 14 Question Id : 6232174177 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical
Wrong Marks : 0

A measure of internal consistency, that is how closely related a set of items are as a group is _____.

Options :

1. Chi square test

2. ANOVA

3. Cronbach's Alpha

4. Level of significance

Question Number : 15 Question Id : 6232174178 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical
Wrong Marks : 0

The probability rejecting H_0 when it is true is called

Options :

1. Type one error

2. Type two error

3. Level of significance

4. Confidence level

Question Number : 16 Question Id : 6232174179 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical
Wrong Marks : 0

The full form of DOI is

Options :

1. Digital Object Identifier

2. Digital Observation Identification

3. Digital Object Identity

4. Digital Order Identifier

Question Number : 17 Question Id : 6232174180 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical
Wrong Marks : 0

The following is not a citation style.

Options :

1. APA

2. MLA

3. Chicago/Turbian

4. Scopus

Question Number : 18 Question Id : 6232174181 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Wrong Marks : 0

The following is not included in the five ethics of research.

Options :

1. Informed consent

2. Respect for privacy

3. Proper citation to earlier works

4. Loyal to funding agency

Sub-Section Number:	2
Sub-Section Id:	623217140
Question Shuffling Allowed :	Yes

Question Id : 6232174182 Question Type : COMPREHENSION Sub Question Shuffling Allowed : Yes Group Comprehension
Questions : No
Question Numbers : (19 to 27)
Question Label : Comprehension

Read the following passage and answer the questions given:

Our times seem poised to witness the resurgence of the romantic vision of human life, a view that underlines the importance of the spiritual by conceiving of life as a quest. In such a view, there are many obstacles and difficulties along the way, but if the seeker persists, then he or she will be rewarded by the union with a higher power or the spirit. In contrast the rationalist vision is sceptical of all higher powers and exalted aims of life and likes to show that all gods have clay feet. The romantic vision also emphasizes an intimate connection between human kind and universe, between self and not-self while the rationalist insists on an enduring separation between the two. He looks down at the romantic view as a scientifically wrong and philosophically confused reaction to the objective rift between mind and nature. For the rationalist, the romantic is engaged in a futile and regressive revolt against the 'bad news' of the Enlightenment: Separateness.

As a broader intellectual and social current, the romantic resurgence is more characteristic of Western societies than of most non-western ones where the romantic vision never lost its ascendancy over the rational. Or, to put it more accurately, the *Ur-*romantic vision of non-western societies generally remained oblivious of separateness and this differs from the Western post-enlightenment romantic sensibility which has been struggling to overcome the rift even as it has remained exquisitely aware of it.

Sub questions

Question Number : 19 Question Id : 6232174183 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Wrong Marks : 0

What has been our observation of contemporary reality?

Options :

1. Rise of postmodernism

2. Marxist ideology

3. Revival of romantic view of life

4. Democratic tendencies

Question Number : 20 Question Id : 6232174184 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

Which view challenges the spiritual seeker?

Options :

1. Life as a quest

2. Faith in one God

3. Belief in pantheon of gods

4. Life is absurd and has no meaning

Question Number : 21 Question Id : 6232174185 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

How does one define spirituality?

Options :

1. Prayer for forgiveness

2. Life after death

3. Sinless actions

4. Union with a higher spirit

Question Number : 22 Question Id : 6232174186 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

What do you understand by "all gods have clay feet"?

Options :

1. Idols are made of clay

2. Sceptical of all higher powers

3. Romantic view of gods

4. Gods are earthly

Question Number : 23 Question Id : 6232174187 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical
Wrong Marks : 0

What is the "bad news" of enlightenment for romantics?

Options :

1. Separation between the self and the non-self

2. Intimate connection between man and the world

3. Science and philosophy coming together

4. Mind, nature and soul as one

Question Number : 24 Question Id : 6232174188 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical
Wrong Marks : 0

What is the characteristic of resurgence of romantic vision?

Options :

1. Eastern societies

2. African societies

3. Western societies

4. The Middle East societies

Question Number : 25 Question Id : 6232174189 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical
Wrong Marks : 0

Which of the societies have never lost their romantic vision?

Options :

1. Western societies

2. The American societies

3. The European societies

4. Non-western societies

Question Number : 26 Question Id : 6232174190 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical
Wrong Marks : 0

Western post-romantic enlightenment is aware of the

Options :

1. importance of spirituality

2. rift between the rational and the romantic

3. existential dilemma

4. cult of irrationality

Question Number : 27 Question Id : 6232174191 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

What is the central concept of the prose passage?

Options :

1. Resurgence of Romantic vision

2. Intellectual aspiration

3. Lack of spirituality

4. Philosophical confusion

Sub-Section Number:	3
Sub-Section Id:	623217141
Question Shuffling Allowed :	Yes

Question Number : 28 Question Id : 6232174192 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical
Wrong Marks : 0

Which one of these must be avoidable for effective communication?

Options :

1. Politeness

2. Listening

3. Sharing of activity

4. Ambiguity

Question Number : 29 Question Id : 6232174193 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical
Wrong Marks : 0

According to Eric Ashby,the fourth revolution in communication is

Options :

1. Printing

2. Written word

3. Home school

4. Electronics

Question Number : 30 Question Id : 6232174194 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical
Wrong Marks : 0

'Synatactics' is relating to

Options :

1. principles of sounds

2. characteristics of language

3. rules of signs

4. construction of sentence

Question Number : 31 Question Id : 6232174195 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical
Wrong Marks : 0

'Anxiety tension' is a behaviour in communication comes under

Options :

1. Physical barrier

Psychological barrier

2.

Technical barrier

3.

Cultural barrier

4.

Question Number : 32 Question Id : 6232174196 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical
Wrong Marks : 0

'Iconic Domain' in the Edgar Dales Cone of experience is related to

Options :

Learning by doing

1.

Learning through observation

2.

Learning through abstraction

3.

Learning by experience

4.

Question Number : 33 Question Id : 6232174197 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical
Wrong Marks : 0

The book 'Human Communication Theory – A comparative Essays' written by

Options :

T.R. Nelson

1.

Edward Bono

2.

Edward Berlo

3.

Frank Dance

4.

Question Number : 34 Question Id : 6232174198 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical
Wrong Marks : 0

'Semantics' is a major branch of Linguistics which says about the

Options :

Study of origin of language

1.

Structure of language

2.

Meaning of language

3.

Difference in the languages

4.

Question Number : 35 Question Id : 6232174199 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical
Wrong Marks : 0

Technological literacy is a skill referred to the field of

Options :

Industry

1.

Education

2.

Space science

3.

Environment

4.

Question Number : 36 Question Id : 6232174200 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

Student Information System (SIS) is used for the maintenance of

Options :

1. student response system

2. student data

3. student attendance

4. display of examination results

Question Number : 37 Question Id : 6232174201 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical
Wrong Marks : 0

What is the number that comes next in the sequence?

2, 10, 30, 56, _____.

Options :

1. 84

2. 72

3. 90

4. 100

Question Number : 38 Question Id : 6232174202 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical
Wrong Marks : 0

Which letters in the order will follow the blank spaces?

Z, X, V, T, R, _____, _____.

Options :

1. L, J

2. N, L

3. H, J

4. P, N

Question Number : 39 Question Id : 6232174203 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

If a : b = 2 : 3 and b : c = 7 : 9, then a : b : c =

Options :

1. 2 : 3 : 9

2. 2 : 7 : 9

3. 2 : 21 : 9

4. 14 : 21 : 27

Question Number : 40 Question Id : 6232174204 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

If the sum of the squares of three positive numbers, which are in the ratio 2 : 3 : 4 is 725,

then the sum of the numbers is

Options :

1. 45

2. 65

3. 75

4. 55

Question Number : 41 Question Id : 6232174205 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical
Wrong Marks : 0

The average of A, B, C is 60. The average of A and B is 65, then the value of C is _____.

Options :

1. 50

2. 60

3. 65

4. 55

Question Number : 42 Question Id : 6232174206 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical
Wrong Marks : 0

A's income is 12% more than that of B's income. Then B's income is less than A's income by

Options :

1. 12%

2. $10\frac{2}{3}\%$

3. $10\frac{5}{7}\%$

$$15\frac{2}{3}\%$$

4.

Question Number : 43 Question Id : 6232174207 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

A man covers 1/4th of his total journey by train and 2/3rd by bus and the remaining 20 km by bullock cart. His total journey is _____ km.

Options :

1. 200

2. 240

3. 217

4. 320

Question Number : 44 Question Id : 6232174208 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

The average of x and y is 55 and the average of y and z is 45. Then z – x =

Options :

1. 10

2. 20

3. 15

4. –20

Question Number : 45 Question Id : 6232174209 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

An investiment of Rs X become Rs 3720/- in 4 years and it become Rs 4080/- in 6 years under simple interest. What is the value of X?

Options :

1. 2,500

2. 2,800

3. 3,000

4. 3,250

Question Number : 46 Question Id : 6232174210 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

The words in the bottom row are related in the same way as the words in top row. Find the word and fill the blank.

Pallet, Easel, Brush

Text book, Lesson plan, _____.

Options :
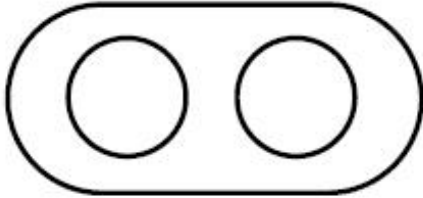
1. Artist pen

2. Report card
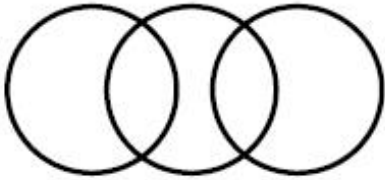
3. Paint

4. Teacher's desk

Question Number : 47 Question Id : 6232174211 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

The words in the bottom row are related in the same way as the words in top row. Find the word and fill the blank.

Daisy, Flower, Plant

Bungalow, House, _____.

Options :

1. Building

2. Cottage

3. Apartment

4. City

Sita is 8 years old. She has been asking her parents for a dog. Her parents have told her that they believe a dog would not be happy in an apartment, but they have given her permission to have a bird. Sita has not yet decided what kind of bird she would like to have. Then which of the following is correct.

Options :

1. Sita parents like birds better than the dogs

2. Sita does not like birds

3. Sita and her parents would like to move from the apartment

4. Sita and her parents live in an apartment
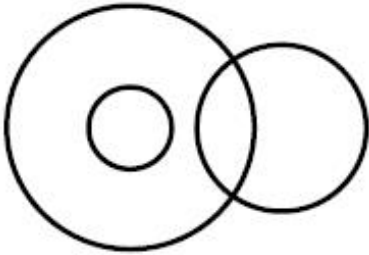
Question Number : 49 Question Id : 6232174213 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Wrong Marks : 0

The following statement and courses of action are given. Identify which course of action follows.

Statement: Severe drought is reported to have set in several parts of the country.

  I.   Government should immediately make arrangement for providing financial assistance to these affected.

  II. Food, water and fodder should immediately be sent to all these areas to save the people and cattle.

Options :

1. Only I follows

2. Only II follows

3. Neither I nor II follows

4. Both I and II follows

Question Number : 50 Question Id : 6232174214 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Wrong Marks : 0

Rama is in the East of Raju and Raju is in the North of Ranga. Rao is in the South of Ranga then in which direction of Rama is to Rao?

Options :

1. South-East

2. South-West

3. North-East

4. North-West

Question Number : 51 Question Id : 6232174215 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

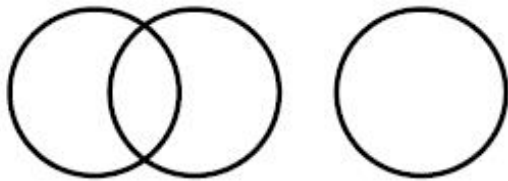Which of the following diagram correctly represents lions, elephants and animals?
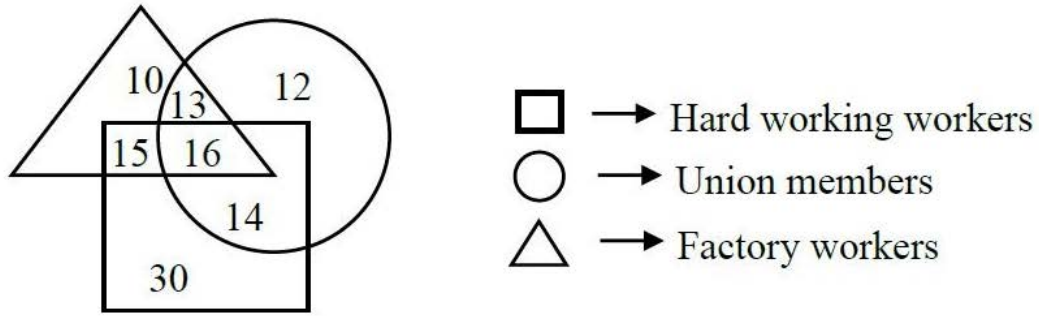
Options :

1.

2.

3.

4.

Question Number : 52 Question Id : 6232174216 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

A river always has.......
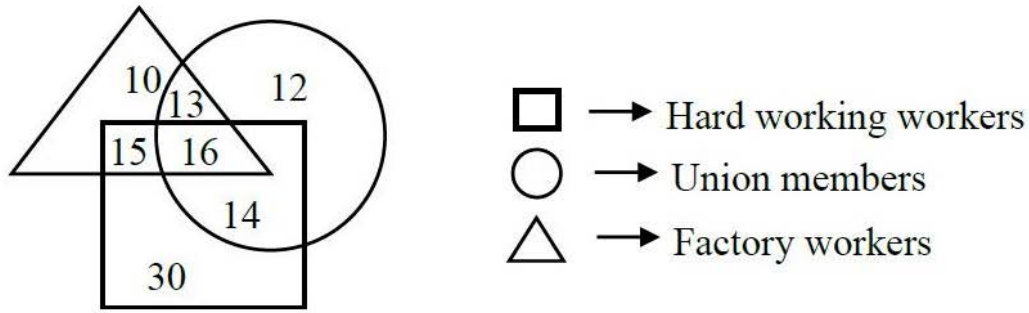
Options :

1. Boats

2. Delta

3. Fishes

4. Banks

Question Number : 53 Question Id : 6232174217 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

Appalakonda pointing a photograph said "I have no brother, and that man's father is my fathers son". Whose photograph was it?

Options :

1. His father

2. His son

3. His nephew

4. His own

Question Number : 54 Question Id : 6232174218 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

How many letter pairs in the word "PARADISE" one such pairs which contain the same number of letters between them as they have in the English alphabets ?
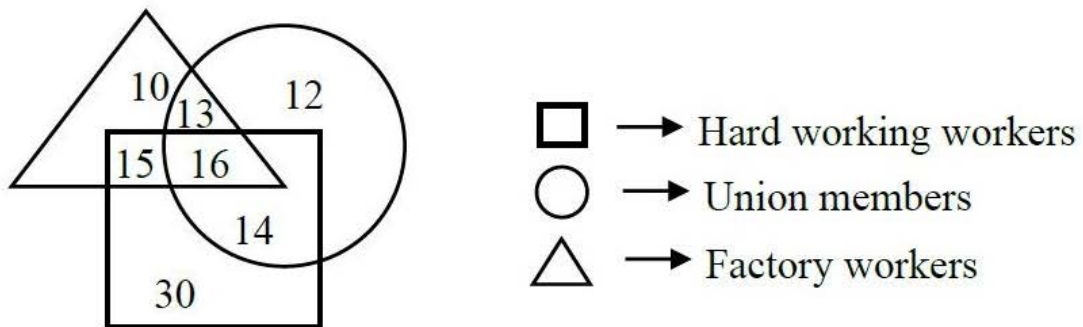
Options :

1. 2

2. 4

3. **3**

4. **1**

Question Number : 55 Question Id : 6232174219 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

Study the following figure carefully and answer the question given below.

□ ⟶ Hard working workers
○ ⟶ Union members
△ ⟶ Factory workers

The number of hard working factory workers who are also the members of the union is

Options :

1. **15**

2. **14**

3. **30**

4. **16**

Question Number : 56 Question Id : 6232174220 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

Study the following figure carefully and answer the question given below.

The number of factory workers who are hardworking but not the members of the union, is

Options :

1. 31

2. 45

3. 15

4. 16

Question Number : 57 Question Id : 6232174221 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Wrong Marks : 0

Study the following figure carefully and answer the question given below.

The number of union members who are working in factory and are not hardworking is

Options :

1. 13

2. 12

3. 14

4. 16

The following tabular statement represents the performance of six students S_1, S_2, S_3, S_4, S_5 and S_6 in an examination of various subjects as indicated. Study it carefully and answer the question below.

Subject / Student	Maths (Total marks 200)	Physics (Total marks 100)	Chemistry (Total marks 100)	English (Total marks 100)	General Education (Total marks 100)
S_1	184	72	85	85	57
S_2	140	80	81	75	84
S_3	131	74	90	81	87
S_4	195	68	76	96	91
S_5	138	78	91	72	81
S_6	165	82	93	60	76

The two students who got equal number of marks in all the subjects put together are

Options :

1. S_1 and S_3

2. S_3 and S_5

3. S_1 and S_5

4. S_2 and S_5

The following tabular statement represents the performance of six students S_1, S_2, S_3, S_4, S_5 and S_6 in an examination of various subjects as indicated. Study it carefully and answer the question below.

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S_4	195	68	76	96	91
S_5	138	78	91	72	81
S_6	165	82	93	60	76

The percentage of marks obtained by the student S_2 in all the subject put together is

Options :

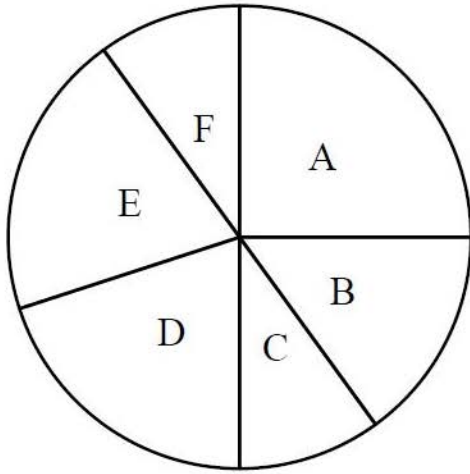1. 92

2. $85\dfrac{2}{3}$

3. $76\dfrac{2}{3}$

4. $80\dfrac{1}{3}$

Question Number : 60 Question Id : 6232174224 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

The following tabular statement represents the performance of six students S_1, S_2, S_3, S_4, S_5 and S_6 in an examination of various subjects as indicated. Study it carefully and answer the question below.

Subject / Student	Maths (Total marks 200)	Physics (Total marks 100)	Chemistry (Total marks 100)	English (Total marks 100)	General Education (Total marks 100)
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S_3	131	74	90	81	87
S_4	195	68	76	96	91
S_5	138	78	91	72	81
S_6	165	82	93	60	76

The student who got the highest number of marks in basic sciences, i.e., Maths, Physics and Chemistry.

Options :

1. S_6

2. S_1

3. S_4

4. S_5

The following pie chart indicates the monthly budget of a family.

A	Food 25%
B	Clothing 15%
C	Conveyance 10%
D	House rent
E	Health 20%
F	Saving 10%

Based on the above information, answer the question below.

If the total monthly income of the family is ₹ 25,000, then how much amount is spent on house rent per month, in rupees?
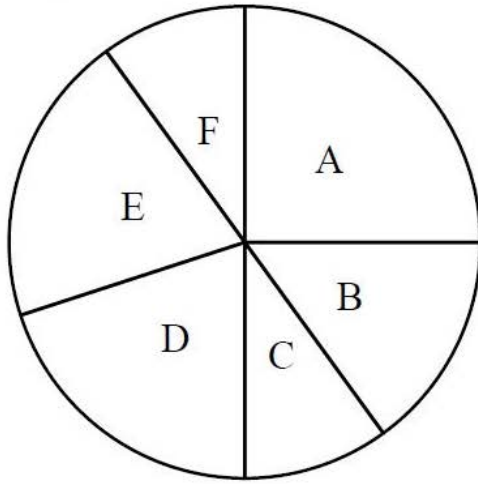
Options :

1. 2,500

2. 3,000

3. 4,500

4. 5,000

The following pie chart indicates the monthly budget of a family.

A	Food 25%
B	Clothing 15%
C	Conveyance 10%
D	House rent
E	Health 20%
F	Saving 10%

Based on the above information, answer the question below.

If the annual income of the family is ₹ 4,20,000, then the total amount spent in rupees, per month on clothing and house rent, put-together is
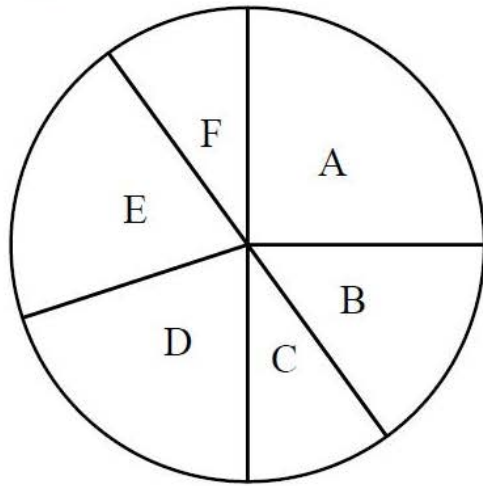
Options :

1. 12,000

2. 12,250

3. 9,500

4. 11,500

Question Number : 63 Question Id : 6232174227 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Wrong Marks : 0

The following pie chart indicates the monthly budget of a family.

A	Food 25%
B	Clothing 15%
C	Conveyance 10%
D	House rent
E	Health 20%
F	Saving 10%

Based on the above information, answer the question below.

If the half yearly expenditure on clothing by the family is 18,396 rupees, then the total monthly income of that family will be, in rupees

Options :

1. 40,440

2. 45,000

3. 52,300

4. 48,450

Sub-Section Number: 5
Sub-Section Id: 623217143
Question Shuffling Allowed : Yes

Question Number : 64 Question Id : 6232174228 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical
Wrong Marks : 0

Which of the following is not true about RAM?

Options :

1. RAM is a temporary storage area

2. RAM is volatile

3. RAM is the same as hard disk storage

4. Information stored in the RAM is gone when you turns the computer off

Question Number : 65 Question Id : 6232174229 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

The following is not considered as secondary storage.

Options :

1. Floppy disk

2. Optical disk

3. Hard disk

4. Flash disk

Question Number : 66 Question Id : 6232174230 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

The full form of WAN is

Options :

1. Wide Area Network

2. Wide Antenna Network

3. World Area Network

Wide Arial Network

4.

What is the name of web page address?

Options :

1. Directory

2. Protocol

3. Domain

4. URL

NMEICT stands for

Options :

1. National Mission on Education through ICT

2. National Mission on E-governance through ICT

3. National Mission on E-learning through ICT

4. National Mission on Evaluation through ICT

Which one of the following is not a search engine?

Options :

1. Google

2. Chrome

3. Yahoo

4. Bing

Question Number : 70 Question Id : 6232174234 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Wrong Marks : 0

A compiler is a software which converts

Options :

1. characters to bits

2. high level language to machine language

3. machine language to high level language

4. words to bits

Question Number : 71 Question Id : 6232174235 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Wrong Marks : 0

Computer virus is a

Options :

1. Software

2. Hardware

3. Bacteria

4. Firewall

The following is not an initiative of E-governance.

Options :

1. G2G

2. G2C

3. G2B

4. G2D

The horizontal transport of any atmospheric property by the wind is

Options :

1. Advenction

2. Radiation

3. Conduction

4. Reflection

The chemical which causes ozone depletion is

Options :

1. Chloro Fluro Carbons

2. Dioxins

3. Polyphenols

4. Rayon

The movement "Beej Bacho Andolan" was for the conservation of

Options :

1. Trees

2. Shrubs

3. Crops

4. Dogs

The source of energy in an ecosystem is

Options :

1. D.N.A.

2. R.N.A.

3. Sunlight

4. Water

Question Number : 77 Question Id : 6232174241 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Wrong Marks : 0

Greenhouse effect is caused by

Options :

1. increase in O_2

2. increase in CO_2

3. decrease in O_2

4. decrease in CO_2

Question Number : 78 Question Id : 6232174242 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Wrong Marks : 0

Normally, rain water is slightly

Options :

1. pure

2. acidic

3. toxic

4. basic

Question Number : 79 Question Id : 6232174243 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical
Wrong Marks : 0

The thickness of ozone layer is measured in

Options :

1. Mn

2. DU

3. Nm

4. Hg

Question Number : 80 Question Id : 6232174244 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical
Wrong Marks : 0

The full form of CTBT is

Options :

1. Comprehensive Nuclear Test Ban Treaty

2. Comprehensive Test Bank Trust

3. Comprehensive Tree cutting Ban Treaty

4. Comprehensive Test Based Temperature

Question Number : 81 Question Id : 6232174245 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical
Wrong Marks : 0

In an ecosystem, bacteria are

Options :

1. producers

2. consumers

3. decomposers

4. suppliers

Question Number : 82 Question Id : 6232174246 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical
Wrong Marks : 0

Which of the following committee first talked about the relationship between academic work and productive work?

Options :

1. Sargent Committee

2. Khere Committee

3. Zakir Hussian Committee

4. Jnanam Committee

Question Number : 83 Question Id : 6232174247 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical
Wrong Marks : 0

Ethic and aesthetics are components of

Options :

1. Ontology

2. Cosmology

3. Epistemology

4. Axiology

Question Number : 84 Question Id : 6232174248 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Wrong Marks : 0

Another name for Basic Education proposed by M.K. Gandhi is

Options :

1. Wardha Education plan

2. Free and Compulsory Education

3. Vocational Education

4. Primary Education

Question Number : 85 Question Id : 6232174249 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Wrong Marks : 0

The launch of satellite channel by IGNOU for technological Education for the growth and

development of Distance Education is called

Options :

1. Chandrayana-1

2. Eklavya channel

3. PSLV-3

4. Gnandarshan channel

National Assessment and Accreditation Council (NAAC) is an autonomous institution established under the aegies of

Options :

1. UGC

2. ICSSR

3. CSIR

4. AICTE

Autonomy in Higher Education implies freedom in

Options :

1. Policy-making

2. Curriculum development

3. Financial management

Administration

4.

Question Number : 88 Question Id : 6232174252 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

The recommendation of National Knowledge Commission is to fulfil the aim of to

Options :

1. create more teaching jobs

2. replace the private managed higher education by public institution

3. enable students to move from rural to urban

4. ensure to increase number of student enrolment in higher education

Question Number : 89 Question Id : 6232174253 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

Which among the following is NOT a Central University

Options :

1. Nalanda University

2. Assam University

3. Kurukshetra University

4. Guru Grhasidas Vishwavidyalaya

Question Number : 90 Question Id : 6232174254 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

India's first Defence University was established in the state of

Options :

1. Andhra Pradesh

2. Punjab

3. Haryana

4. Uttara Pradesh

Civil Engineering

Section Id :	62321748
Section Number :	2
Section type :	Online
Mandatory or Optional:	Mandatory
Number of Questions:	90
Number of Questions to be attempted:	90
Section Marks:	90
Display Number Panel:	Yes
Group All Questions:	No

Sub-Section Number:	1
Sub-Section Id:	623217144
Question Shuffling Allowed :	Yes

Question Number : 91 Question Id : 6232174255 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical
Wrong Marks : 0

A force of 100 N is acting at a point making an angle of 30º with horizontal. The components of this force along X and Y directions is

Options :

1. 50 N

2. 45 N

3. 20 N

4. 26 N

Question Number : 92 Question Id : 6232174256 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical
Wrong Marks : 0

When a body is subjected to two forces, the body will be in equilibrium if the two forces are

Options :

1. Collinear

2. equal

3. opposite

4. all the other options

Question Number : 93 Question Id : 6232174257 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical
Wrong Marks : 0

A simply supported beam of span (l) carries a uniformly distributed load (W) at the centre of the beam. The bending moment diagram will be

Options :

1. Parabola with maximum ordinate at the centre of the beam

2. Parabola with maximum ordinate at the end of the beam

3. Triangle with maximum ordinate at the centre of the beam

4. Triangle with maximum ordinate at the end of the beam

Question Number : 94 Question Id : 6232174258 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

The buckling load will be maximum for a column, if

Options :

1. One end of the column is clamped and other end is free

2. Both ends of the column is clamped

3. Both ends of the column are hinged

4. One end of the column is hinged and other is free

Question Number : 95 Question Id : 6232174259 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Wrong Marks : 0

A rod having cross-sectional area 100×10^{-6} m^2 is subjected to a tensile load. Based on the Tresca failure criterion, if the uniaxial yield stress of the material is 200 M Pa, the failure load is

Options :

1. 10kN

2. 20 kN

3. 100 kN

4. 200 kN

Question Number : 96 Question Id : 6232174260 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Wrong Marks : 0

The ratio of lateral strain to linear strain is known as

Options :

1. Modulus of elasticity

2. Modulus of rigidity

3. Poisson's ratio

4. Elastic limit

Structural steels, should have carbon content between 0.15 to 0.30%, if the carbon content goes much higher,

Options :

1. The ductility will be too low

2. The ductility will be high

3. The strength will not be satisfactory

4. No change in the ductility

Match the following

I.	Pith	1. Recent growth
II.	Cambium	2. Dead portion of tree
III.	Heart Wood	3. Innermost central portion
IV.	Sap Wood	4. Thin layer of sap between sap wood and inner bark

Options :

1. I-1   II-2   III-3   IV-4

2. I-4   II-3   III-2   IV-1

3. I-2   II-1   III-4   IV-3

4. I-3   II-2   III-4   IV-1

Question Number : 99 Question Id : 6232174263 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical
Wrong Marks : 0

Bitumen when added to soil mainly

Options :

1. Increases cohesion

2. accelerates compaction

3. acts as water proofing agent

4. fills voids in soils

Question Number : 100 Question Id : 6232174264 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical
Wrong Marks : 0

For a particular activity of a project, time estimates received from two engineers X and Y are as following, state who is more certain about the time of completion.

	T_o	T_m	T_p
X	4	5	8
Y	3	6	8

Choose the correct answer

Options :

1. Engineer X is more certain

2. Engineer Y is more certain

3. X and Y are equally certain

4. Data is insufficient

. Column I gives a list of test methods for evaluating properties of concrete and column

II gives the list of properties.

Column I	Column II
D. Resonant frequency test	1. Tensile strength
E. Rebound hammer test	2. Dynamic modulus of elasticity
F. Split cylinder test	3. Workability
G. Compacting factor test	4. Compressive strength

Choose the correct match

Options :

1. D-2   E-4   F-1   G-3

2. D-2   E-1   F-4   G-3

3. D-2   E-4   F-3   G-1

4. D-4   E-3   F-1   G-2

Consider the following statements:

X.   The compressive strength of concrete decreases with increase in water-cement ration of the concrete mix.

Y.   Water is added to the concrete mix for hydration of cement and workability

Z.   Creep and shrinkage of concrete are independent of the water-cement ratio in the concrete mix.

Identify the true statements are

Options :

1.
X and Y only

2.
X, Y and Z

3.
Y only

4.
Y and Z only

Match the following:

	Group –I		Group -II
T.	Factor to decrease ultimate strength to design strength.	1.	Upper bound on ultimate load
U.	Factor to increase working load to ultimate load for design.	2.	Lower bound on ultimate load
V.	Statistical method of ultimate load analysis	3.	Material partial safety factor
W.	Kinematical mechanism method of ultimate load analysis	4.	Load factor

Options :

1. T-1   U-2   V-3   W-4

2. T-2   U-1   V-4   W-3

3. T-3   U-4   V-2   W-1

4. T-4   U-3   V-2   W-1

Question Number : 104 Question Id : 6232174268 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical
Wrong Marks : 0

As per IS 800:2007, the cross section in which the extreme fiber can reach the yield stress, but cannot develop the plastic moment of resistance due to failure by local buckling is classified as

Options :

1. Plastic section

2. Compact section

3. Semi-compact section

4. Slender section

Question Number : 105 Question Id : 6232174269 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical
Wrong Marks : 0

The total unit weight (γt) of soil is 18.8 kN/M^3 the specific gravity (G) of solid particles of soil is 2.67 and the water content (w) of the soil is 12%, the dry unit weight (γd) is

Options :

1. 15.798 kN/m^3

2. 16.786 kN/m^3

3. 14.318 kN/m^3

4. 18.789 kN/m^3

Question Number : 106 Question Id : 6232174270 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical
Wrong Marks : 0

Consolidation and compressibility of soil

Options :

1. Is a measure of ability of soil to allow the water pass through its pores

2. Is a measure of the ability of soil to bear stresses without failure

3. Deals with changes in volume of pores in soil under load

None of the other options

4.

Question Number : 107 Question Id : 6232174271 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Wrong Marks : 0

According to Indian standards, the dispersing solution used in pipette method, for the determination of size of particle consists of

Options :

1. 7 g sodium carbonate, 43 g sodium hexameta-phosphate and 1 litre distilled water

2. 7 g sodium carbonate, 33 g sodium hexameta-phosphate and 1 litre distilled water

3. 7 g sodium carbonate, 23 g sodium hexameta-phosphate and 1 litre distilled water

4. 8 g sodium carbonate, 43 g sodium hexameta-phosphate and 1 litre distilled water

Question Number : 108 Question Id : 6232174272 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Wrong Marks : 0

When water content in a soil is reduced beyond the shrinkage limit, the soil will be in

Options :

1. Solid state

2. liquid state

3. semi-solid state

4. plastic state

Question Number : 109 Question Id : 6232174273 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Wrong Marks : 0

The equipotential line in a seepage through a soil medium is defined as the

1. Path of particles of water through saturated soil

2. Line connecting points of equal head of water

3. Flow of movement of fine particles of oil

4. Direction of flow particles

Question Number : 110 Question Id : 6232174274 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical
Wrong Marks : 0

The strength of a soil is usually identified by

Options :

1. Direct tensile stress

2. direct compress stress

3. Ultimate shear stress

4. effective stress

Question Number : 111 Question Id : 6232174275 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical
Wrong Marks : 0

According to Terzagh's equation, the bearing capacity of strip footing resting on cohesive soil ($c = 10$ kN/m^2) per unit depth and unit width (assume N_c as 5.7) is

Options :

1. 47 kN/m^2

57 kN/m^2

2.

67 kN/m^2

3.

77 kN/m^2

4.

Question Number : 112 Question Id : 6232174276 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical
Wrong Marks : 0

Westergaard's theories is more appropriate for

Options :

Layered soils

1.

homogeneous deposits

2.

Anisotropic soil

3.

normally consolidated homogenous soil

4.

Question Number : 113 Question Id : 6232174277 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical
Wrong Marks : 0

In Mohr's circle the angle made by the plane which consists of maximum shear stress with horizontal at origin of planes is

Options :

0°

1.

45°

2.

3. 90º

4. 180º

Question Number : 114 Question Id : 6232174278 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical
Wrong Marks : 0

Pile foundation are usually provided for

Options :

1. Bridges

2. high rise multistoreyed buildings

3. Runways

4. residential buildings

Question Number : 115 Question Id : 6232174279 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical
Wrong Marks : 0

According to Mayerhof, the foundation depth parameter is

Options :

1. Normal stress on equivalent free surface

2. Shear stress on equivalent free surface

3. Angle made by the equivalent free surface with horizontal

4. all of the other options

Question Number : 116 Question Id : 6232174280 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical
Wrong Marks : 0

For slopes of limited extent, the surface of slippage, is usually along

Options :

1. Parabolic arc

2. an elliptical arc

3. circular arc

4. a straight line

Question Number : 117 Question Id : 6232174281 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical
Wrong Marks : 0

Raising of water table in shallow foundations, near foundation level

Options :

1. Reduces bearing capacity

2. increases bearing capacity

3. does not affect bearing capacity

4. increases and then decreases the bearing capacity

Question Number : 118 Question Id : 6232174282 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical
Wrong Marks : 0

Newton's law of viscosity states that

Options :

1. Shear stress is directly proportional to the velocity

2. Shear stress is directly proportional to velocity gradient

3. Shear stress is directly proportional to shear strain

4. Shear stress is directly proportional to the viscosity

Question Number : 119 Question Id : 6232174283 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical
Wrong Marks : 0

The flow of pipe is laminar if

Options :

1. Reynolds number is equal to 2500

2. Reynolds number is equal to 4000

3. Reynolds number is more than 2500

4. None of the other options

Question Number : 120 Question Id : 6232174284 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical
Wrong Marks : 0

When the pipes are connected in series, the total rate of flow

Options :

1. Is equal to the sum of rate of flow in each pipe

2. Is equal to the reciprocal of rate of flow in each pipe

3. Is the same as flowing through each pipe

Question Number : 121 Question Id : 6232174285 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

The boundary layer flow will be attached to the surface if

Options :

$$\left(\frac{\partial u}{\partial y}\right)_{y=0} = 0$$

1.

$$\left(\frac{\partial u}{\partial y}\right)_{y=0} = +ve$$

2.

$$\left(\frac{\partial u}{\partial y}\right)_{y=0} = -ve$$

3.

None of the other options

4.

Question Number : 122 Question Id : 6232174286 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

Which one of the dimensionless number identifies the compressibility effect of a fluid?

Options :

Euler number

1.

Froude number

2.

Mach number

3.

Weber number

4.

Question Number : 123 Question Id : 6232174287 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Wrong Marks : 0

A hydraulic turbine rotates at N rpm operating under a net head H and having a discharge Q while developing an output power P. The specific speed is expressed as

Options :

1. $\dfrac{N\sqrt{P}}{H^{5/4}}$

2. $\dfrac{N\sqrt{Q}}{H^{5/4}}$

3. $\dfrac{N\sqrt{P}}{H^{3/4}}$

4. $\dfrac{N\sqrt{Q}}{H^{3/4}}$

Question Number : 124 Question Id : 6232174288 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Wrong Marks : 0

Which of the following pumps is preferred for flood control and irrigation applications?

Options :

1. Centrifugal pump

2. axial flow pump

3. Mixed flow pump

4. reciprocating pump

Question Number : 125 Question Id : 6232174289 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical
Wrong Marks : 0

In super critical flow, as depth of flow increases, the specific energy

Options :

1. Also increases

2. decreases

3. does not change

4. increases and then decreases

Question Number : 126 Question Id : 6232174290 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical
Wrong Marks : 0

The average pan coeffiecient of USWB class A land pan is equal to

Options :

1. 0.70

2. 0.75

3. 0.85

4. 0.95

Question Number : 127 Question Id : 6232174291 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Wrong Marks : 0

In channel routing by the Muskingum method, the values of routing constants c_0 and c_1 are -0.2 and 0.5 respectively. The value of the third routing constant c_2 is

Options :

1. 0.5

2. -0.2

3. -0.5

4. 0.7

Question Number : 128 Question Id : 6232174292 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Wrong Marks : 0

To which category does the Symon's rain gauge belong?

Options :

1. Tipping-bucket

2. ordinary rain gauge

3. Syphon

4. weighing

Question Number : 129 Question Id : 6232174293 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Wrong Marks : 0

Darcy's law for groundwater movement states that the velocity is proportional to

Options :

1. The hydraulic gradient

2. the square of hydraulic gradient

3. the logarithm of hydraulic gradient

4. the reciprocal of hydraulic gradient

Question Number : 130 Question Id : 6232174294 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Wrong Marks : 0

The duty at the field of a crop is 100 hectares/cumec. If the canal losses are 25%, what is the duty at the head of the canal?

Options :

1. 750

2. 1250

3. 250

4. 800

Question Number : 131 Question Id : 6232174295 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Wrong Marks : 0

The canals which are excavated directly from the rivers with or without head regulators are called

Options :

inundation canals

1.

ditch canals

2.

seasonal canals

3.

Natural canals

4.

Question Number : 132 Question Id : 6232174296 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Wrong Marks : 0

Hydraulic failures of earth dam accounts for

Options :

40% of the total failures

1.

30 % of the total failures

2.

50% of the total failures

3.

60% of the total failures

4.

Question Number : 133 Question Id : 6232174297 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Wrong Marks : 0

Chlorine gas used for disinfection combines with water to form hypochlorous acid (HOCl). The hypoclorous acid ionizes to form hypochorit ion (OCl⁻) in a reversible reaction

$$HOCl \rightleftharpoons H^+ + OCl^-$$
$$(K = 2.7 \times 10^{-8} \text{ at } 20^\circ C)$$

The equilibrium of which is governed by pH. The sum of HOCl and OCl⁻ is known as free chlorine residuals. The 90% fraction of HOCl in the free chlorine residual is

Options :

1. 4.8

2. 6.6

3. 7.5

4. 9.4

Question Number : 134 Question Id : 6232174298 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical
Wrong Marks : 0

A 2% solution of sewage sample is kept at an incubation temperature of 20°. If the initial DO and final DO values after 5 days incubation period are 8.5 mg/L and 5.5 mg/L respectively, then BOD will be

Options :

1. 50 mg/L

2. 150 mg/L

3. 250 mg/L

4. 350 mg/L

Question Number : 135 Question Id : 6232174299 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical
Wrong Marks : 0

For a flow of 5.7 MLD and a detention time of 2 hour, the surface area of a rectangular sedimentation tank to remove all the particles having settling velocity of 0.33 mm/s

Options :

1. $20 \ m^2$

2. $100 \ m^2$

3. $200 \ m^2$

4. $400 \ m^2$

Question Number : 136 Question Id : 6232174300 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical
Wrong Marks : 0

A water treatment plant is required to process 28800 m^3/day of raw water (density=1000kg/m^3), kinematic viscosity = 10^{-6} m^2/s. The rapid mixing tank imparts a velocity gradient of 900 s^{-1} to blend 35 mg/L of alum with the flow for a detention time of 2 minute. The power input (w) required for rapid mixing is

Options :

1. 32400

2. 36

3. 32.4

4. 324000

Question Number : 137 Question Id : 6232174301 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical
Wrong Marks : 0

Zero hardness of water is achieved by

Options :

1. Lime soda process

2. excess lime treatment

3. Ion exchange treatment

4. excess alum and lime

Question Number : 138 Question Id : 6232174302 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical
Wrong Marks : 0

A cubic metre sample of air was found to contain $80\mu g/m^3$ of SO_2. The temperature and pressure were 25°C and 103.193 kPa when the air sample was taken. What was the SO_2 concentration in ppm?

Options :

1. 0.030

2. 0.30

3. 3.0

4. 0.15

Question Number : 139 Question Id : 6232174303 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical
Wrong Marks : 0

An air parcel having 40°C temperature moves from ground level to 500 m in dry air following the adiabatic lapse rate. The resulting temperature of air parcel at 500 m elevation will be?

Options :

1. 35 °C

2. 38 °C

3. 41 °C

4. 44 °C

Question Number : 140 Question Id : 6232174304 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical
Wrong Marks : 0

The dispersion of air pollutants in atmosphere is maximum when

Options :

1. Environmental lapse rate is greater than adiabatic lapse rate

2. Environmental lapse rate is lesser than adiabatic lapse rate

3. Environmental lapse rate is equal to adiabatic lapse rate

4. Maximum mixing depth is equal to zero

Question Number : 141 Question Id : 6232174305 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical
Wrong Marks : 0

Pneumoconiosis is caused due to inhalation of which of the following?

Options :

1. Silica

2. NO_x

Lead

3.

Cadmium

4.

Question Number : 142 Question Id : 6232174306 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Wrong Marks : 0

Daily cover a MSW landfills consists of which one of the following?

Options :

Compacted soil

1.

Geomembrane

2.

Geotextile

3.

Geocomposite

4.

Question Number : 143 Question Id : 6232174307 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Wrong Marks : 0

Banglore method and Indore method of disposing solid waste are

Options :

Identical

1.

Different as Bangalore method is anaerobic method

2.

Different as Bangalore method does not contain human excreta

3.

Different as Indore method is an incineration method

4.

50 g of CO_2 and 25g of CH_4 are produced from decomposition of MSW with a formula weight of 120g. What is the average per capita green house gas production in a city of 1 million people? With MSW production rate 500 ton/day.

Options :

1. 104 g/day

2. 120 g/day

3. 208 g/day

4. 313 g/day

What will be the resultant decibel level when two sources make noise of equal decibels level?

Options :

1. Decibel level will be the same

2. Decibel levels will increase by 3 decibels

3. Decibel levels will decrease by 3 decibels

4. Decibel level will be equal to the sum of decibels of two sources

The reference pressure level used in determination of sound/ pressure level is

Options :

1. 20 μPa

2. 20dB

3. 10 μPa

4. 40dB

Question Number : 147 Question Id : 6232174311 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical
Wrong Marks : 0

According to noise pollution and regulation act 2000, the day time and night time noise level limits in ambient air of residential area are expressed in dB (A) L_{eq} are

Options :

1. 50 and 40

2. 55 and 45

3. 65 and 55

4. 75 and 40

Question Number : 148 Question Id : 6232174312 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical
Wrong Marks : 0

Consider the following statements in the context of cement concrete pavements

1. Warping stresses in cement concrete pavements are caused by the seasonal variation in temperature

2. Tie bars are generally provided across transverse joints of cement concrete pavements. Choose the correct answer by evaluating the above options

Options :

1. 1 is true and 2 is false

2. 1 is false and 2 is true

3. 1 is true and 2 is also true

4. 1 is false and 2 is also false

Question Number : 149 Question Id : 6232174313 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Wrong Marks : 0

Grades of road tar along with their use and match them.

List – I (Grade for road tar)	List-II (Uses)
P. RT-1	1. Premixing tar macadam in base course
Q. RT -2	2. Surface paintings under exceptionally cold weather
R. RT -3	3. Surface paintings renewal coats and premixing chips
S. RT-4	4. Surface paintings under tropical climatic conditions

Options :

1. P-2   Q-3   R-4   S-1

2. P-2   Q-4   R-3   S-1

3. P-2   Q-4   R-1   S-3

P-4   Q-3   R-·2   S-1

4.

Question Number : 150 Question Id : 6232174314 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical
Wrong Marks : 0

What is the stopping sight distance on a highway at a ascending gradient of 5% for a

design speed of 80 kmph assuming coefficient of friction as 0.35 and reaction time as

4 sec

Options :

1. 151.95 m

2. 15195 m

3. 151 km

4. 15.19m

Question Number : 151 Question Id : 6232174315 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical
Wrong Marks : 0

Bituminous materials are commonly used in highway construction because of their

good

Options :

1. Tensile and compressive properties

2. Binding and water proofing properties

3. Shear strength and tensile strength

4. Bond and tensile strength

Question Number : 152 Question Id : 6232174316 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

On a horizontal curve, if pavement is kept horizontal across the alignment, then pressure on the outer wheels will be

Options :

1. More than the pressure on inner wheels

2. Less than the pressure on inner wheels

3. Equal pressure on inner wheels

4. No effect on inner wheels

Question Number : 153 Question Id : 6232174317 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

In signal design as per IRC specification, if the sum of the ratios of normal flows to the saturation flows of two directional traffic flow is 0.50 and the total lost time per cycle is 10 s, the optimum cycle length in second is

Options :

1. 100

2. 80

3. 60

4. 40

Question Number : 154 Question Id : 6232174318 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

Which of the following pair is not correctly matched

Width of all vehicles   -   2.50 m
1.

Height of single –decked vehicle   -   3.80 m
2.

Height of double–decked vehicle   -   7.50 m
3.

Length of single unit truck with two or more axles   -   11.00m
4.

Question Number : 155 Question Id : 6232174319 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical
Wrong Marks : 0

Find the correct order of the following layers from top to bottom is

1. Sub-base course

2. Base course

3. Wearing course

4. Sub-grade

Options :

3,1,4,2
1.

3,2,1,4
2.

3,2,4,1
3.

3,4,1,2
4.

Bitumen grade 80/100 indicates that under the standard test conditions, penetration value of

Options :

1. 0.8 mm to 1mm

2. 8 mm to 10 mm

3. 8 cm to 10 cm

4. 0.08 mm to 0.1 mm

Name of the traffic survey data which is plotted by means of desire lines

Options :

1. Accident

2. Classified volume

3. origin and destination

4. speed and delay

Reflection cracking is observed in

1. Flexible pavement

2. Rigid pavement

3. Rigid over layer over flexible pavement

4. Bituminous overlay over cement concrete pavement

Question Number : 159 Question Id : 6232174323 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical
Wrong Marks : 0

In case of governing equations for calculating wheel load stresses using Westergaard's approach, the following statements are made.

A. Load stresses are inversely proportional to wheel load

B. Modulus of subgrade reaction is useful for load stress calculation

Chose the correct answer

Options :

1. Both statements are true

2. A is true and B is false

3. Both statements are false

4. A is false and B is true

Question Number : 160 Question Id : 6232174324 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical
Wrong Marks : 0

Consider the following statements in the context of geometric design of roads

A. A simple parabolic curve is an acceptable shape of summit curve

B. Comfort to passengers is an important consideration in the design of summit curve.

Identify the correct option by evaluating the above statements and their relationship is

1. A is true and B is false

2. A and B both are true and B is the correct reason for A

3. A and B both are true and B is not the correct reason for A

4. A is false and B is true

Question Number : 161 Question Id : 6232174325 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Wrong Marks : 0

Road roughness is measured using

Options :

1. Benkelman beam

2. Bump integrator

3. Dynamic cone benetrometer

4. Falling weight deflectometer

Question Number : 162 Question Id : 6232174326 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Wrong Marks : 0

Identify the formula for calculating traffic volume

Options :

1. Traffic density X traffic speed

2. Traffic density/traffic speed

Traffic speed/traffic density

3.

Traffic speed+traffic density

4.

Question Number : 163 Question Id : 6232174327 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

Two straight lines intersect at an angle of 60°. The radius of a curve joining two straight lines is 600 m. The length of long cord and mid-ordinates in meters of the curve are

Options :

80.4 , 600.0

1.

600.0,80.4

2.

600.0, 39.89

3.

40.89, 300.0

4.

Question Number : 164 Question Id : 6232174328 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

A scale representing either three units or only one unit and its fractions upto second place of decimal point is

Options :

Diagonal scale

1.

comparative scale

2.

vernier scale

3.

shrunk scale

4.

The accuracy required in precise leveling is of order of

Options :

1. $\sqrt{K}$ *mm*

2. $2\sqrt{K}$ *mm*

3. $5\sqrt{K}$ *mm*

4. None of the other options

If in a triangle ABC, b=300 m and angle ABC = 60°, then the radius of the circular

curve paasing through points A,B and C will be

Options :

1. 86.6 m

2. 100.0 m

3. 173.2 m

4. 300.6 m

A vertical photograph of a tower was taken from an elevation of 250 m above mean sea level. The elevation base of the tower was 125 m, if the relief displacement of the top of tower was 25.7 mm and the radial distance of the image of the top of the tower was 55 mm, then the height of the tower is

Options :

1. 61 m

2. 58.41 m

3. 51.22 m

4. 65.15 m

Question Number : 168 Question Id : 6232174332 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The flying height above the datum is 2000 m and the focal length of the aerial camera is 20 cm, the scale of the photograph is

Options :

1. 1: 10

2. 100: 1

3. 1:100

4. 10:1

Question Number : 169 Question Id : 6232174333 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The normal orbital period of a GPS satellite is

Options :

1. 12 h 00 min

2. 11 h 58 min

3. 24 h

4. 6 h 35 min

Question Number : 170 Question Id : 6232174334 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Wrong Marks : 0

The sun synchronous orbit selected so that the space craft passes over the same ground track at the same local time each day. This condition is satisfied by a family of near polar retrograde orbits with altitudes between

Options :

1. 100 and 300 km

2. 300 and 1000 km

3. 1000 and 2000 km

4. None of the other options

Question Number : 171 Question Id : 6232174335 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Wrong Marks : 0

If 4 and 8 are the eigen values of a matrix $A = \begin{bmatrix} 2 & 3 \\ x & y \end{bmatrix}$ then _____.

Options :

$x=4, y=8$

1.

$x=-4, y=10$

2.

$x=5, y=8$

3.

$x=-3, y=9$

4.

Question Number : 172 Question Id : 6232174336 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical
Wrong Marks : 0

The system $2x+y+z=0$, $y-z=0$, $x+y=0$ has _____

Options :

a unique solution

1.

no solution

2.

infinite number of solutions

3.

exactly three solutions

4.

Question Number : 173 Question Id : 6232174337 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical
Wrong Marks : 0

Consider the function $f(x)=|x|$ $in[-3,3]$. At $x=0$, the function $f(x)$ is___

Options :

Continuous and Differentiable.

1.

Differentiable but not continuous.

2.

Continuous but not Differentiable.

3.

Neither Continuous nor Differentiable.

4.

The area of the closed region bounded by pair of curves $y=2-x$ and $y^2=2(2-x)$ is ___.

Options :

1.
$$\int\limits_{0}^{2}\int\limits_{\sqrt{2(2-x)}}^{2-x} dxdy$$

2.
$$\int\limits_{-2}^{2}\int\limits_{2-x}^{\sqrt{2(2-x)}} dydx$$

3.
$$\int\limits_{0}^{2}\int\limits_{2-x}^{\sqrt{2(2-x)}} dydx$$

4.
$$\int\limits_{0}^{2}\int\limits_{-\sqrt{2(2-x)}}^{\sqrt{2(2-x)}} dydx$$

Question Number : 175 Question Id : 6232174339 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

The value of b for which the force field $\overline{A} = (e^x z - bxy)\overline{i} + (1 - bx^2)\overline{j} + (e^x + bz)\overline{k}$ is conservative.

Options :

1. 0

2. 1

3. $\dfrac{1}{2}$

4. -2

Question Number : 176 Question Id : 6232174340 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

$y = e^{-x}\left[C_1 \cos\sqrt{3}x + C_2 \sin\sqrt{3}x\right] + C_3 e^{2x}$ is the general solution of _____.

Options :

1. $y''' + 4y = 0$

2. $y''' - 8y = 0$

3. $y''' + 8y = 0$

$$y'''-2y''+y'-2y=0$$
4.

The partial differential equation $\dfrac{\partial u}{\partial x} + u\dfrac{\partial u}{\partial y} = \dfrac{\partial^2 u}{\partial y^2}$ is a ____

Options :

1. Linear equation order 2.

2. Non-linear equation order 2.

3. Linear equation order 1.

4. Non-linear equation order 1.

The partial differential equation $\dfrac{\partial f}{\partial t} = \dfrac{\partial^2 f}{\partial x^2}$ is ____

Options :

1. Parabolic

2. Elliptic

Hyperbolic
3.

Non- linear
4.

Question Number : 179 Question Id : 6232174343 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

If the probability density function of a random variable is defined as $f(x) = \begin{cases} 1+x, & -1 \le x \le 0 \\ 1-x, & 0 \le x \le 1. \end{cases}$

then the mean of the random variable is ___ .

Options :

1. 0

2. $\dfrac{1}{6}$

3. $\dfrac{1}{\sqrt{6}}$

4. $\dfrac{-1}{2}$

Question Number : 180 Question Id : 6232174344 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

The Newton- Raphson's iteration formula $x_{n+1} = \dfrac{x_n}{2} + \dfrac{3}{2x_n}$ can be used to solve the equation _.

Options :

1. $x^3 - 3 = 0$

2. $x^2 - 3 = 0$

3.
$$x^2 - 2 = 0$$

4.
$$x^3 - 2 = 0$$