Entrance Exam

2024



QUESTION PAPER

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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 :	ELECTRONICS AND INSTRUMENTATION 2nd May 2024 Shift 2
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 :	971036411
Section Number :	1
Mandatory or Optional :	Mandatory
Number of Questions :	66
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 : 97103628906 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 factors shows an adverse effect on the academic performance of a student?

Options :

1. ✖ Faith in God

2. ✖ Physical appearance of teachers

3.

✖ Indifferent attitude towards environment

4. ✔ Low belief in self-efficacy

Question Number : 2 Question Id : 97103628907 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

In order to improve the academic performance of children the parents shall be encouraged to

Options :

1. ✖ Arrange extra coaching at home

2. ✖ Always report to the school teacher

3. ✔ Supervise the work of children

4. ✖ Just remain unconcerned

Question Number : 3 Question Id : 97103628908 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 following is the most important quality of a good teacher

Options :

1. ✖ Being social with students

2. ✔ Mastery over subject

3. ✖ Punctual to work

4. ✖ Possess sympathy on students

Question Number : 4 Question Id : 97103628909 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The method of dividing students into small groups to learn parts of a topic is known as

Options :

1. ✖ Round-Robin method

2. ✖ Numbered heads together

3. ✖ Think-pair-share method

4. ✔ Jigsaw method

Question Number : 5 Question Id : 97103628910 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Which is the first stage in the cycle of experimental learning

Options :

1. ✖ Reflective observation

2. ✔ Concrete experience

3. ✖ Active experimentation

4. ✖ Abstract

Question Number : 6 Question Id : 97103628911 Display Question Number : Yes Is Questio

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

Time : 0

The process of creating knowledge by transforming experiences is known as

Options :

1. ✖ Abstraction

2. ✖ Conceptualization

3. ✔ Learning

4. ✖ Experimentation

Question Number : 7 Question Id : 97103628912 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

A teacher of a diverse class wishes to ensure that all students are engaged on the topic being taught. Which of the following is the best method to reach the goal?

Options :

1. ✔ Initiate a collaborative group activity for students

2. ✖ Use worksheets and calculations

3. ✖ Traditional lecturing

4. ✖ Teaching with the help of slides

Question Number : 8 Question Id : 97103628913 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Which approach emphasizes the importance of objective, measurable data in research?

Options :

1. ✔ Positivism

2. ✖ Post-positivism

3. ✖ Constructivism

4. ✖ Interpretivism

Question Number : 9 Question Id : 97103628914 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Which research method involves manipulating variables to establish cause-and-effect relationships?

Options :

1. ✖ Descriptive

2. ✔ Experimental

3. ✖ Historical

4. ✖ Qualitative

Question Number : 10 Question Id : 97103628915 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The research approach in which focus lies on observable facts avoiding speculation and metaphysical issues is known as

Options :

1. ✖ Abstraction

2. ✖ Constructionism

3. ✔ Positivism

4. ✖ Feminism

Question Number : 11 Question Id : 97103628916 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 research is carried out is called

Options :

1. ✖ Research paradigm

2. ✖ Research synopsis

3. ✖ Research theme

4. ✔ Research design

Question Number : 12 Question Id : 97103628917 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

An approach known as 'research-to-action' is called _____ research

Options :

1. ✖ Case study

2. ✔ Participatory

3. ✖ Intuitive

4. ✖ Qualitative

Question Number : 13 Question Id : 97103628918 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The 'bottom-up method' approach in research is known as

Options :

1. ✔ Inductive method

2. ✖ Hypothesis method

3. ✖ Pattern method

4. ✖ Interview method

Question Number : 14 Question Id : 97103628919 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction

Time : 0

In the context of research, the saying 'knowledge comes from experience' is called

Options :

1. ✖ Empiricism

2. ✖ Logic

3. ✔ Deductive reasoning

4. ✖ Experimentation

Question Number : 15 Question Id : 97103628920 Display Question Number : Yes Is Questi

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

Time : 0

A research approach that relies on neutral and measurable physical things around is known as

Options :

1. ✔ Positivism

2. ✖ Post-positivism

3. ✖ Rationalism

4. ✖ Delfi approach

Question Number : 16 Question Id : 97103628921 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

A type of research that adheres to specific research design is called

Options :

1. ✖ Historical research

2. ✔ Experimental research

3. ✖ Case study

4. ✖ Survey research

Question Number : 17 Question Id : 97103628922 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

In experimental research, the results of a study group are compared with those of

Options :

1. ✖ Popularly known results

2. ✖ Published research outcomes

3. ✔ Control group

4.

✖ Myth and belief

Question Number : 18 Question Id : 97103628923 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

A research approach used to generate an in-depth and multi-faceted understanding of an issue is called

Options :

1. ✖ Quasi experimental approach

2. ✖ Historical research

3. ✖ Participatory research

4. ✔ Case study approach

Question Number : 19 Question Id : 97103628924 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The chief goal of qualitative research is _____ of the findings

Options :

1. ✖ Dimension reduction

2. ✔ Categorization

3. ✖ Presentation

4. ✖ Meta-analysis

Question Number : 20 Question Id : 97103628925 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 first step in the research process?

Options :

1. ✖ Data analysis

2. ✖ Literature review

3. ✔ Formulating research questions

4. ✖ Writing the research report

Is Section Default? : null

Question Id : 97103628926 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 : (21 to 25)

Read the Passage and answer the following questions:

Education is fundamental for achieving full human potential, developing an equitable and just society, and promoting national development. Providing universal access to quality education is the key to India's continued ascent, and leadership on the global stage in terms of economic growth, social justice and equality, scientific advancement, national integration, and cultural preservation. Universal high-quality education is the best way forward for developing and maximizing our country's rich talents and resources for the good of the individual, the society, the country, and the world. India will have the highest population of young people in the world over the next decade, and our ability to provide high-quality educational opportunities to them will determine the future of our country. The global education development agenda reflected in the Goal 4 (SDG4) of the 2030 Agenda for Sustainable Development, adopted by India in 2015 - seeks to "ensure inclusive and equitable quality education and promote lifelong learning opportunities for all" by 2030. Such a lofty goal will require the entire education system to be reconfigured to support and foster learning, so that all of the critical targets and goals (SDGs) of the 2030 Agenda for Sustainable Development can be achieved.

Sub questions

Question Number : 21 Question Id : 97103628927 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Which is required to achieve human potential?

Options :

1. ✖ Culture

2. ✖ Social Justice

3. ✖ Leadership

4. ✔ Education

Question Number : 22 Question Id : 97103628928 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

India's leadership in multifaced national development is largely based on

Options :

1. ✖ Good quality of life

2. ✔ Access to quality education

3. ✖ Social justice

4. ✖ Industrial growth

Question Number : 23 Question Id : 97103628929 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Youngsters in India will determine the future of the country through quality education because

Options :

1. ✖ Youngsters learn things faster than seniors

2. ✖ Youngsters possess great skills

3. ✔ India's younger population will be the highest in the world in the next 10 years

4. ✖ Younger population are energetic

Question Number : 24 Question Id : 97103628930 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The SDG4 seeks to ensure by 2030 the following aspect

Options :

1. ✔ Inclusive and equitable quality education

2. ✖ Equality to both genders in higher education

3. ✖ Compulsory free education

4. ✖ Inclusiveness to all in mid-day meal in schools

Question Number : 25 Question Id : 97103628931 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

India has adopted the global education development agenda in the year

Options :

1. ✖ 2003

2. ✖ 2005

3. ✖ 2030

4. ✔ 2015

Is Section Default? : null

Question Number : 26 Question Id : 97103628932 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The method of communication from a single source to selected receivers is called

Options :

1. ✖ Mass communication

2. ✖ Inter-personal communication

3. ✔ Group communication

4. ✖ Tele communication

Question Number : 27 Question Id : 97103628933 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The use of a language to convey information by speaking is called

Options :

1. ✔ Verbal communication

2. ✖ Inter-personal communication

3. ✖ Body language

4. ✖ Facial communication

Question Number : 28 Question Id : 97103628934 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The following is an example of non-verbal communication

Options :

1. ✖ Question paper

2. ✖ Google form

3. ✖ SMS on mobile

4. ✔ Facial expression

Question Number : 29 Question Id : 97103628935 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The term dyadic communication refers to

Options :

1. ✖ Group communication

2. ✔ Inter personal communication

3. ✖ Face to face communication

4. ✖ Gestures

Question Number : 30 Question Id : 97103628936 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruct Time : 0

Which type of communication is inherently asynchronous?

Options :

1. ✖ Satellite communication

2. ✖ Voice calls

3. ✖ Video streaming

4. ✔ Instant messaging

Question Number : 31 Question Id : 97103628937 Display Question Number : Yes Is Question

Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

How does ICT (Information and Communication Technology) benefit research?

Options :

1. ✖ Increases manual workload

2. ✔ Enhances data analysis and visualization

3. ✖ Decreases data storage capacity

4. ✖ Reduces research collaboration

Question Number : 32 Question Id : 97103628938 Display Question Number : Yes Is Questi

Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

_____ is a vital requirement of good quality in group discussion by participants

Options :

1. ✖ Aggressiveness

2. ✖ Ignorance

3. ✔ Emotional stability

4. ✖ Cross talking

Question Number : 33 Question Id : 97103628939 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

When shall there be break in the discussion by the modulator during group discussion?

Options :

1. ✖ When only one person keeps on talking

2. ✖ When all are silent

3. ✖ When less time is left out

4. ✔ When two or more people talk at a time

Question Number : 34 Question Id : 97103628940 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

In a group discussion one should avoid

Options :

1. ✖ Speaking fake things

2. ✖ Trying to be dominating

3. ✔ Being subjective

4. ✖ Asking questions

Question Number : 35 Question Id : 97103628941 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

What is a fundamental principle of research ethics?

Options :

1. ✔ Respect for participants' rights

2. ✖ Plagiarism

3. ✖ Data falsification

4. ✖ Biased reporting

Question Number : 36 Question Id : 97103628942 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

If the day after the day after tomorrow is four days before Monday, what day is it today?

Options :

1. ✖ Monday

2. ✔ Tuesday

3. ✖ Wednesday

4. ✖ Friday

Question Number : 37 Question Id : 97103628943 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Given the number series: 7, 10, 8, 11, 9, 12, … the next number in sequence will be

Options :

1. ✖ 7

2. ✖ 12

3. ✔ 10

4. ✖ 13

Question Number : 38 Question Id : 97103628944 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

SCD, TEF, UGH, ____, WKL

Options :

1. ✖ CMN

2. ✖ UJI

3. ✔ VIJ

4. ✖ IJT

Question Number : 39 Question Id : 97103628945 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

If in a certain code language "CONSTRUCTION" was written as "EMPQVPWAVGQL" identify what will be the code in the same language for the word "DESTRUCTION"?

Options :

1. ✔ FCURTSERKMP

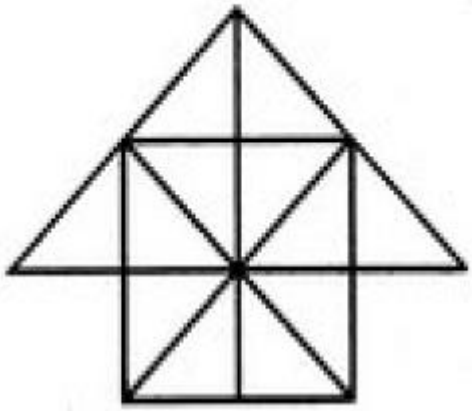
2. ✖ EFTVSVDVJPO

3. ✖ FCURTSFSLOQ

4. ✖ FCEFSVJVTRM

Question Number : 40 Question Id : 97103628946 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Count the number of triangles and squares in the given figure.



Options :

1. ✖ 26 triangles, 5 squares

2. ✖ 28 triangles, 5 squares

3. ✔ 28 triangles, 6 squares

4. ✖ 26 triangles, 6 squares

Question Number : 41 Question Id : 97103628947 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

An Aeroplane covers a certain distance at a speed of 240 kmph in 5 hours. At what speed it should travel in order to cover the same distance in 2 hours

Options :

1. ✖ 300 Kmph

2. ✖ 360 Kmph

3. ✖ 720 Kmph

4. ✔ 600 Kmph

Question Number : 42 Question Id : 97103628948 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

If we multiply two consecutive integers the product is an even number. So (3x4 = 12) is an even number. What type of logic is this?

Options :

1. ✖ Informal

2. ✖ Inductive

3. ✖ Formal

4. ✔ Deductive

Question Number : 43 Question Id : 97103628949 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Given a premise and a conclusion, a deductive argument becomes invalid when

Options :

1. ✖

Both premise and conclusion are false

2. ✔ Premise is true but conclusion is false

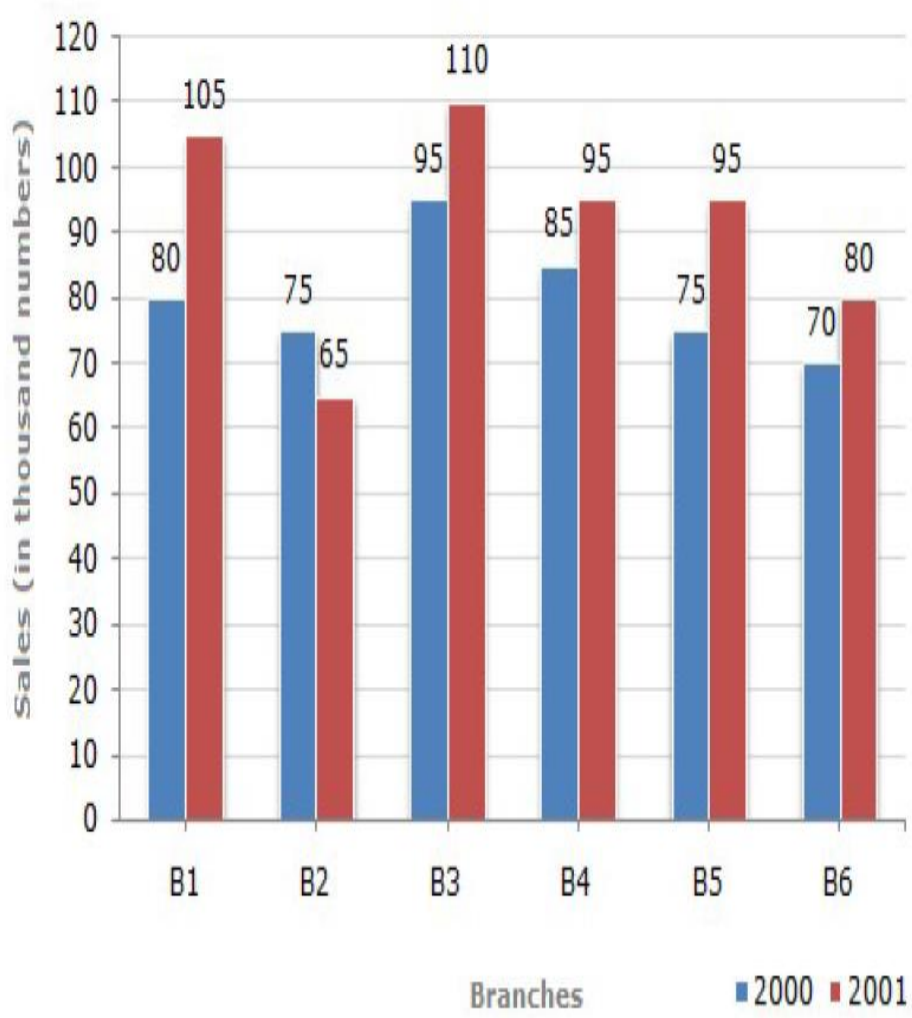
3. ✖ Both premise and conclusion are true

4. ✖ Premise is false but conclusion is true

Question Number : 44 Question Id : 97103628950 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The bar graph given below shows the sales of books (in thousand number) from six branches of a publishing company during two consecutive years 2000 and 2001.

Sales of Books (in thousand numbers) from Six Branches - B1, B2, B3, B4, B5 and B6 of a publishing Company in 2000 and 2001.



What is the ratio of the total sales of branch B2 for both years to the total sales of branch B4 for both years?

Options :

1. ✖ 2.3

2. ✖ 3.5

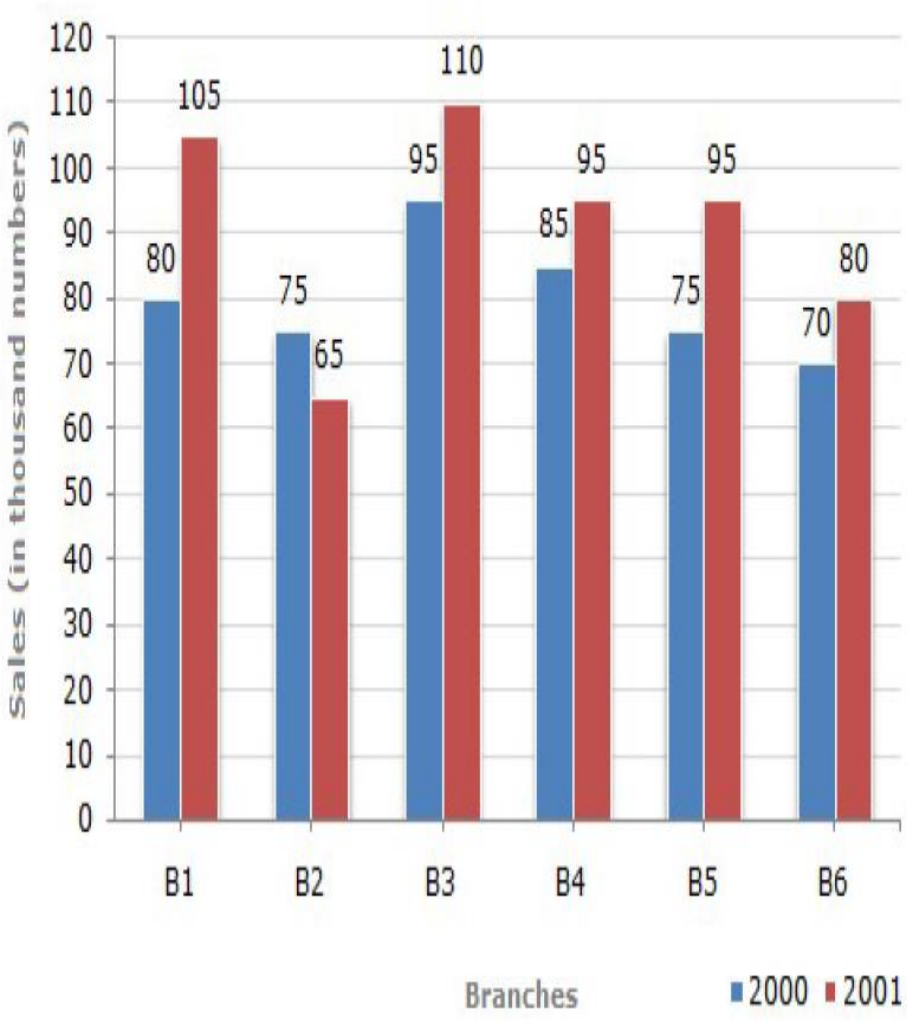
3. ✖ 4.5

4. ✔ 7.9

Question Number : 45 Question Id : 97103628951 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The bar graph given below shows the sales of books (in thousand number) from six branches of a publishing company during two consecutive years 2000 and 2001.

Sales of Books (in thousand numbers) from Six Branches - B1, B2, B3, B4, B5 and B6 of a publishing Company in 2000 and 2001.



Total sales of branch B6 for both the years is what percent of the total sales of branches B3 for both the years?

Options :

1. ✖ 68.54

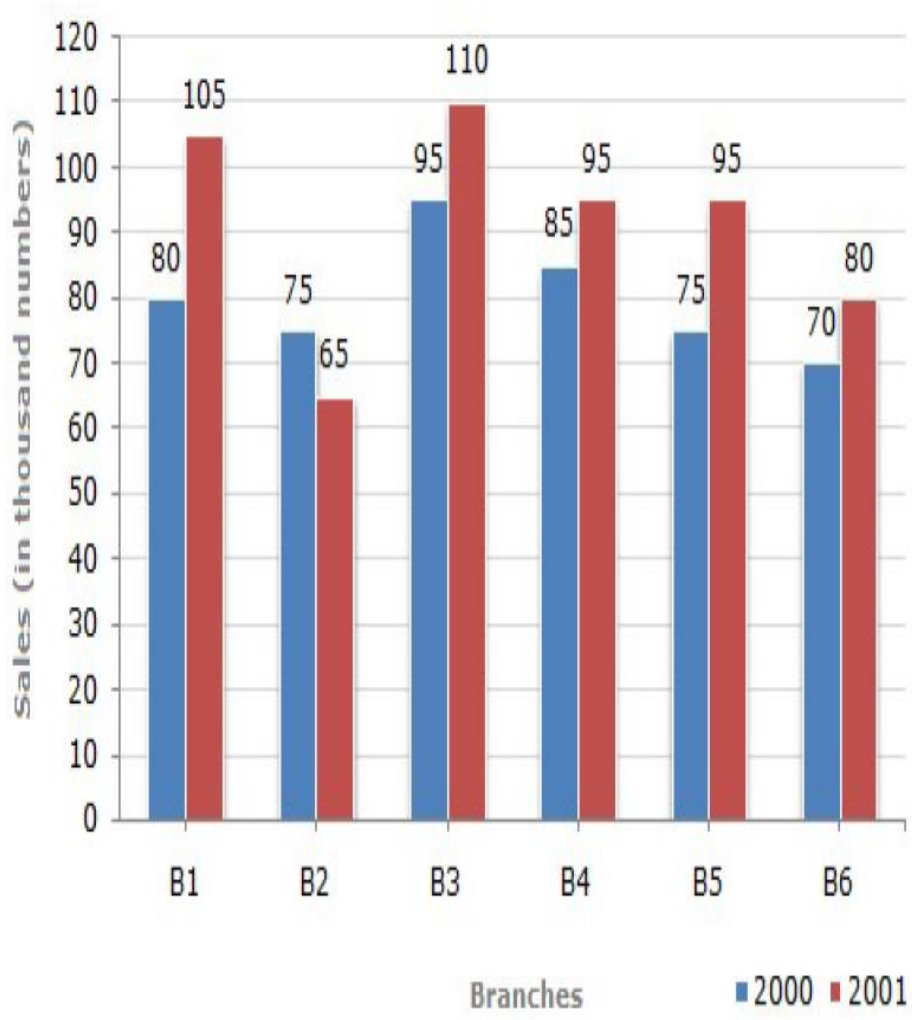
2. ✖ 71.11

3. ✔ 73.17

4. ✖ 75.55

Question Number : 46 Question Id : 97103628952 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The bar graph given below shows the sales of books (in thousand number) from six branches of a publishing company during two consecutive years 2000 and 2001.
Sales of Books (in thousand numbers) from Six Branches - B1, B2, B3, B4, B5 and B6 of a publishing Company in 2000 and 2001.



What percent of the average sales of branches B1, B2 and B3 in 2001 is the average sales of branches B1, B3 and B6 in 2000?

Options :

1. ✖ 78

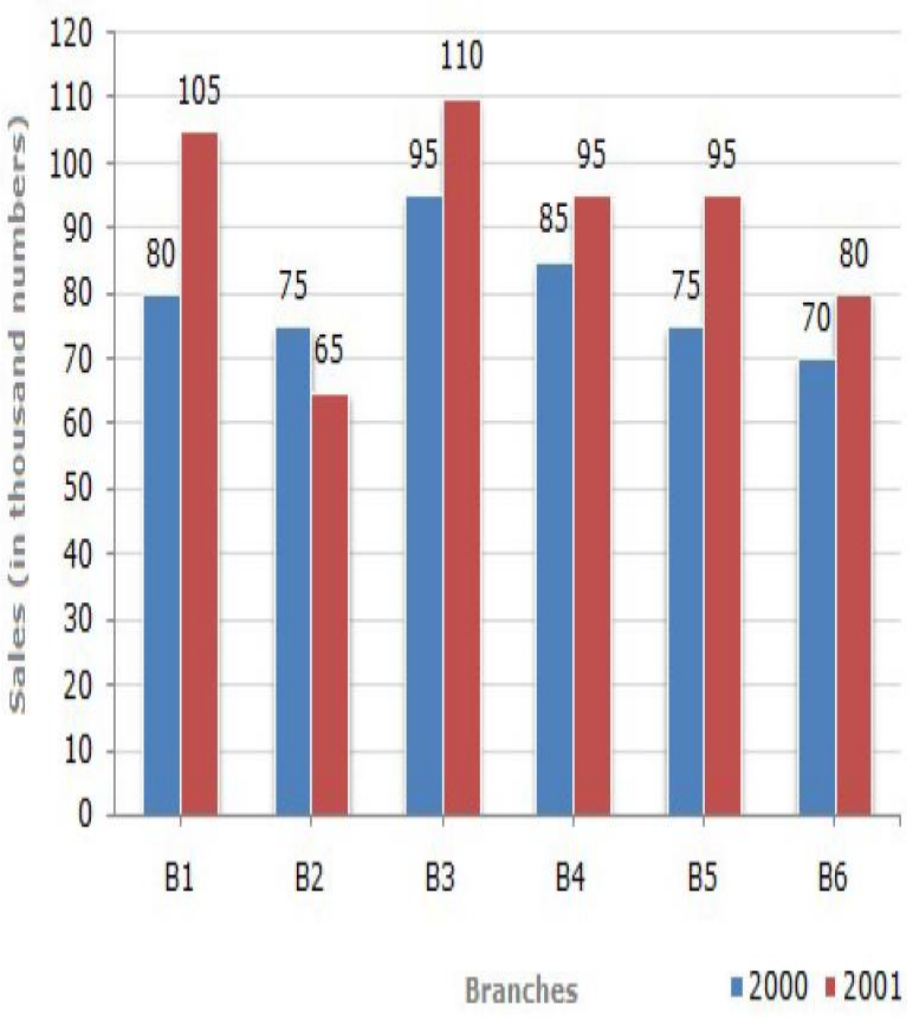
2. ✖ 77.5

3. ✖ 82.5

4. ✔ 87.5

Question Number : 47 Question Id : 97103628953 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The bar graph given below shows the sales of books (in thousand number) from six branches of a publishing company during two consecutive years 2000 and 2001.
Sales of Books (in thousand numbers) from Six Branches - B1, B2, B3, B4, B5 and B6 of a publishing Company in 2000 and 2001.



What are the average sales of all the branches (in thousand numbers) for the year 2000?

Options :

1. ✖ 73

2. ✔ 80

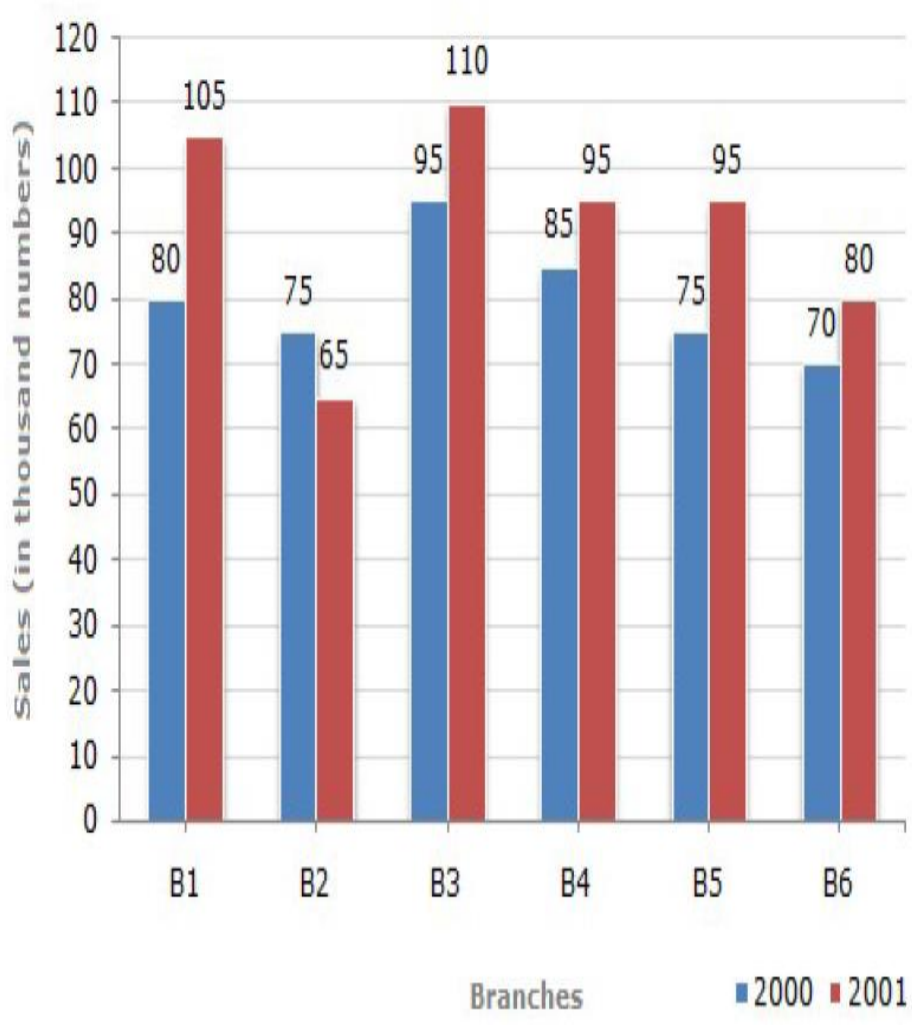
3. ✖ 83

4. ✖ 88

Question Number : 48 Question Id : 97103628954 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The bar graph given below shows the sales of books (in thousand number) from six branches of a publishing company during two consecutive years 2000 and 2001.

Sales of Books (in thousand numbers) from Six Branches - B1, B2, B3, B4, B5 and B6 of a publishing Company in 2000 and 2001.



Total sales of branches B1, B3 and B5 together for both the years (in thousand numbers) is?

Options :

1. ✖ 250

2. ✖ 310

3. ✖ 435

4. ✔ 560

Question Number : 49 Question Id : 97103628955 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruct Time : 0

What is a challenge in inter-cultural communication?

Options :

1. ✖ Shared cultural norms

2. ✖ Similar communication styles

3. ✖ Homogeneous perspectives

4. ✔ Language barriers

Question Number : 50 Question Id : 97103628956 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 following is a web browser

Options :

1. ✖ Microsoft Windows

2. ✖ Google Drive

3. ✔ Google Chrome

4. ✖ HTML

Question Number : 51 Question Id : 97103628957 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

An example of not cloud storage of data files is

Options :

1. ✔ SQL

2. ✖ Google Drive

3. ✖ Drobox

4. ✖ One-drive

Question Number : 52 Question Id : 97103628958 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Suspicious and potentially dangerous e-mails are stored in

Options :

1. ✖ Sent folder

2. ✔ Spam folder

3. ✖ Junk folder

4. ✖ In-box folder

Question Number : 53 Question Id : 97103628959 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The act of sending harmful e-mails to steal personal information is called

Options :

1. ✖ Group mailing

2. ✖ Mailing without attachments

3. ✖ Junk mailing

4. ✔ Phishing

Question Number : 54 Question Id : 97103628960 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The purpose of firewall for an internet connection is

Options :

1. ✔ To prevent unauthorized access to the network

2. ✖ To handle large volumes of data

3. ✖ To provide video conferencing

4. ✖ To enhance the speed of data access

Question Number : 55 Question Id : 97103628961 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

In order to achieve sustainable development, the most important factor to be considered is

Options :

1. ✖ High GDP growth rate

2. ✖ Inclusiveness in planning

3. ✔ Inter-generation equity

4. ✖ Industrial growth

Question Number : 56 Question Id : 97103628962 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The SDG India Index (2020-21) for measuring progress of states and union territories was developed by

Options :

1. ✖ ICMR

2. ✔ NITI Ayog

3. ✖ MHRD

4. ✖ RBI

Question Number : 57 Question Id : 97103628963 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Activities that are harmful to humans and environment like excessive ground water abstraction are called

Options :

1. ✔ Anthropogenic activities

2. ✖ Agri-farm activities

3. ✖ Rain forest exploration

4. ✖ Cloud seeding activities

Question Number : 58 Question Id : 97103628964 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 following is a secondary air pollutant

Options :

1. ✖ Sulfur dioxide

2. ✖ Suspended Particulate Matter (SPM)

3. ✖ Methene

4. ✔ Sulphuric Acid

Question Number : 59 Question Id : 97103628965 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction

Time : 0

The harmful pollutant released by petrol/diesel vehicles is

Options :

1. ✖ Carbon Dioxide

2. ✖ Ozone

3. ✔ Carbon Monoxide

4. ✖ Nitrogen Oxide

Question Number : 60 Question Id : 97103628966 Display Question Number : Yes Is Questi

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

Time : 0

The measurement unit dB is used to measure the level of _____ pollution

Options :

1. ✖ Air

2. ✖ Water

3. ✔ Soil

4. ✖ Noise

Question Number : 61 Question Id : 97103628967 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 expansion for the acronym SPM in the context of pollution?

Options :

1. ✖ Surface Particle Matter

2. ✔ Suspended Particulate Matter

3. ✖ Stagnated Particulate Matter

4. ✖ Structured Polluted Material

Question Number : 62 Question Id : 97103628968 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The dB of normal conversation is

Options :

1. ✖ 30

2. ✖ 10

3. ✖ 120

4. ✔ 60

Question Number : 63 Question Id : 97103628969 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 sectors does not cause soil pollution?

Options :

1. ✖ Agriculture

2. ✖ Road transport

3. ✖ Thermal power plants

4. ✔ Hydropower plants

Question Number : 64 Question Id : 97103628970 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Disruption of sleeping pattern, known as insomnia is attributable to _____ pollution

Options :

1. ✖ Water

2. ✔ Noise

3. ✖ Air

4. ✖ Soil

Question Number : 65 Question Id : 97103628971 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The renowned Taxila university flourished during the empire of

Options :

1. ✖ Vikramaditya

2. ✖ Chola

3. ✔ Mourya

4. ✖ Pallava

Question Number : 66 Question Id : 97103628972 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The ancient fundamental text Yoga Sutras was authored by

Options :

1. ✖ Chanakya

2. ✖ Tadhagatha

3. ✖ Bhatti

4. ✔ Pathanjali

Question Number : 67 Question Id : 97103628973 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 following is an important provision in the India's New Education Policy 2020

Options :

1. ✖ Teaching all courses in mother tongue

2. ✖ Teaching all courses in English language only

3. ✔ Admissions into Universities across the country through a common entrance test

4. ✖ All higher educational institutions be owned by Government

Question Number : 68 Question Id : 97103628974 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Funding for social science research exclusively in India is facilitated by the following organization

Options :

1. ✖ UGC

2. ✖ ICMR

3. ✖ CSIR

4. ✔ ICSSR

Question Number : 69 Question Id : 97103628975 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The University Grants Commission of India was formed basing on the recommendations of

Options :

1. ✔ Radhakrishnan Commission

2. ✖ Sam Pitroda Commission

3. ✖ Kothari Commission

4. ✖ Sri Krishna Commission

Question Number : 70 Question Id : 97103628976 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 subject deals with the study of past events and human affairs ?

Options :

1. ✖ Psychology

2. ✖ Vedic studies

3. ✔ History

4. ✖ Law

ELECTRONICS AND INSTRUMENTATION

Section Id :	971036412
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 : 97103628977 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

A clinical thermometer has a built-in amplifying element in the form of

Options :

1. ✖ Mercury bulb

2. ✔ Capillary

3. ✖ Scale

4. ✖ Thermocouple

Question Number : 72 Question Id : 97103628978 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Example of active transducer

Options :

1. ✖ Thermistor

2. ✖ LVDT

3. ✖ LDR

4. ✔ Thermocouple

Question Number : 73 Question Id : 97103628979 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The auto-focus and auto-shutter adjustment camera is

Options :

1. ✖ Dumb instrument

2. ✖ A self-generating instrument

3. ✖ An analog instrument

4. ✔ A smart instrument

Question Number : 74 Question Id : 97103628980 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The error which is repetitive in nature is

Options :

1. ✖ Observational error

2. ✖ Environmental error

3. ✖ Random

4. ✔ Systematic error

Question Number : 75 Question Id : 97103628981 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction

Time : 0

A $4^{1/2}$ digital voltmeter has a read out range from 0- 19999 counts, for full scale measuring range from 0 to 2 volts, then the value of resolution of this voltmeter is

Options :

1. ✔ 0.1 mV

2. ✖ 1 mV

3. ✖ 0.2 mV

4. ✖ 2 mV

Question Number : 76 Question Id : 97103628982 Display Question Number : Yes Is Questi

Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

LVDT works on the principle of variation of

Options :

1. ✖ Capacitance

2. ✖ Resistance

3. ✔ Mutual inductance

4. ✖ Self-inductance

Question Number : 77 Question Id : 97103628983 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

_____ cannot be used to measure pressure

Options :

1. ✖ Strain gauge

2. ✔ Pyrometer

3. ✖ LVDT

4. ✖ Pirani gauge

Question Number : 78 Question Id : 97103628984 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 can be measured by Ring-balance meter?

Options :

1. ✖ Mass flow rate

2. ✖ Flow

3. ✔ Differential pressure

4. ✖ Humidity

Question Number : 79 Question Id : 97103628985 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

By a Rotometer we can measure

Options :

1. ✖ Specific gravity

2. ✖ Viscosity

3. ✔ Flow

4. ✖ Rotation

Question Number : 80 Question Id : 97103628986 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 used for very high temperature (>2500 ^{O}C) measurement

Options :

1. ✖ RTD

2. ✖ Thermocouple

3. ✔ Pyrometer

4. ✖ IC sensor

Question Number : 81 Question Id : 97103628987 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

A measure of the reproducibility of the measurements is known as

Options :

1. ✖ Resolution

2. ✔ Precision

3. ✖ Fidelity

4. ✖ Accuracy

Question Number : 82 Question Id : 97103628988 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

What type of bridge is suitable for measuring capacitance?

Options :

1. ✖ Kelvin Bridge

2. ✖ Anderson Bridge

3. ✖ Hay Bridge

4. ✔ Schering Bridge

Question Number : 83 Question Id : 97103628989 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

LVDT is primarily used for measuring which of the following?

Options :

1. ✖ Current

2. ✖ Force

3. ✖ Speed

4. ✔ Linear displacement

Question Number : 84 Question Id : 97103628990 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Which instrument is used to measure the density of a liquid?

Options :

1. ✖ Refractometer

2. ✔ Hydrometer

3. ✖ Thermocouple

4. ✖ Tachometer

Question Number : 85 Question Id : 97103628991 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

_____ increases the steady state accuracy

Options :

1. ✔ Integrator

2. ✖ Differentiator

3. ✖ Phase lead compensator

4. ✖ Phase lag compensator

Question Number : 86 Question Id : 97103628992 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

As a result of the introduction of negative feedback, which of the following will not decrease?

Options :

1. ✔ Stability

2. ✖ Gain

3. ✖ Bandwidth

4. ✖ Distortion

Question Number : 87 Question Id : 97103628993 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The position and velocity errors of a type-2 system are

Options :

1. ✖ Constant, constant

2. ✖ Constant, infinity

3. ✖ Zero, constant

4. ✔ Zero, zero

Question Number : 88 Question Id : 97103628994 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

What does a positive gain margin indicate in a control system?

Options :

1. ✖ System is unstable

2.

✔ System is stable

3. ✖ System is critically damped

4. ✖ System is underdamped

Question Number : 89 Question Id : 97103628995 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

A Servomechanism with step displacement input will form _____ system.

Options :

1. ✖ Type 3

2. ✖ Type 2

3. ✔ Type 1

4. ✖ Type 0

Question Number : 90 Question Id : 97103628996 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

A unity feedback system has the open loop transfer function

$G(s) = 1 / (s - 1)(s + 2)(s + 3)$

The Nyquist plot of G(s) encircles the origin

Options :

1. ✖ Never

2. ✔ Once

3. ✖ Twice

4. ✖ Thrice

Question Number : 91 Question Id : 97103628997 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

In the second order system with transfer function $1/s^2$, the phase shift will be

Options :

1. ✖ $-180°$

2. ✔ $+180°$

3. ✖ $\pi/2$

4. ✖ $-\pi/2$

Question Number : 92 Question Id : 97103628998 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 intrinsic stand-off ratio(η) of a unijunction transistor, if RB1 = 10 kΩ and RBB = 16 kΩ?

Options :

1. ✖ 0.550

2. ✖ 0.454

3. ✖ 0.806

4. ✔ 0.625

Question Number : 93 Question Id : 97103628999 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruct Time : 0

The SCR is a

Options :

1. ✖ Four layer, four junction device

2. ✔ Four layer, three junction device

3. ✖ Four layer, two junction device

4. ✖ Three layer, three junction device

Question Number : 94 Question Id : 97103629000 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

In a regulated power supply, two similar 6.2 V zeners are connected in series. The input voltage is 20 V d.c. If each Zener has a maximum current rating of 100 mA, what should be the value of the series resistance?

Options :

1. ✖ 200 Ω

2. ✖ 100 Ω

3. ✔ 76 Ω

4. ✖ 50 Ω

Question Number : 95 Question Id : 97103629001 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

A power supply has voltage regulation of 2%. If no-load voltage is 15V, what will be the full-load voltage ?

Options :

1. ✖ 15 V

2. ✖ 15.2 V

3. ✔ 14.7 V

4. ✖ 30 V

Question Number : 96 Question Id : 97103629002 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The advantage of switching regulators is

Options :

1. ✔ High efficiency

2. ✖ Low ripple

3. ✖ Low cost

4. ✖ Less components

Question Number : 97 Question Id : 97103629003 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 resistances will be physically largest in size?

Options :

1. ✖ 10 Ω, 50 W

2. ✖ 100 Ω, 10 W

3. ✔ 100 Ω, 50 W

4. ✖ 1 kΩ, 1 W

Question Number : 98 Question Id : 97103629004 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The parameter which limits the maximum rate at which an op.amp output voltage can change is

Options :

1. ✖ CMRR

2. ✖ Input impedance

3. ✔ Slew rate

4. ✖ Output impedance

Question Number : 99 Question Id : 97103629005 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 value of CMRR of differential amplifier in dB ?, if the differential amplifier has $A_d = 1000$, $Ac = 0.01$

Options :

1. ✖ 70 dB

2. ✖ 80 dB

3. ✖ 90 dB

4. ✔ 100 dB

Question Number : 100 Question Id : 97103629006 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

In a full-wave rectifier, if A.C. supply frequency is 50 Hz, then A.C. ripple in the output is

Options :

1. ✖ 25 Hz

2. ✖ 50 Hz

3. ✔ 100 Hz

4. ✖ 150 Hz

Question Number : 101 Question Id : 97103629007 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

_____ oscillator is the most stable oscillator

Options :

1. ✔ Crystal controlled

2. ✖ Weybridge

3. ✖ Colpilts

4. ✖ Hartley

Question Number : 102 Question Id : 97103629008 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 circuits is used as frequency to voltage converter?

Options :

1. ✖ Schmitt trigger

2. ✔ Monostable multivibrators

3. ✖ Bistable multivibrator

4. ✖ Astable multivibrator

Question Number : 103 Question Id : 97103629009 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

If bandwidth of the amplifier is 1 MHz at 100 gain, what will be the bandwidth if the gain of the amplifier is decreased to 1?

Options :

1. ✖ 100 KHz

2. ✖ 1 MHz

3. ✖ 10 MHz

4. ✔ 100 MHz

Question Number : 104 Question Id : 97103629010 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruct Time : 0

A 10 V step input is applied to RC low-pass circuit with R = 100 kΩ and C = 100 pF. The time for the capacitor to charge to 63.2% of final value is

Options :

1. ✔ 10 μs

2. ✖ 1 μs

3. ✖ 10,000 μs

4. ✖ 100 μs

Question Number : 105 Question Id : 97103629011 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The cumulative addition of the four binary bits (1 + 1 + 1 + 1) gives

Options :

1. ✔ 0100

2. ✖ 0111

3. ✖ 1001

4. ✖ 1111

Question Number : 106 Question Id : 97103629012 Display Question Number : Yes Is Quest Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The basic DTL configuration is _____ gate.

Options :

1. ✖ OR

2. ✖ NOR

3. ✔ NAND

4. ✖ AND

Question Number : 107 Question Id : 97103629013 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 fastest unsaturated logic gate?

Options :

1. ✖ RTL

2. ✖ HTL

3. ✖ TTL

4. ✔ ECL

Question Number : 108 Question Id : 97103629014 Display Question Number : Yes Is Quest... Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Which of the following is binary equivalent of (0·875)?

Options :

1. ✖ 0·0110

2. ✖ 0·1010

3. ✔ 0·1110

4. ✖ 0·1001

Question Number : 109 Question Id : 97103629015 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

_____ has maximum fan-out capacity.

Options :

1. ✖ MOS

2. ✔ CMOS

3. ✖ ECL

4. ✖ RTL

Question Number : 110 Question Id : 97103629016 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Master-slave configuration is used in flip-flops to

Options :

1. ✖ Increase its clocking rate

2. ✖ Reduce power dissipation

3. ✔ Eliminate race-around condition

4. ✖ Improve its reliability

Question Number : 111 Question Id : 97103629017 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

$(A + \overline{B} + \overline{A}\,B)$ is the same as

Options :

1. ✖ 0

2. ✔ 1

3. ✖ C

4. ✖ $\overline{C}$

Question Number : 112 Question Id : 97103629018 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The number of comparisons carried out in an 8-bit flash-type A/D converter is

Options :

1. ✖ 256

2. ✔ 255

3. ✖ 8

4.

✖ 9

Question Number : 113 Question Id : 97103629019 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The logic family which consumes maximum power is

Options :

1. ✔ ECL

2. ✖ TTL

3. ✖ CMOS

4. ✖ MOS

Question Number : 114 Question Id : 97103629020 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The most suitable gate to check whether the number of 1s in a digital word is even or odd is

Options :

1. ✖ NOR

2. ✖ NAND

3. ✔ X-OR

4. ✖ AND

Question Number : 115 Question Id : 97103629021 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

A BCD-to-Decimal decoder is a

Options :

1. ✔ 3-to-8 line decoder

2. ✖ 1-to-10 line decoder

3. ✖ 4-to-8 line decoder

4. ✖ Any-to-10 line decoder

Question Number : 116 Question Id : 97103629022 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The resolution of an 8-bit ADC is 20 mV, what will be the digital data if the analog input voltage is 110 mV?

Options :

1. ✖ 1111 1100

2.

✖ 1111 0000

3. ✖ 0000 0110

4. ✔ 0000 0101

Question Number : 117 Question Id : 97103629023 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

How many special function registers are there in 8051?

Options :

1. ✖ 5

2. ✖ 10

3. ✖ 15

4. ✔ 20

Question Number : 118 Question Id : 97103629024 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 vector address of INT0 interrupt?

Options :

1. ✔ 0003H

2. ✖ 000BH

3. ✖ 00013H

4. ✖ 001BH

Question Number : 119 Question Id : 97103629025 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

How many modes are there for on-chip serial port of 8051 microcontroller?

Options :

1. ✖ 2

2. ✖ 3

3. ✔ 4

4. ✖ 5

Question Number : 120 Question Id : 97103629026 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 bit addressable register?

Options :

1. ✖ SBUF

2. ✖ TMOD

3. ✔ IE

4. ✖ TH0

Question Number : 121 Question Id : 97103629027 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 maximum addressing capacity of 8051 microcontroller?

Options :

1. ✖ 8 Kbytes

2. ✖ 16 Kbytes

3. ✖ 32 Kbytes

4. ✔ 64 Kbytes

Question Number : 122 Question Id : 97103629028 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

If clock frequency of the 8051 is 12 MHz then the timer clock will have frequency of

Options :

1.

✖ 12 MHz

2. ✔ 1 MHz

3. ✖ 500 KHz

4. ✖ 50 KHz

Question Number : 123 Question Id : 97103629029 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

What will be the output of the following C code?

```
#include <stdio.h>
int main()
{
int a = 45;
int a = 26;
printf("%d\n", a);
return 0;
}
```

Options :

1. ✖ 26

2. ✖ 45

3. ✔ Compile time error

4. ✖ Random value

Question Number : 124 Question Id : 97103629030 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

What will be the output of the following C code

```
#include <stdio.h>
int main()
{
int i = 20;
double a = 97.12;
printf("%d, %lu, %lu \n", sizeof(i), sizeof(a), sizeof(a + i));
return 0;
}
```

Options :

1. ✖ 2, 4, 6

2. ✖ 4, 8, 12

3. ✔ 4, 8, 8

4. ✖ 2, 2, 12

Question Number : 125 Question Id : 97103629031 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 elements present in the array of the following C code?

Int array[4] = {2};

Options :

1. ✖ 2, 2, 2, 2

2. ✔ 2, 0, 0, 0

3. ✖ 2, 2, 0, 0

4. ✖ 0, 0, 0, 2

Question Number : 126 Question Id : 97103629032 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

How is the 10^{th} element in an array accessed based on pointer notation?

Options :

1. ✖ *a +10

2. ✔ *(a + 10)

3. ✖ *(*a + 10)

4.

✖ &(a + 10)

Question Number : 127 Question Id : 97103629033 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The modulus for float can be achieved by

Options :

1. ✖ x % y

2. ✖ Modulus(x, y)

3. ✔ Fmod(x, y)

4. ✖ Mod(x, y)

Question Number : 128 Question Id : 97103629034 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

In ESR the resonance frequency is given by the equation

Options :

1. ✔ $\nu = g\beta H/h$

2. ✖ $\nu = g\beta/h$

3.

✖ $\nu = H_o/\pi$

4. ✖ $\nu = \gamma H_o/2\pi$

Question Number : 129 Question Id : 97103629035 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Beer's law says that the transmitted radiation intensity decreases

Options :

1. ✖ Exponentially with the thickness of the medium

2. ✔ Exponentially with the concentration of the medium

3. ✖ Exponentially with the thickness as well as concentration of the medium

4. ✖ Linearly with the thickness of the medium

Question Number : 130 Question Id : 97103629036 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Most commonly used source in IR Spectrometer is

Options :

1. ✖ Tungsten lamp

2.

✔ Globar source

3. ✖ Deuterium lamp

4. ✖ Mercury lamp

Question Number : 131 Question Id : 97103629037 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The reference material used in DSC

Options :

1. ✔ Alumina

2. ✖ Silica

3. ✖ Chromel

4. ✖ Carbon

Question Number : 132 Question Id : 97103629038 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The operating range of UV-Visible spectrophotometer is

Options :

1. ✖ 400 nm to 800 nm

2. ✖ 200 nm to 400 nm

3. ✔ 200 nm to 800 nm

4. ✖ 800 nm to 1200 nm

Question Number : 133 Question Id : 97103629039 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Thermal conductivity detector is used in

Options :

1. ✖ NMR

2. ✖ ESR

3. ✔ Chromatography

4. ✖ AAS

Question Number : 134 Question Id : 97103629040 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The polarography is used for

Options :

1.

✖ Qualitative analysis only

2. ✔ Both qualitative and quantitative analysis

3. ✖ Quantitative analysis only

4. ✖ Non-electrolytic solutions analysis

Question Number : 135 Question Id : 97103629041 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The separation of different molecules of sample by mass spectrometer is based on

Options :

1. ✔ Mass to charge ratio

2. ✖ Adsorption

3. ✖ Absorption

4. ✖ Election affinity

Question Number : 136 Question Id : 97103629042 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The Bio-signal frequencies from various sections of the human body are in the

Options :

1. ✖ RF frequency range

2. ✖ Microwave frequency range

3. ✔ 0 to few KHz

4. ✖ Few KHz to MHz

Question Number : 137 Question Id : 97103629043 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

EEG signals are originated from the

Options :

1. ✔ Glial cells

2. ✖ Motor units

3. ✖ Sinoartrial node

4. ✖ Acetylcholine

Question Number : 138 Question Id : 97103629044 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The hydrogen ion concentration of the blood is most easily determined with a

Options :

1. ✖ Surface electrode

2. ✖ Needle electrode

3. ✖ Differential amplifier

4. ✔ Glass electrode

Question Number : 139 Question Id : 97103629045 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

For biomedical applications, the most commonly used amplifier is

Options :

1. ✖ Single ended amplifier

2. ✔ Differential amplifier

3. ✖ Inverting operational amplifier

4. ✖ Chopper amplifier

Question Number : 140 Question Id : 97103629046 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction

Time : 0

Among the following which has more non-invasive character?

Options :

1. ✔ Ultrasonic interface

2. ✖ CT imaging system

3. ✖ Nuclear imaging system

4. ✖ PET scan

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