

Andhra Pradesh State Council of Higher Education

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 :	Computer Science and Engineering 17th Oct 2022 Shift 1
Duration :	120
Total Marks :	140
Display Marks:	No
Share Answer Key With Delivery Engine :	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
Show Watermark on Console? :	Yes
Highlighter :	No
Auto Save on Console?	Yes
Change Font Color :	No
Change Background Color :	No
Change Theme :	No
Help Button :	No
Show Reports :	No
Show Progress Bar :	No
Is this Group for Examiner? :	No
Examiner permission :	Cant View
Show Progress Bar? :	No



Research Methodology

Section Id :	549470297
Section Number :	1
Mandatory or Optional :	Mandatory
Number of Questions :	59
Section Marks :	70
Enable Mark as Answered Mark for Review and Clear Response :	Yes
Maximum Instruction Time :	0
Is Section Default? :	null

Question Number : 1 Question Id : 54947021094 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The primary stage of promoting the learning in a child is _____.

Options :

1.  Imitation
2.  Instinct
3.  Motivation
4.  Conditioning

Question Number : 2 Question Id : 54947021095 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response

Time : N.A Think Time : N.A Minimum Instruction Time : 0

A good teacher is one who ____

Options :

1. ✘ gives useful information
2. ✘ gives notes to students
3. ✘ explains concepts and principles
4. ✔ inspires students to learn

Question Number : 3 Question Id : 54947021096 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The highest contribution of the sensory organ in effective learning belongs to ____.

Options :

1. ✘ sense of touch
2. ✘ sense of hearing

sense of taste

3. ✘

sense of seeing

4. ✔

Question Number : 4 Question Id : 54947021097 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The classroom communication should essentially be _____.

Options :

Abstract

1. ✘

Empathetic

2. ✔

Non-descriptive

3. ✘

Contrived

4. ✘

Question Number : 5 Question Id : 54947021098 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Which of the following is the highest level of cognitive ability?

Options :

1. ✘ Knowing
2. ✘ Understanding
3. ✘ Analyzing
4. ✔ Evaluating

Question Number : 6 Question Id : 54947021099 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Which among the following is NOT a component of effective teaching.

Options :

1. ✘ Questioning to check for the understanding of students
2. ✘ Providing students with feedback

3. ✖ Being flexible about how long it takes to learn

4. ✔ Reactive mode of students' behavior

Question Number : 7 Question Id : 54947021100 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

SWAYAM refers to _____.

Options :

1. ✖ Study World of Action-Learning for Young Aspiring Minds

2. ✔ Study Webs of Active-Learning for Young Aspiring Minds

3. ✖ Student World of Action-Learning for Young Ailing Minds

4. ✖ Study Webs of Active-Learning for Youth Awareness Models

Question Number : 8 Question Id : 54947021101 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Which of the following is the main purpose of using ICT for class room teaching is to__.

Options :

1. ✘ Keep students engaged in the class
2. ✘ Divert student's attention in the class
3. ✔ Optimize learning outcomes of teaching
4. ✘ Make the classroom instructions are interesting

Question Number : 9 Question Id : 54947021102 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

GUI stands for_____.

Options :

1. ✘ Graphical User Interference
2. ✔ Graphical User Interface

Graphical User Identifier

3. ✘

Gaming User Identifier

4. ✘

**Question Number : 10 Question Id : 54947021103 Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

Which of the following be the true evaluation of the students if possible?

Options :

Formative

1. ✘

Evaluation at the end of the course

2. ✘

Evaluation twice in a year

3. ✘

Continuous evaluation

4. ✔

**Question Number : 11 Question Id : 54947021104 Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

Teaching in Higher education implies

Options :

1. ✘ Presenting the information given in the text book
2. ✘ Asking questions in the class and conducting examinations
3. ✘ Helping students to prepare and pass the examinations
4. ✔ Helping students to learn

Question Number : 12 Question Id : 54947021105 Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The primary task of a teacher is

Options :

1. ✘ To teach the prescribed curriculum
2. ✔ To stimulate and guide students learning

3. ✘ To provide diagnostic and remedial is aid wherever desired

4. ✘ To promote habits of conformity to adult demands and expectations

Question Number : 13 Question Id : 54947021106 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

One of the aims of scientific method in research is to ____.

Options :

1. ✘ Improve data interpretation

2. ✔ Eliminate spurious relations

3. ✘ Introduce new variable

4. ✘ Conform triangulation

Question Number : 14 Question Id : 54947021107 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Which of the following is NOT a characteristic of research?

Options :

Research is symmetric

1. ✘

Research is not a process

2. ✔

Research is not passive

3. ✘

Research is problem oriented

4. ✘

Is Section Default? :

null

Question Id : 54947021108 Sub Question Shuffling Allowed : Yes Group Comprehension Questions : No Question Pattern Type : NonMatrix Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Question Numbers : (15 to 21)

Read the following passage carefully and answer the questions from 15 to 21:

Intelligence is associated with academic achievement by most people. The various theories of intelligence created by psychologists hold that there are two kinds of academic intelligence-verbal and mathematical or logical. Intelligence is an inherited trait that impacts individual behavior and performance according to most experts. But, many research studies have revealed that the environment greatly impacts the development of intelligence. Since, one property of intelligence is analytical and reasoning skills, people with high intelligence quotient will understand the problem at hand better than people with a low IQ. Many organizations consider intelligence as an important criterion while recruiting. For instance in many management schools, a lot of weightage is given to high IQ while admitting students or recruiting faculty members. The qualities of intelligent people are high energy drive, achievement and competitiveness. Very intelligent employees learn job – related skills and other organizational practices quickly and organizations have to spend less time training them. People with high intelligence have good decision making ability due to their good analytical and reasoning skills. With a high achievement drive, they are mostly very productive. As the saying goes, ‘A wise enemy is better than a foolish’ friend;

Even with such a high IQ, very intelligent people may not always be very happy. The high IQ makes them dysfunctional leading to anxiety and depression. Generally speaking, people with high intelligence quotient are often dissatisfied people.

Sub questions

Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

What are the two kinds of academic intelligence defined by psychologists?

Options :

1. ✘ Mathematical and logical
2. ✘ Logical and psychological
3. ✔ Verbal and logical
4. ✘ Mathematical and social

Question Number : 16 Question Id : 54947021110 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

What are the possible ill effects associated with high IQ people?

Options :

1. ✘ Mania and hallucination
2. ✘ Depression and hallucination

3. ✖ Bipolar disease

4. ✔ Anxiety and depression

Question Number : 17 Question Id : 54947021111 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

When a student stands first in the class, the general credit is given to: ____.

Options :

1. ✖ Contacts

2. ✔ Intelligence

3. ✖ Hard work

4. ✖ Attractive features

Question Number : 18 Question Id : 54947021112 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Dissatisfaction is often witnessed in people with ____.

Options :

1. ✘ Creative skills
2. ✘ High expectations
3. ✔ Good decision-making ability
4. ✘ High education qualifications

Question Number : 19 Question Id : 54947021113 Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

High energy drive, achievements and competitiveness are valued during ____.

Options :

1. ✘ Admission
2. ✘ Recruitment
3. ✘ Promotion

Admission and recruitment

4. ✓

Question Number : 20 Question Id : 54947021114 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Those who understand a problem in a short span of time will be people with ____.

Options :

1. ✓ High IQ
2. ✘ Low IQ
3. ✘ Average IQ
4. ✘ Good IQ

Question Number : 21 Question Id : 54947021115 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Another word for 'Weightage' is ____.

Options :

1. ✓ Credit

2. ✘ Mass

3. ✘ Weight

4. ✘ Freedom

Is Section Default? : null

Question Number : 22 Question Id : 54947021116 Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Synopsis of a research is ____.

Options :

1. ✘ Summary of research

2. ✓ Blueprint of a research

3. ✘ Extract of research

A plan of research

4. ✖

Question Number : 23 Question Id : 54947021117 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Which of the following objectives is not associated with teaching aids?

Options :

To present difficult concepts in simpler manner for students

1. ✖

To make the students comparatively more active and dynamic

2. ✖

To make advertisements of attractive and miraculous events to students

3. ✔

To determine the audio-visual aids by keeping mind individual differences in the class

4. ✖

Question Number : 24 Question Id : 54947021118 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The first step of research is ____.

Options :

1. ✘ selecting a problem
2. ✘ searching a problem
3. ✔ finding a problem
4. ✘ identifying a problem

Question Number : 25 Question Id : 54947021119 Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Which of these is not a method of data collection?

Options :

1. ✘ Interviews
2. ✘ Observations

Questionaries

3. ✘

Experiments

4. ✔

Question Number : 26 Question Id : 54947021120 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

A researcher conducted three experiments with 100 subjects each following uniform design instead of one experiment with 300 subjects. This is known as ____.

Options :

Validation

1. ✔

Manipulation

2. ✘

Observation

3. ✘

Replication

4. ✘

Question Number : 27 Question Id : 54947021121 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The conceptual framework in which a research is conducted is called a _____.

Options :

1. ✘ Synopsis of research
2. ✔ Research design
3. ✘ Research hypothesis
4. ✘ Research Paradigm

Question Number : 28 Question Id : 54947021122 Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Which one of the following is an identification of the quality of a research journal?

Options :

1. ✔ Impact Factor
2. ✘ h – index

3. ✘ g – index

4. ✘ i10 – index

Question Number : 29 Question Id : 54947021123 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The ethics in research is not related to ____.

Options :

1. ✘ Scientific method

2. ✘ Reliability

3. ✔ Self-interest

4. ✘ Humanity

Question Number : 30 Question Id : 54947021124 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The objective of a research work can be written_____.

Options :

only in question form

1. ✘

only in statement form

2. ✔

both question and standard form

3. ✘

in hypothetical form

4. ✘

**Question Number : 31 Question Id : 54947021125 Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

Complete the series: 3C4, 7G5, 12L6, 18R7, 25Y8,_____.

Options :

32F9

1. ✘

33G9

2. ✔

32G9

3. ✖

33G7

4. ✖

Question Number : 32 Question Id : 54947021126 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

In a certain code language, if CHECK = 30 and TIME = 47 then what is the code for HOCKEY?

Options :

52

1. ✖

67

2. ✔

48

3. ✖

72

4. ✖

Question Number : 33 Question Id : 54947021127 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The ratio of the present ages of A and B is 5:6. Fifteen years ago, the ratio of their ages was 7:9. Find the present age of A.

Options :

1. ✘ 10

2. ✘ 30

3. ✔ 50

4. ✘ 65

Question Number : 34 Question Id : 54947021128 Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

A shopkeeper losses 15% if an article is sold for Rs.102. What should be the selling price of the article to gain 20%?

Options :

1. ✘ 150

2. ✓ 144

3. ✘ 138

4. ✘ 132

Question Number : 35 Question Id : 54947021129 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

In a class, the average age of the students is 21 years. If their class teacher, aged 45 years is also included, the average of the class would be 22 years. Find the number of students in the class.

Options :

1. ✘ 20

2. ✓ 23

3. ✘ 24

25

4. ✖

Question Number : 36 Question Id : 54947021130 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

What sum of money amounts to 5800 in three years at 15% per annum with simple interest?

Options :

3800

1. ✖

4000

2. ✔

4200

3. ✖

4600

4. ✖

Question Number : 37 Question Id : 54947021131 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Starting from his house, Krishna travels a distance of 8m towards North, he then turns left and travels a distance of 6m, then travels 5m South and finally he travels 6m towards the West to reach his office. What is the approximate distance between his house and the office?

Options :

1. ✘ 14m

2. ✘ 12m

3. ✔ 12.5m

4. ✘ 14.5m

Question Number : 38 Question Id : 54947021132 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

A person can cover a certain distance in 8 hours at a speed of 50 kmph. At what speed he must travel to cover the distance in 5 hours?

Options :

1. ✘ 400 kmph
2. ✔ 80 kmph
3. ✘ 100 kmph
4. ✘ 300 kmph

Question Number : 39 Question Id : 54947021133 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Which of the following groups of fraction are in ascending order?

Options :

1. ✘ $\frac{8}{11}, \frac{5}{8}, \frac{7}{10}$

2. ✘ $\frac{7}{10}, \frac{5}{8}, \frac{8}{11}$

3. ✓ $\frac{5}{8}, \frac{7}{10}, \frac{8}{11}$

4. ✘ $\frac{5}{8}, \frac{8}{11}, \frac{7}{10}$

Question Number : 40 Question Id : 54947021134 Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Which of the following statements are mutually inconsistent?

- I. Mostly poets are not egoistic
- II. Mostly poets are humble
- III. Some poets are egoistic
- IV. Some poets are not non-egoistic

Options :

1. ✘ I and IV

2. ✘ II and III

3. ✓ I and III

III and IV

4. ✘

Question Number : 41 Question Id : 54947021135 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

“Some teachers are not sincere” is an example for which category of proposition?

Options :

1. ✘ Particular affirmative

2. ✔ Particular negative

3. ✘ Universal affirmative

4. ✘ Universal negative

Question Number : 42 Question Id : 54947021136 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

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

Assertion (A): Skill development is a key feature in every individual's life.

Reason (R): An individual, who wants to get employed, needs to possess good education only.

In this context of above two statements choose the correct option codes:

Options :

1. ✓ (A) is true, but (R) is false

2. ✘ (A) is false, but (R) is true

3. ✘ Both (A) and (R) are true and (R) is the correct explanation of (A)

4. ✘ Both (A) and (R) are true and (R) is not the correct explanation of (A)

Is Section Default? : null

Question Id : 54947021137 Sub Question Shuffling Allowed : Yes Group Comprehension Questions : No Question Pattern Type : NonMatrix Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Question Numbers : (43 to 45)

Note:

From the data furnished in the following table, answer the questions 43-45. Area under different crops over the years 2016-20 is in lakh hectares.

Year	Mango	Vegetables	Flowers	Total crop area
2016	53	72	1	187
2017	56	75	1	194
2018	58	78	2	202
2019	61	79	2	207
2020	63	79	2	209

Sub questions

Question Number : 43 Question Id : 54947021138 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Which of the following two years have registered the highest rate increase in total crop area?

Options :

1. ✓ 2017 and 2018
2. ✗ 2016 and 2017

3. ✖ 2017 and 2019

4. ✖ 2018 and 2019

Question Number : 44 Question Id : 54947021139 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Which of the following has recorded the highest rate of increase in crop area during 2016 to 2020?

Options :

1. ✖ Mango

2. ✖ Vegetables

3. ✔ Flowers

4. ✖ None of these

Question Number : 45 Question Id : 54947021140 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

In which year, area under mango has recorded the highest rate of growth?

Options :

1. ✖ 2019

2. ✔ 2017

3. ✖ 2016

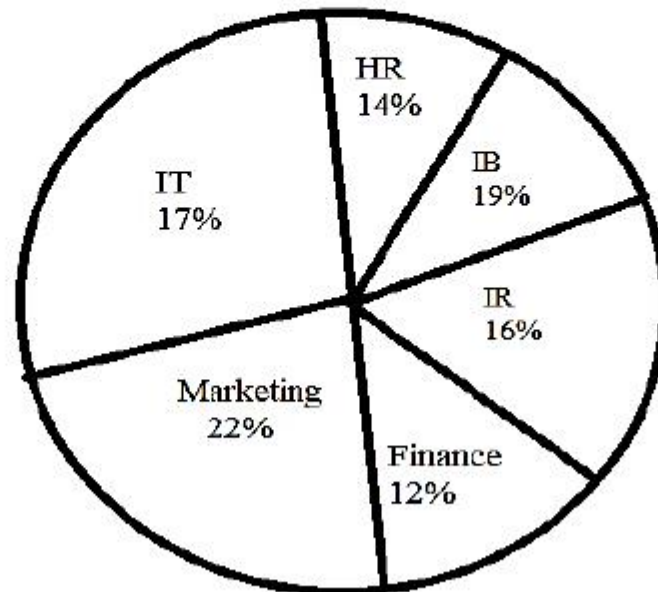
4. ✖ 2018

Is Section Default? : null

Question Id : 54947021141 Sub Question Shuffling Allowed : Yes Group Comprehension Questions : No Question Pattern Type : NonMatrix Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Question Numbers : (46 to 49)

Note:

Study the following pie chart carefully and answer the questions 46-49. It gives data on number of students having specializations in different study branches.



Sub questions

Question Number : 46 Question Id : 54947021142 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

What is the total number of students having specialization in HR, Marketing and IT?

Options :

4640

1. ✘

2. ✘ 4080

3. ✔ 4400

4. ✘ 4260

Question Number : 47 Question Id : 54947021143 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

What is the total number of students having IB as specialization?

Options :

1. ✔ 1520

2. ✘ 1280

3. ✘ 1120

4. ✘ 1360

Question Number : 48 Question Id : 54947021144 Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

What is the ratio of the students having Finance as specialization to students having HR as specialization?

Options :

1. ✘ 11:9

2. ✘ 4:7

3. ✘ 18:13

4. ✔ 6:7

Question Number : 49 Question Id : 54947021145 Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Students having IR as specialization forms approximately what percent of students having HR specialization?

Options :

1. ✔ 114

2. ✖

106

3. ✖

76

4. ✖

87

Is Section Default? :

null

Question Number : 50 Question Id : 54947021146 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

If the statement “most of the students are obedient” is taken to be true, which one of the following pair of statements can be claimed to be true?

- A) All obedient persons are students
- B) All students are obedient
- C) Some students are obedient
- D) Some students are not disobedient

Choose the correct codes from the options given below:

Options :

A and B

1. ✖

2. ✖ B and C

3. ✔ C and D

4. ✖ B and D

Question Number : 51 Question Id : 54947021147 Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Given below are two statements I and II followed by two conclusions (A) and (B).
Suppose if the statements are true, which of the following conclusions can logically follow?

Statements:

I: Some flowers are red

II: Some flowers are blue

Conclusions:

A: Some flowers are neither red nor blue

B: Some flowers are both red and blue

Options :

1. ✖ only (A) follows

only (B) follows

2. ✖

both (A) and (B) follows

3. ✖

Neither (A) nor (B) follows

4. ✔

Question Number : 52 Question Id : 54947021148 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

At selling price of Rs 240, a person incurred a loss of 10%. To earn a profit of 10%, what should be the selling price?

Options :

Rs 310

1. ✖

Rs 300

2. ✖

Rs 285.50

3. ✖

Rs 293.33

4. ✓

Question Number : 53 Question Id : 54947021149 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

‘Every woman is white and ‘not every woman is white’ comes under which domain source of opposition

Options :

Contradictory

1. ✓

Contrary

2. ✘

Sub-contrary

3. ✘

Sub alternation

4. ✘

Question Number : 54 Question Id : 54947021150 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Mercury and leads are poisonous substances that contribute to _____

Options :

1. ✘ Noise exposure
2. ✘ Poor air quality
3. ✘ Water contamination
4. ✔ Skill pollution

Question Number : 55 Question Id : 54947021151 Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

In the binary equivalent of decimal number 48 is 110000, then the binary equivalent of decimal number 51 is given by _____.

Options :

1. ✘ 110010
2. ✔ 11011

110001

3. ✖

110100

4. ✖

Question Number : 56 Question Id : 54947021152 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Which of the following represents one billion characters?

Options :

Kilobyte

1. ✖

Megabyte

2. ✖

Gigabyte

3. ✔

Terabyte

4. ✖

Question Number : 57 Question Id : 54947021153 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Python is ____.

Options :

1. ✘ an operating system
2. ✘ an application program
3. ✘ a compiler
4. ✔ a programming language

Question Number : 58 Question Id : 54947021154 Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

A description in communication process is called ____

Options :

1. ✘ Interaction
2. ✔ Noise

Transgression

3. ✘

Feedback

4. ✘

**Question Number : 59 Question Id : 54947021155 Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

Which of the following is an example of asynchronous medium?

Options :

Radio

1. ✘

Film

2. ✘

Newspaper

3. ✔

Television

4. ✘

**Question Number : 60 Question Id : 54947021156 Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

Which of the following are priority areas in relation to the sustainable development goals?

- A) No poverty
- B) Zero hunger
- C) Reducing Urbanization
- D) Peace, Justice and Strong institutions

Choose the correct answer from the options given below:

Options :

1. ✘ A, B, C

2. ✘ A, C, D

3. ✘ B, C, D

4. ✔ A, B, D

Question Number : 61 Question Id : 54947021157 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Which of the following is the largest soil group in India?

Options :

1. ✘ Red soil
2. ✘ Black soil
3. ✔ Sandy soil
4. ✘ Mountain soil

Question Number : 62 Question Id : 54947021158 Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Which of the following is not a waterborne disease?

Options :

1. ✘ Typhoid
2. ✘ Hepatitis

3. ✖ Cholera

4. ✔ Dengue

Question Number : 63 Question Id : 54947021159 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Name the clinical trial in which blood is transferred from recovered COVID-19 patients to Corona virus patients who is in critical condition.

Options :

1. ✖ Hydroxychloroquine

2. ✖ Soidarity

3. ✖ Remdesivir

4. ✔ Plasma therapy

Question Number : 64 Question Id : 54947021160 Display Question Number : Yes Is Question Mandatory : No Calculator : None

Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The first case of novel coronavirus was identified in

Options :

1. ✘ Beijing
2. ✔ Wuhan
3. ✘ Tianjin
4. ✘ Shanghai

**Question Number : 65 Question Id : 54947021161 Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

Which of the following sources of energy has maximum potential in India?

Options :

1. ✔ Solar energy

2. ✘ Wind energy

3. ✘ Tidal energy

4. ✘ Ocean thermal energy

Question Number : 66 Question Id : 54947021162 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Which one of the following is regarded as an immediate need of an educational organization?

Options :

1. ✔ To ensure self-employment capabilities in the students

2. ✘ To enrich the knowledge of future generation

3. ✘ To focus on Employment opportunities

To make provision of maximum service opportunities

4. ✘

Question Number : 67 Question Id : 54947021163 Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The scheme “Unnat Bharat Abhiyan” aims to _____.

Options :

Increase number of colleges in India

1. ✘

Increase quality in Higher education

2. ✘

Link higher educational institutions in the country with at least five villages

3. ✔

Increase strength of students in colleges in India

4. ✘

Question Number : 68 Question Id : 54947021164 Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Which one of the following are the goals of Higher education in India?

- A) Access
- B) Equity
- C) Quality and Excellence
- D) Relevance
- E) Value based education
- F) Compulsory and free education

Select the correct answer from the code given below:

Options :

A, B, E and F

1. ✖

A, B, C, D and E

2. ✔

A, B, C, D, E and F

3. ✖

A, B and E

4. ✖

Which of the following is NOT a constitutional body?

Options :

1. ✓ NITI Aayog
2. ✘ Election commission
3. ✘ Finance commission
4. ✘ Union Public Service Commission

Question Number : 70 Question Id : 54947021166 Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

What is ABC as per NEP-2020?

Options :

1. ✓ Academic Bank of Credit

Academic Basic Certificate

2. ✖

Annual Basic Certificate

3. ✖

Annual Bank of Credit

4. ✖

Computer Science and Engineering

Section Id :	549470298
Section Number :	2
Mandatory or Optional :	Mandatory
Number of Questions :	70
Section Marks :	70
Enable Mark as Answered Mark for Review and Clear Response :	Yes
Maximum Instruction Time :	0
Is Section Default? :	null

Question Number : 71 Question Id : 54947021167 Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

If A and B are mutually exclusive events and $P(A)=0.29, P(B)=0.43$ then

$$P(A \cap \bar{B}) = \underline{\hspace{2cm}}$$

Options :

1. ✖ 0.72

2. ✓ 0.165

3. ✗ 0.246

4. ✗ 0.623

Question Number : 72 Question Id : 54947021168 Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

If X is a Poisson variable and $2P(X=1)=P(X=2)$ then the variance is ____

Options :

1. ✗ 0

2. ✗ -1

3. ✓ 4

4. ✗ 2

Question Number : 73 Question Id : 54947021169 Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

If $*$ is a binary operation defined as $a * b = a + b + ab$ in $\mathbb{R} - \{1\}$ then the inverse of

$\frac{1}{3}$ is _____

Options :

1. ✓ $-\frac{1}{4}$

2. ✗ $\frac{1}{4}$

3. ✗ $\frac{1}{6}$

4. ✗ $\frac{1}{2}$

Question Number : 74 Question Id : 54947021170 Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

In any lattice L , $((a \wedge b) \vee a) \wedge b =$ _____

Options :

1. ✗ $a \vee b$

2. ✓ $a \wedge b$

3. ✗ $(a \wedge b) \vee a$

4. ✘ $((a \vee b) \wedge a) \vee b$

Question Number : 75 Question Id : 54947021171 Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The system of equations $x+2y+3z=2, y+z=-1, 2y+2z=0$ has _____

Options :

1. ✘ A unique solution
2. ✔ No solution
3. ✘ An infinite solution
4. ✘ Only trivial solutions

Question Number : 76 Question Id : 54947021172 Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The function $f(x) = |x+1|$ in the interval $[-2, 0]$ is _____

Options :

1. ✘ Continuous and differentiable
2. ✔ Continuous and but not differentiable

3. ✘ Neither Continuous nor differentiable

4. ✘ Differentiable but not Continuous

Question Number : 77 Question Id : 54947021173 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

If $(101.01)_2 = (x)_{10}$, then what is the value of x?

Options :

1. ✘ 505.05

2. ✘ 10.101

3. ✘ 101.01

4. ✔ 5.25

Question Number : 78 Question Id : 54947021174 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Sum of two octal numbers “456” and “123” =

Options :

1. ✔ 601

2. ✘ 624

3. ✘ 666

4. ✘ 699

Question Number : 79 Question Id : 54947021175 Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Using Karnaugh map, the simplified expression of $F(A,B,C,D) = \sum(0,2,3,5,7,8,10,11,14,15)$ is

Options :

1. ✘ $F = B'D' + AC + A'BC + C'D$

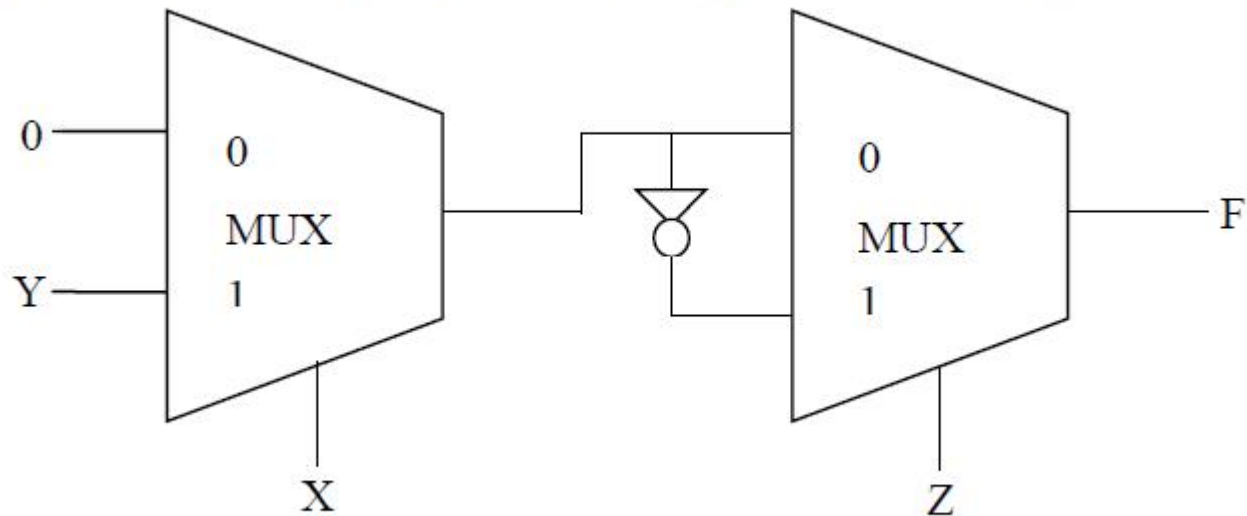
2. ✘ $F = A'B' + B'D' + AC + A'BD$

3. ✘ $F = B'C + AC + AD + A'CD$

4. ✔ $F = B'D' + AC + A'BD + CD$

Question Number : 80 Question Id : 54947021176 Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Consider the circuit with multiplexers (MUX) shown in the figure:



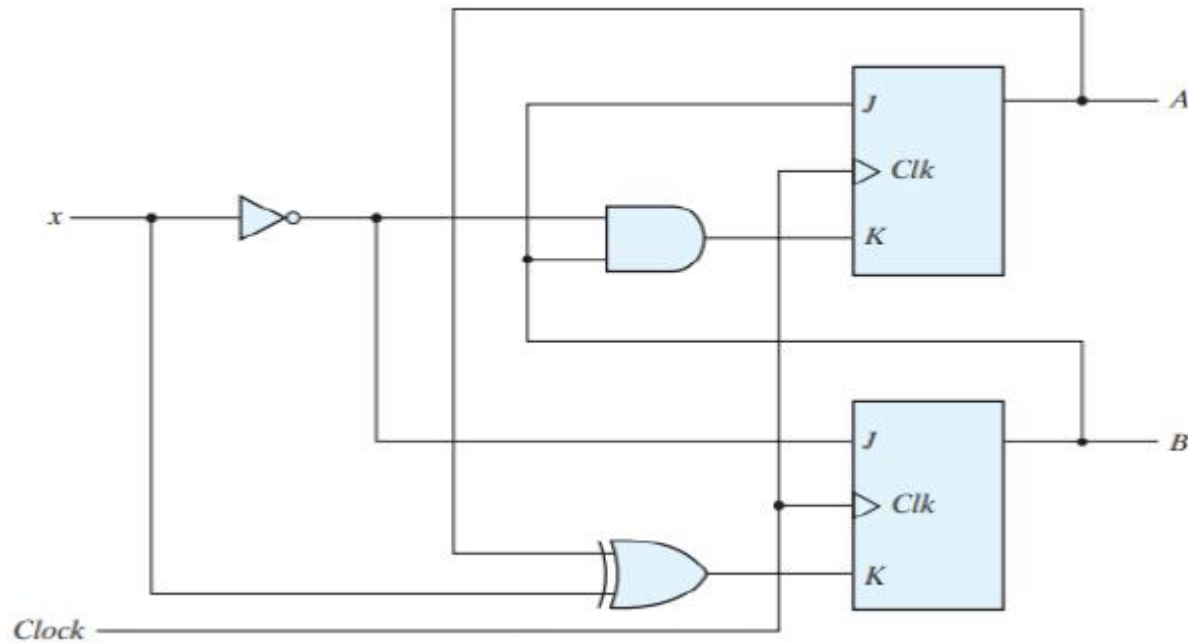
The Boolean expression F implemented by the circuit is

Options :

1. ✘ $X'YZ'+X'Z+Y'Z$
2. ✔ $XYZ'+X'Z+Y'Z$
3. ✘ $XYZ+XY+X'Z$
4. ✘ $XYZ'+X'Z+XYZ$

Question Number : 81 Question Id : 54947021177 Display Question Number : Yes Is Question Mandatory : No Calculator : None
 Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Consider the sequential circuit given below:



What are the state equations $A(t+1)$ and $B(t+1)$, to represent the next state values?

Options :

1. ✓ $A(t+1)=A'B+AB'+AX$ and $B(t+1)=B'X'+ABX+A'BX'$
2. ✘ $A(t+1) =AB+A'X+AX$ and $B(t+1) = BX+A'BX+ABX'$
3. ✘ $A(t+1) = A'B+AB'+AX$ and $B(t+1)= BX+A'BX+ABX'$
4. ✘ $A(t+1) =A'B'+AX$ and $B(t+1)=BX+A'BX'+AB$

Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Which of the following registers is used to keep track of address of the memory location where the next instruction is located

Options :

1. ✘ Instruction Register
2. ✘ Memory Address Register
3. ✔ Program Counter
4. ✘ Memory Data Register

**Question Number : 83 Question Id : 54947021179 Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

The effectiveness of the cache memory is based on the property of

Options :

1. ✔ Locality of reference
2. ✘ Memory localization
3. ✘ Memory size
4. ✘ None of the mentioned

Question Number : 84 Question Id : 54947021180 Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The number successful accesses to memory stated as a fraction is called as?

Options :

1. ✓ Hit Rate
2. ✗ Access Rate
3. ✗ Miss Rate
4. ✗ Success Rate

Question Number : 85 Question Id : 54947021181 Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Consider an 8-way set associative cache consisting of 256 lines with a line size of 128 words. The CPU generates 32-bit address of a word in the memory. The number of bits in the TAG, LINE and WORD fields respectively.

Options :

1. ✗ 19,6,7
2. ✓ 20,5,7
3. ✗ 20,6,6

4. ✘ 19,7,6

Question Number : 86 Question Id : 54947021182 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Which one of the following statements is true?

Options :

1. ✔ Hardwired control unit is faster than micro-programmed control unit
2. ✘ Address register is used to hold the address of the next instruction
3. ✘ Storage Capacity of cache memory is more than RAM
4. ✘ Storage capacity of RAM is greater than that of Hard Disk

Question Number : 87 Question Id : 54947021183 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Stack organised computer uses _____ number of address fields.

Options :

1. ✘ One
2. ✘ Two

3. ✘ Three
4. ✔ Zero

Question Number : 88 Question Id : 54947021184 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

In DMA, which mode allows the DMA controller to transfer one data word at a time, then it must return control of the buses to the CPU.

Options :

1. ✘ Burst transfer
2. ✔ Cycle stealing
3. ✘ Memory interleaving
4. ✘ No answer

Question Number : 89 Question Id : 54947021185 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The prefix expression for the infix expression $A/B * C + D * E$ is

Options :

1. ✘ $AB/C * DE * +$

2. ✓ $+*/ABC*DE$

3. ✗ $+*AB/C*DE$

4. ✗ $/+ABCDE$

Question Number : 90 Question Id : 54947021186 Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The Breadth First Search traversal of a graph will result into?

Options :

1. ✗ Linked List

2. ✓ Tree

3. ✗ Graph with back edges

4. ✗ Double Linked Lists

Question Number : 91 Question Id : 54947021187 Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

If a user tries to pop an element from empty stack, it is called as

Options :

1. ✓ Underflow

2. ✘ Overflow
3. ✘ Empty Collection
4. ✘ Garbage Collection

Question Number : 92 Question Id : 54947021188 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Quicksort takes _____ time to sort n elements on average.

Options :

1. ✔ $O(n \log n)$
2. ✘ $O(n^2)$
3. ✘ $O(n^2 \log n)$
4. ✘ $O(n^2 + n)$

Question Number : 93 Question Id : 54947021189 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Sorting method A runs in $2n^2$ steps, while method B runs in $4n(1+\log_2 n)$ steps. For which value of n , both the methods take the same effort to run. (Calculators are not required.)

Options :

1. ✘ 4
2. ✘ 6
3. ✔ 8
4. ✘ 13

Question Number : 94 Question Id : 54947021190 Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

If n keys are stored in a hash table of size $m=n^2$ using a hash function h randomly chosen from a universal class of hash functions, then the probability of there being any collisions is

Options :

1. ✔ $<1/2$
2. ✘ $>1/2$
3. ✘ $=1$

4. ✘ >1

Question Number : 95 Question Id : 54947021191 Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

If you have searched an element successfully using linear search, the average time taken for search is

Options :

1. ✘ n^2

2. ✔ $(n+1)/2$

3. ✘ $n(n+1)/2$

4. ✘ n

Question Number : 96 Question Id : 54947021192 Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The time and space requirements for dynamic programming solution for a travelling salesman problem with an input graph where vertices are numbered 1 through n are:

Options :

1. ✔ $O(n^2 2^n), O(n 2^n)$

2. ✘ $O(n2^n)$, $O(n^22^n)$

3. ✘ $O(n+2^n)$, $O(n^22^n)$

4. ✘ $O(n!)$, $O(n^22^n)$

Question Number : 97 Question Id : 54947021193 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

You are given a knapsack that can carry a maximum weight of 60. There are 4 items with weights {20, 30, 40, and 70} and values {70, 80, 90, and 200}. What is the maximum value of the items you can carry using the knapsack?

Options :

1. ✔ 160

2. ✘ 200

3. ✘ 170

4. ✘ 90

Question Number : 98 Question Id : 54947021194 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The preorder traversal of a binary search tree is 15, 10, 12, 11, 20, 18, 16, 19. Which one of the following is the post order traversal of the tree?

Options :

1. ✘ 20, 19,18,16,15,12,11,10
2. ✘ 10, 11,12,15,16,18,19,20
3. ✔ 11, 12,10,16,19,18,20,15
4. ✘ 19, 16,18,20,11,12,10,15

Question Number : 99 Question Id : 54947021195 Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

In the given state space below, specify the squares where the other 4 Queens must be placed in the first four rows, to solve the 8-queen problem. The options show the position of square by (row,col)

	1	2	3	4	5	6	7	8
1								
2								
3								
4								
5		Q						
6								Q
7						Q		
8				Q				

Options :

1. ✘ (1,3); (2,1);(3,7);(4,5)

2. ✘ (1,7); (2,3);(3,5);(4,1)

3. ✔ (1,5); (2,3);(3,1);(4,7)

4. ✘ (1,7); (2,1);(3,5);(4,3)

Question Number : 100 Question Id : 54947021196 Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

A _____ is a complete binary tree with the property that the value of each node is at least as large as the value of its children (if they exist).

Options :

1. ✘ Stacked Heap

2. ✘ Hierarchical Heap

3. ✘ Min Heap

4. ✔ Max Heap

Question Number : 101 Question Id : 54947021197 Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Number of edges in an n-vertex complete graph is

Options :

1. ✓ $\frac{n(n-1)}{2}$

2. ✘ n

3. ✘ 2^n

4. ✘ $\frac{n(2n-1)}{2}$

Question Number : 102 Question Id : 54947021198 Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

If L_1 and L_2 are context free languages and R a regular set, which of the languages below is not necessarily a context free language?

Options :

1. ✘ $L_1 \cdot L_2$

2. ✓ $L_1 \cap L_2$

3. ✘ $L_1 \cap R$

4. ✘ $L_1 \cup L_2$

Question Number : 103 Question Id : 54947021199 Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Which of the following languages is generated by the given grammar?

$$S \rightarrow AB, A \rightarrow aaA \mid \epsilon, B \rightarrow Bb \mid \epsilon$$

Options :

1. ✘ $\{a^n b^m \mid m, n \geq 0\}$
2. ✔ $\{a^{2n} b^m \mid m, n \geq 0\}$
3. ✘ $\{w \in \{a, b\}^* \mid w \text{ has equal number of } a\text{'s and } b\text{'s}\}$
4. ✘ $\{a^{2n} b^n \mid n \geq 0\}$

Question Number : 104 Question Id : 54947021200 Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Which of the following has same power as Turing Machine?

Options :

1. ✘ N DFA
2. ✘ 2 – PDA
3. ✘ k – tape TM

4. ✓ Both 2-PDA and k-tape TM

Question Number : 105 Question Id : 54947021201 Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

What is the solution for the Post Correspondence system with two lists $x = \{b, bab^3, ba\}$ and $y = \{b^3, ba, a\}$?

Options :

1. ✘ 1312213

2. ✓ 2113

3. ✘ 3112

4. ✘ No solution

Question Number : 106 Question Id : 54947021202 Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Which graph describes the basic block and successor relationship?

Options :

1. ✘ DAG

2. ✓ Flow graph
3. ✘ Control graph
4. ✘ Hamilton graph

Question Number : 107 Question Id : 54947021203 Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Regular expression $(x/y)(x/y)$ denotes which of the following set?

Options :

1. ✘ $\{xy, xy\}$
2. ✓ $\{xx, xy, yx, yy\}$
3. ✘ $\{x,y\}$
4. ✘ $\{x,y,xy\}$

Question Number : 108 Question Id : 54947021204 Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Which table is a permanent database that has an entry for each terminal symbol?

Options :

1. ✓ Terminal Table
2. ✘ Literal Table
3. ✘ Identifier Table
4. ✘ Variable Table

Question Number : 109 Question Id : 54947021205 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

What is the action of parsing the source program into proper syntactic classes known as?

Options :

1. ✘ Interpretation analysis
2. ✘ General Syntax analysis
3. ✘ Syntax analysis
4. ✓ Lexical analysis

Question Number : 110 Question Id : 54947021206 Display Question Number : Yes Is Question Mandatory : No Calculator : None

Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The set of all strings over the alphabet $S = \{a, b\}$ (including ϵ) is denoted by

Options :

1. ✓ $(a + b)^*$
2. ✗ $(a + b)^+$
3. ✗ $a+b^+$
4. ✗ a^*b^*

Question Number : 111 Question Id : 54947021207 Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The FIRST and FOLLOW sets for the grammar: $S \rightarrow SS + / SS^* / a$

Options :

1. ✓ First (S) = {a}, Follow (S) = {+, *, \$}
2. ✗ First (S) = {+}, Follow (S) = {+, *, \$}
3. ✗ First (S) = {a}, Follow (S) = {+, *}
4. ✗ First (S) = {+, *}, Follow (S) = {+, *, \$}

Question Number : 112 Question Id : 54947021208 Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Live variables analysis is used as a technique for _____

Options :

1. ✘ Code generation
2. ✔ Code optimization
3. ✘ Type checking
4. ✘ Run time management

Question Number : 113 Question Id : 54947021209 Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The total number of tokens that are present in the following statement in C is:

```
Printf ("i=%d, &i=%X", i&i);
```

Options :

1. ✘ 6
2. ✘ 10
3. ✔ 9

4. ✘ 13

Question Number : 114 Question Id : 54947021210 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

A process has been allocated 3 page frames. Assume that none of the pages of the process are available in the memory initially. The process makes the following sequence of page references (reference string): 1, 2, 1, 3, 7, 4, 5, 6, 3, 1. If optimal page replacement policy is used, how many page faults occur for the above reference string?

Options :

1. ✔ 7

2. ✘ 8

3. ✘ 9

4. ✘ 10

Question Number : 115 Question Id : 54947021211 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Consider the following table of arrival time and burst time for three processes P0, P1 and P2.

Process	Arrival time	Burst Time
P0	0 ms	9 ms
P1	1 ms	4 ms
P2	2 ms	9 ms

The pre-emptive shortest job first scheduling algorithm is used. Scheduling is carried out only at arrival or completion of processes. What is the average waiting time for the three processes?

Options :

1. ✓ 5.0 ms
2. ✗ 4.33 ms
3. ✗ 6.33 ms
4. ✗ 7.33 ms

Question Number : 116 Question Id : 54947021212 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

_____ gives control of the CPU to the process selected by the short-term scheduler and also its function is Switching Context.

Options :

1. ✗ Scheduler

2. ✘ Interval Timer
3. ✔ Dispatcher
4. ✘ CPU Utilization

Question Number : 117 Question Id : 54947021213 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Which if the following page replacement algorithms suffers from Belady's anomaly?

Options :

1. ✔ FIFO
2. ✘ LRU
3. ✘ Optimal replacement
4. ✘ MRU

Question Number : 118 Question Id : 54947021214 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Assume a FAT file system with a block size of 1KB. Let the present state of directory be as shown below:

File name	First block	Size (in bytes)
Aditya.dat	6	1450
Bobby.c	8	2400

Let the present state of FAT be as below:

0	Free
1	Free
2	-1
3	4
4	-1
5	Free
6	2
7	Free
8	3
9	Free

What is the last block of file Bobby.c and how many bytes are used in the last block?

Options :

1. ✘ 2nd Block, 1K Bytes
2. ✔ 4th Block, 352 Bytes
3. ✘ 2nd Block, 672 Bytes

4. ✘ 4th Block, 1K Bytes

Question Number : 119 Question Id : 54947021215 Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Consider the following process state transitions

- i. Run → Terminated
- ii. Run → Ready
- iii. Run → Blocked
- iv. Blocked → Run

Which one of the following suits the above state transitions?

Options :

- 1. ✘ i. Possible, ii. Possible, iii. Possible, iv. Possible
- 2. ✔ i. Possible, ii. Possible, iii. Possible, iv. Not Possible
- 3. ✘ i. Not Possible, ii. Possible, iii. Possible, iv. Not Possible
- 4. ✘ i. Not Possible, ii. Possible, iii. Not Possible, iv. Possible

Question Number : 120 Question Id : 54947021216 Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Find the minimum number of resources needed to be available for the state given below to be safe.

Process	Current Allocation R1	Maximum Allocation R1
P1	2	3
P2	1	3
P3	3	9
P4	2	8

Options :

1. ✘ 1
2. ✘ 2
3. ✔ 3
4. ✘ 4

Question Number : 121 Question Id : 54947021217 Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Consider the code given below:

```
shared int turn=1;
int my_pid=0; // for first process set 0 and for second process set 1
int other_pid=1-my_pid;

while(turn!=my_pid)
do nothing();

//critical section

turn=other_pid
```

Which of the following conditions fails in the above code?

Options :

1. ✘ Mutual Exclusion
2. ✔ Progress
3. ✘ Bounded Wait
4. ✘ Memory availability

Question Number : 122 Question Id : 54947021218 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Which one of the following is not a Database concurrency anomaly?

Options :

1. ✘ Lost Update
2. ✔ Committed Read
3. ✘ Phantom Read
4. ✘ Non-Repeatable Read

Question Number : 123 Question Id : 54947021219 Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The bank account balance should not be less than Rs 1000. This is

Options :

1. ✘ Referential constraint
2. ✔ Integrity constraint
3. ✘ Schema constraint
4. ✘ Conceptual constraint

Question Number : 124 Question Id : 54947021220 Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

An indexing operation

Options :

1. ✘ sorts a file using a single key
2. ✘ sorts a file using two keys
3. ✔ creates an index for the file
4. ✘ creates a master file

Question Number : 125 Question Id : 54947021221 Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The SQL expression - `select distinct T.branch_name from branch T, branch S where T.assets > S.assets and S.branch_city="BANGALORE"` – finds the names of

Options :

1. ✔ all the branches that have greater than some branch located in BANGALORE
2. ✘ the branch that has greatest asset in BANGALORE
3. ✘ all branches any branch that has greater asset than any branch located in BANGALORE
4. ✘ all branches that have greater assets than all branches located in BANGALORE

Question Number : 126 Question Id : 54947021222 Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Which symbol is used to represent weak entity in E-R model?

Options :

1. ✘ Circle
2. ✘ Diamond
3. ✘ Dotted rectangle
4. ✔ Doubly outlined rectangle

Question Number : 127 Question Id : 54947021223 Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Which level of Abstraction tells how the data is actually stored and structured?

Options :

1. ✘ Internal
2. ✘ View
3. ✔ Conceptual

4. ✖ Physical

Question Number : 128 Question Id : 54947021224 Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Which of the following is the correct order of keywords for SQL SELECT statements?

Options :

1. ✔ SELECT, FROM, WHERE
2. ✖ FROM, WHERE, SELECT
3. ✖ WHERE, FROM, SELECT
4. ✖ SELECT, WHERE, FROM

Question Number : 129 Question Id : 54947021225 Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

_____ is a set of one or more attributes taken collectively to uniquely identify a record.

Options :

1. ✖ Primary Key

2. ✘ Foreign key
3. ✔ Super key
4. ✘ Candidate key

Question Number : 130 Question Id : 54947021226 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Which of the following is/are example(s) of stateful application layer protocols?

- I. HTTP
- II. FTP
- III. TCP
- IV. POP3

Options :

1. ✘ I and II only
2. ✘ II and III only
3. ✔ II and IV only
4. ✘ IV only

Question Number : 131 Question Id : 54947021227 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

How many networks can be allowed in Class C under IPV4 ?

Options :

1. ✘ 2^{14}
2. ✘ 2^{17}
3. ✔ 2^{21}
4. ✘ 2^{24}

Question Number : 132 Question Id : 54947021228 Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

A bit-stuffing based framing protocol uses an 8-bit delimiter pattern of 01111110. If the output bit-string after stuffing is 01111100101, then the input bit-string is

Options :

1. ✘ 0111110100
2. ✔ 0111110101
3. ✘ 0111111101
4. ✘ 0111111111

Question Number : 133 Question Id : 54947021229 Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

What is the efficiency of the Go back N (ARQ) protocol?

Options :

1. ✘ $N = N / (2a + 2a)$

2. ✔ $N = N / (1 + 2a)$

3. ✘ $N = N * (2a + 2a)$

4. ✘ $N = N * (1 + 2a)$

Question Number : 134 Question Id : 54947021230 Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Error control and flow control are the responsibilities of which layers?

Options :

1. ✘ Data link and network layers

2. ✘ Data link and physical layers

3. ✘ Application and presentation layers

Data link and transport layers

4. ✓

Question Number : 135 Question Id : 54947021231 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

User datagram protocol is called connectionless because

Options :

1. ✘ it sends data as a stream of related packets
2. ✓ all UDP packets are treated independently by transport layer
3. ✘ it sends data very quickly
4. ✘ it is received in the same order as sent order

Question Number : 136 Question Id : 54947021232 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

A router has the following routes in its routing table:

Route	Outgoing Interface
0.0.0.0 /0	e1
10.0.0.0 /8	e0
10.0.0.0 /16	e1
10.0.1.0 /24	s0
10.1.1.0 /24	s1
10.1.0.0 /16	s0
10.1.0.0 /24	e1
10.1.1.1 /32	s2

A packet arrives at the router with a destination address of 10.0.4.1 Which interface will the router use to transmit that packet?

Options :

1. ✓ e1
2. ✗ s0
3. ✗ e0
4. ✗ s2

At what layer does Fast Ethernet operate?

Options :

1. ✘ Layer 4
2. ✘ Layer 3
3. ✔ Layer 2
4. ✘ Layer 1

Question Number : 138 Question Id : 54947021234 Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

A condition in which excessive paging operations are taking place is called as?

Options :

1. ✘ Deadlock
2. ✘ Segmentation
3. ✔ Thrashing
4. ✘ Congestion

Question Number : 139 Question Id : 54947021235 Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

How many distinct binary search trees can be created out of 4 distinct keys?

Options :

1. ✘ 4
2. ✔ 14
3. ✘ 24
4. ✘ 42

Question Number : 140 Question Id : 54947021236 Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

_____ offers the ability to query the data and insert, alter, and delete tuples.

Options :

1. ✘ Transaction Control Language (TCL)
2. ✘ Data Control Language (DCL)
3. ✘ Data Definition Language (DDL)

4. ✓ Data Manipulation Language (DML)