Entrance Exam

2024



QUESTION PAPER

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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 :	Metallurgical Engineering 3rd 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 :	971036461
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 : 97103632431 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

How does mass media influence society?

Options :

1. ✖ Promotes critical thinking

2. ✔ Shapes public opinion

3. ✖ Limits access to information

4. ✖ Encourages isolation

Question Number : 2 Question Id : 97103632432 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

What is an example of an online teaching platform?

Options :

1. ✖ Tutorial class

2. ✖ Traditional classroom

3. ✖ Laboratory session

4. ✔ Swayamprabha

Question Number : 3 Question Id : 97103632433 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Some students who do not speak often in class and who typically develop ideas and questions in their minds before speaking are _____students.

Options :

1. ✔ Reflective

2. ✖ Active

3. ✖ Non-academic

4. ✖ Shy

Question Number : 4 Question Id : 97103632434 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Learning objectives mean?

Options :

1. ✖ Learning experience

2. ✖ Concise outcomes

3. ✖ Academic achievement

4. ✔ Intended learning outcomes

Question Number : 5 Question Id : 97103632435 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

In the following, which one is not considered in 'White Hat'?

Options :

1. ✔ Feelings

2. ✖ Data gathering

3. ✖ Facts

4. ✖ Information needs

Question Number : 6 Question Id : 97103632436 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The modern pedagogical standards are not related to _____ .

Options :

1. ✖ Learners- focussed process

2. ✔ Rigid teaching plan

3. ✖ Individual Students need

4. ✖ Learner diversity

Question Number : 7 Question Id : 97103632437 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

How many domains of learning are identified by Benjamin Bloom ?

Options :

1. ✖ Two

2. ✔ Three

3. ✖ Four

4. ✖ Five

Question Number : 8 Question Id : 97103632438 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

As per Bloom's taxonomy, the objective of remembering refers to _____

Options :

1. ✖ Psychomotor

2. ✖ Affective

3. ✔ Cognitive

4. ✖ Social

Question Number : 9 Question Id : 97103632439 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

In the following quadrants of SWAYAM, which one is not figured?

Options :

1. ✖ Video lecture

2. ✖ E- content

3. ✖ Self-assessment tests

4. ✔ Podcasts

Question Number : 10 Question Id : 97103632440 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruct Time : 0

In the following, which channel is broadcasting educational content of management and library science and related subjects of the SWAYAM platform?

Options :

1. ✖ Door Darshan

2. ✖ Vageesh-1

3. ✔ Prabandhan-5

4. ✖ Kautilya-7

Question Number : 11 Question Id : 97103632441 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

How many quadrants are there in MOOCs?

Options :

1. ✖ Two

2. ✖ Three

3. ✔ Four

4. ✖ Five

Question Number : 12 Question Id : 97103632442 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 best advantage of a Choice Based Credit System of education?

Options :

1. ✔ Student-centric

2. ✖ Flexibility for teachers

3. ✖ Content specific

4. ✖ Teacher-centric

Question Number : 13 Question Id : 97103632443 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The computer-based testing learning domain covers _____ behaviour.

Options :

1. ✖ Conative

2. ✖ Effective

3. ✔ Cognitive

4. ✖ Psychomotor

Question Number : 14 Question Id : 97103632444 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The research activity pursuing based on observable facts is known as _____

Options :

1. ✖ Ethno methodology

2. ✖ Constructionist

3. ✔ Positivism

4. ✖ Manipulative

Question Number : 15 Question Id : 97103632445 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 purpose of using a Venn diagram in logic?

Options :

1. ✖ To confuse the audience

2. ✔ To visualize logical relationships

3. ✖ To simplify complex arguments

4. ✖ To present factual evidence

Question Number : 16 Question Id : 97103632446 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Experimental research is based on _____ methodology.

Options :

1. ✖ Qualitative

2. ✔ Quantitative

3. ✖ Subjective

4. ✖ Contextual

Question Number : 17 Question Id : 97103632447 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Which type of research findings and conclusions are not generalised to other situations?

Options :

1. ✔ Descriptive

2. ✖ Fundamental

3. ✖ Experimental

4. ✖ Historical

Question Number : 18 Question Id : 97103632448 Display Question Number : Yes Is Question

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

In the following approaches, which one is not quantitative research?

Options :

1. ✖ Correlation

2. ✔ Ground theory

3. ✖ Experimental

4. ✖ Deductive

Question Number : 19 Question Id : 97103632449 Display Question Number : Yes Is Questi

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

The National Literacy Mission was started in the year _____

Options :

1. ✖ 1991

2. ✖ 1947

3. ✔ 1998

4. ✖ 2000

Question Number : 20 Question Id : 97103632450 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 best remedy for the student's problems related to learning?

Options :

1. ✖ Suggestion for private tuition

2. ✖ Suggestion for hard work

3. ✔ Diagnostic teaching

4. ✖ Suggestion to go to the library

Is Section Default? : null

Question Id : 97103632451 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:

If you wish to be a writer, you must learn to develop your own point of view. All good writers make us see things in a different light. You may be writing about the same thing as your classmates, but your presentation must reflect your personality and individuality. There are so many interesting subjects you can write about in different forms but here we will try to attempt writing short stories. There is a good market for the following types: humorous stories, adventurous stories, domestic stories, and mysterious stories and stories related to animals and strange experiences. Don't worry if your story turns out to be short-some of the stories are quite short. Be very careful about the climax or end of the story. It must be what the reader fears, desires, expect or best of all doesn't expect. So, get down to it. Think of a plot-make points on how the story will progress and pen it down.

Sub questions

Question Number : 21 Question Id : 97103632452 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The most important thing about being a writer is that

Options :

1. ✖ You must have a pen and paper

2. ✖ You must have a degree in writing

3. ✖ You must have a painful heart

4. ✔ You must learn to develop your own point of view

Question Number : 22 Question Id : 97103632453 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction

Time : 0

The narrator advises the reader to write in order to _____.

Options :

1. ✖ Earn a livelihood

2. ✔ Encourage him to become a writer

3. ✖ Make him famous among his people

4. ✖ Show his intelligence to others

Question Number : 23 Question Id : 97103632454 Display Question Number : Yes Is Questi

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

Time : 0

A successful writer's presentation must reflect _____.

Options :

1. ✔ His personality and individuality

2. ✖ His hand writing

3. ✖ His showy nature

4. ✖ His superiority to others

Question Number : 24 Question Id : 97103632455 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The phrase 'pen it down' here means _____.

Options :

1. ✖ To get down

2. ✔ To write

3. ✖ To throw the pen

4. ✖ To throw it down

Question Number : 25 Question Id : 97103632456 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

According to the passage, what is essential for aspiring writers to learn?

Options :

1. ✔ Developing their own point of view

2. ✖ Writing about the same topics as classmates

3. ✖ Avoiding short stories

4. ✖ Following popular writing trends

Is Section Default? : null

Question Number : 26 Question Id : 97103632457 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The fundamental function of SPSS software is _____.

Options :

1. ✖ To analyse quantitative data

2. ✖ Management reference tool

3. ✔ Statistical Package for analysing quantitative data

4. ✖ Useful for literature review

Question Number : 27 Question Id : 97103632458 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Plagiarism in research refers to _____.

Options :

1. ✖ Using previous data

2. ✖ Quoting findings of others

3. ✔ Unscrupulously copying others works

4. ✖ Incorporating earlier findings of the research.

Question Number : 28 Question Id : 97103632459 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

In the following, which one is considered a barrier of effective communication?

Options :

1. ✔ Differences of cultural aspects

2. ✖ Active listening

3. ✖ Clarity of message

4. ✖ Perfect information

Question Number : 29 Question Id : 97103632460 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

In the following communication, which one is considered as interpersonal?

Options :

1. ✖ Metaphorical

2. ✖ Philosophical

3. ✖ It is not participating in friendly

4. ✔ It is both focused and unfocussed.

Question Number : 30 Question Id : 97103632461 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 considered as verbal communication?

Options :

1. ✖ Instruction

2. ✔ Wordless messages

3. ✖ Practicals

4. ✖ Online classes

Question Number : 31 Question Id : 97103632462 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

In the following, which one is not considered a subjective aspect of culture ?

Options :

1. ✖ Belief

2. ✖ Attitude

3. ✔ Language

4. ✖ Values

Question Number : 32 Question Id : 97103632463 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The origin of the word communication is from _____.

Options :

1. ✖ Greek

2. ✖ German

3. ✔ Latin

4. ✖ French

Question Number : 33 Question Id : 97103632464 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Who is regarded as the father of reasoning?

Options :

1. ✖ Plato

2. ✖ Rousseau

3. ✖ Montesquieu

4. ✔ Aristotle

Question Number : 34 Question Id : 97103632465 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

In a college 400 students took a mock test. In that 60 percent of boys and 80 percent of the girls cleared the cut off in the test. Suppose the total percentage of students clearing the cut off in the test is 65 percent, how many girls appeared in the test?

Options :

1. ✖ 300

2. ✖ 250

3. ✖ 150

4. ✔ 100

Question Number : 35 Question Id : 97103632466 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

3,5,9,17, 33, _____. What is the next number?

Options :

1. ✖ 45

2. ✖ 35

3. ✔ 65

4. ✖ 75

Question Number : 36 Question Id : 97103632467 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

How many types of reasoning are there?

Options :

1. ✖ Four

2. ✔ Two

3. ✖ Three

4. ✖ Five

Question Number : 37 Question Id : 97103632468 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Suppose AIRLINE is written as ENILRIA7, then RAILWAY will be written as _____

Options :

1. ✖ YAWILAR8

2. ✖ YAWILAR7

3. ✔ YAWLIAR7

4. ✖ YAWLIAR8

Question Number : 38 Question Id : 97103632469 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

In the following series 3W, 7V, 11U, 15T, ____ What comes next?

Options :

1. ✖ 22Q

2. ✖ 20P

3. ✔ 19S

4. ✖ 19Z

Question Number : 39 Question Id : 97103632470 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 sum of (71/105) and (71/420)?

Options :

1. ✖ 83/84

2. ✖ 73/84

3. ✖ 79/84

4. ✔ 71/84

Question Number : 40 Question Id : 97103632471 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruct

Time : 0

A car can finish a certain journey in 10 hrs at a speed of 48 kmph. To cover the same distance in 8 hours, the speed of the car must be increased by

Options :

1. ✔ 12 kmph

2. ✖ 15 kmph

3. ✖ 6 kmph

4. ✖ 7.5 kmph

Question Number : 41 Question Id : 97103632472 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Suppose the price of the commodity is increased by 50 percent and by what fraction must its consumption be reduced to keep the same expenditure consumption?

Options :

1. ✖ 1/2

2. ✔ 1/3

3. ✖ 1/4

4. ✖ 2/3

Question Number : 42 Question Id : 97103632473 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The selling price of a bicycle is Rs. 2,850 and the shopkeeper gains 14% profit. Suppose the profit is reduced to 8%, then the selling price will be Rs. _____.

Options :

1. ✖ 2,600

2. ✔ 2,700

3. ✖ 2,800

4. ✖ 3,000

Question Number : 43 Question Id : 97103632474 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Find out the simple interest, when principal is Rs. 3,000 at the rate of 5% per annum for 2 years?

Options :

1. ✔ 300

2. ✖ 305

3. ✖ 303

4. ✖ 307

Question Number : 44 Question Id : 97103632475 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

A channel marked at a price Rs. 1,600 is available at a discount of 45%. What is the discount given?

Options :

1. ✖ 740

2. ✖ 800

3. ✔ 720

4. ✖ 760

Question Number : 45 Question Id : 97103632476 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The average marks of 25 students is 18. The average marks of first 12 students is 14 and the average marks of last 12 students is 17. What is the 13^{th} student result?

Options :

1. ✖ 69

2. ✖ 74

3. ✔ 78

4. ✖ 75

Question Number : 46 Question Id : 97103632477 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 is 'Contra positive' of " All Whales are Mammals"?

Options :

1. ✖ Some Whales are Mammals

2. ✖ Some Mammals are Whales

3. ✔ All non-Mammals are non-Whales

4. ✖ All Mammals are Whales.

Question Number : 47 Question Id : 97103632478 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruct Time : 0

In the following statement, which informal fallacy is committed?
Statement: We should not ban smoking because it is a personal choice and people should have the freedom to do what they want.

Options :

1. ✖ False dilemma

2. ✖ Ad hominem

3. ✔ Appeal to emotion

4. ✖ Equivocation

Question Number : 48 Question Id : 97103632479 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

A word or phrase that is understood by every person in a particular culture is known as its _____

Options :

1. ✖ Denotation

2. ✖ Connotation

3. ✔ Sense

4. ✖ Reference

Question Number : 49 Question Id : 97103632480 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

In the following types of reasoning, in the conclusion the word 'likely' is used.

Options :

1. ✔ Inductive

2. ✖ Deductive

3. ✖ Analogical

4. ✖ Syllogistic

Question Number : 50 Question Id : 97103632481 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Insect: Disease; War: _____?

Options :

1. ✖ Arsenal

2. ✖ Defeat

3. ✔ Destruction

4. ✖ Army

Question Number : 51 Question Id : 97103632482 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 meaning of 'pratyaksh' ?

Options :

1. ✖ Inference

2. ✔ Perception

3. ✖ Implied

4. ✖ Transcendental

Question Number : 52 Question Id : 97103632483 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

In Indian logic, what is the meaning of 'Anumana"?

Options :

1. ✖ Determination

2. ✖ Credibility

3. ✔ Inference

4. ✖ Implication

Question Number : 53 Question Id : 97103632484 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

In the HTML, M refers to _____.

Options :

1. ✖ Machine

2. ✔ Markup

3. ✖ Margin

4. ✖ Micro

Question Number : 54 Question Id : 97103632485 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The receiving emails appear in _____.

Options :

1. ✖ Spam

2. ✖ Trash

3. ✔ Inbox

4. ✖ Archive

Question Number : 55 Question Id : 97103632486 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Internet standard protocol is _____.

Options :

1. ✖ FTP

2. ✖ WWW

3. ✔ TCP/IP

4. ✖ UDP

Question Number : 56 Question Id : 97103632487 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruct Time : 0

In the following video-conferencing platforms, which one is popular?

Options :

1. ✖ Gmail

2. ✖ Spotify

3. ✖ Google Drive

4. ✔ Zoom

Question Number : 57 Question Id : 97103632488 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 the intranet is _____.

Options :

1. ✖ To facilitate online shopping

2. ✖ To make video calls

3. ✖ To provide unrestricted Access to information on the internet.

4. ✔ To allow communication within a specific company

Question Number : 58 Question Id : 97103632489 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

To improve Quality of research, the government has initiated a digital program and it is called _____.

Options :

1. ✖ National Knowledge Network

2. ✔ E-Shodh Sindu

3. ✖ Swayam

4. ✖ E-PG pathshala

Question Number : 59 Question Id : 97103632490 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

In the following sections, which one deals with the punishment for cyber terrorism as per IT Act 2000.

Options :

1. ✔ 66 F

2. ✖ 67 B

3. ✖ 66 B

4. ✖ 45 F

Question Number : 60 Question Id : 97103632491 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

'Joystick' refers to _____ device.

Options :

1. ✖ Output

2. ✖ Storage

3. ✔ Input

4. ✖ Network

Question Number : 61 Question Id : 97103632492 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Which organisation is established in India to promote , review, encourage, assist and coordinate science research?

Options :

1. ✖ ICSSR

2. ✔ CSIR

3. ✖ NCAR

4. ✖ NCTE

Question Number : 62 Question Id : 97103632493 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

In the following gases, which one is not considered as 'Green House Gas'

Options :

1. ✖ Methane

2. ✖ Nitrous oxide

3. ✔ Oxygen

4. ✖ Carbon dioxide

Question Number : 63 Question Id : 97103632494 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The Environmental protection Act in India was enacted in the year_____.

Options :

1. ✖ 1981

2. ✖ 1996

3. ✔ 1986

4. ✖ 1995

Question Number : 64 Question Id : 97103632495 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Which type of pollution can cause respiratory problems ?

Options :

1. ✖ Acid rain

2. ✔ Smog

3. ✖ Ozone depletion

4. ✖ Eutrophication

Question Number : 65 Question Id : 97103632496 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 correct order of 3R principle?

Options :

1. ✖ Recycle, Reuse, Reduce

2. ✖ Reuse, Reduce,Recycle

3. ✔ Reduce, Reuse, Recycle

4. ✖ Recycle, Reduce,Reuse

Question Number : 66 Question Id : 97103632497 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The Forest conservation Act was passed in the year _____.

Options :

1. ✖ 1986

2. ✖ 1990

3. ✔ 1980

4. ✖ 1988

Question Number : 67 Question Id : 97103632498 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

_____ is an international treaty signed in 1987 to protect the ozone layer.

Options :

1. ✖ Rio Summit

2. ✖ Kyoto Protocol

3. ✖ Vienna convention

4. ✔ Montreal Protocol

Question Number : 68 Question Id : 97103632499 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction

Time : 0

Study the following Table and answer the questions from:

Total Number of Employees in different departments of an organisation and percentage of females and males.			
Department	Total number of employees	Percentage of females	Percentage of Males
IT	840	45	55
Accounts	220	35	65
Production	900	23	77
HR	360	65	35
Marketing	450	44	56
Customer Service	540	40	60

What is the total number of employees in all the departments together ?

Options :

1. ✖ 3260

2. ✔ 3310

3. ✖ 3140

4. ✖ 3020

Question Number : 69 Question Id : 97103632500 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Study the following Table and answer the questions from:

Total Number of Employees in different departments of an organisation and percentage of females and males.			
Department	Total number of employees	Percentage of females	Percentage of Males
IT	840	45	55
Accounts	220	35	65
Production	900	23	77
HR	360	65	35
Marketing	450	44	56
Customer Service	540	40	60

What is the respective ratio of the number of females in production department to the number of females in the marketing department?

Options :

1. ✖ 22:23

2. ✖ 35:33

3. ✔ 23:22

4. ✖ 33:35

Question Number : 70 Question Id : 97103632501 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Study the following Table and answer the questions from:

Total Number of Employees in different departments of an organisation and percentage of females and males.			
Department	Total number of employees	Percentage of females	Percentage of Males
IT	840	45	55
Accounts	220	35	65
Production	900	23	77
HR	360	65	35
Marketing	450	44	56
Customer Service	540	40	60

What is the total number of males in the IT and customer service departments together

Options :

1. ✖ 687

2. ✖ 678

3. ✖ 768

4. ✔ 786

Metallurgical Engineering

Section Id : 971036462

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 : 97103632502 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Find the eigen value of the matrix $\begin{bmatrix} 5 & 4 \\ 1 & 2 \end{bmatrix}$

Options :

1. ✖ 2 and 3

2. ✔ 6 and 1

3. ✖ 0 and 2

4. ✖ 4 and 6

Question Number : 72 Question Id : 97103632503 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

If $\lambda_1, \lambda_2, \lambda_3$ are the eigen values of the matrix $\begin{bmatrix} -2 & -9 & 5 \\ -5 & -10 & 7 \\ -9 & -21 & 14 \end{bmatrix}$ find the value of $\lambda_1 + \lambda_2 + \lambda_3$.

Options :

1. ✖ -2

2. ✖ 5

3. ✖ -6

4. ✔ 2

Question Number : 73 Question Id : 97103632504 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

If $\lim_{x\to 0}\left\{\frac{\log(3+x)-\log(3-x)}{x}\right\}=k$, the value of k is

Options :

1. ✖ 0

2. ✖ -1/3

3. ✔ 2/3

4. ✖ -2/3

Question Number : 74 Question Id : 97103632505 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction

Time : 0

On the interval (1,3) the function f (x) = 3x + (2/ x) is

Options :

1. ✖ Strictly decreasing

2. ✔ Strictly increasing

3. ✖ Decreasing in (2,3) only

4. ✖ Neither increasing nor decreasing

Question Number : 75 Question Id : 97103632506 Display Question Number : Yes Is Questi

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

Time : 0

The area of the region bounded by the curve $y = x - x^2$ between x = 0 and x=1 is

Options :

1. ✔ 1/6

2. ✖ 1/3

3. ✖ 1/2

4. ✖ 5/6

Question Number : 76 Question Id : 97103632507 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The directional derivative of a scalar point function is

Options :

1. ✖ Maximum in the direction other than $\nabla\phi$

2. ✖ Minimum in any direction

3. ✔ Maximum in the direction of $\nabla\phi$

4. ✖ Minimum in the direction of $\nabla\phi$

Question Number : 77 Question Id : 97103632508 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The direction of maximum decrease of flow of heat in a temperature field T = x/y at P(-8, 1) is

Options :

1. ✖ $8i + j$

2. ✖ $8i - j$

3. ✖ $i - 8j$

4.

✔ $i + 8j$

Question Number : 78 Question Id : 97103632509 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The order and degree of the differential equation $\left(\frac{d^2y}{dx^2}\right) + \left(\frac{dy}{dx}\right)^{\frac{1}{3}} + x^{\frac{1}{4}} = 0$, are respectively

Options :

1. ✔ 2, 1

2. ✖ 3, 3

3. ✖ 2, 6

4. ✖ 2, 4

Question Number : 79 Question Id : 97103632510 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

If y(t) is a solution of $(1+t)\frac{dy}{dt} - ty = 1$ and y(0) = -1 then $y(1)$

Options :

1. ✔ -1/2

2. ✖ $e^{+1/2}$

3. ✖ $e^{-1/2}$

4. ✖ 1/2

Question Number : 80 Question Id : 97103632511 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Two dimensional Fourier transform and its inverse are infinitely

Options :

1. ✔ Aperiodic

2. ✖ Periodic

3. ✖ Linear

4. ✖ Non-linear

Question Number : 81 Question Id : 97103632512 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The Newton-Raphson method of finding roots of non-linear equations falls under the

category of _____ method.

Options :

1. ✖ Bracketing

2. ✔ Open

3. ✖ Random

4. ✖ Graphical

Question Number : 82 Question Id : 97103632513 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

To find $\int_a^b f(x)\,dx$ using Simpson's $\frac{1}{3}$ rule the points taken from a to b are

$a = x_0 < x_1 < x_2 \ldots\ldots x_n = b$ then a passible value of n $\Leftrightarrow$ is

Options :

1. ✖ 9

2. ✔ 10

3. ✖ 13

4. ✖ 15

Question Number : 83 Question Id : 97103632514 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

If the corrosion product is volatile, then the rate of corrosion of base metal will

Options :

1. ✖ Increase

2. ✔ Decrease

3. ✖ Unchange

4. ✖ Not be predicted

Question Number : 84 Question Id : 97103632515 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

An electrochemical cell stops working after some time because

Options :

1. ✖ One of the electrodes is eaten away

2. ✔ Electrode potentials of both electrodes becomes equal in magnitude

3. ✖ Electrode potentials of both the electrodes go on decreasing

4. ✖ Electrode potentials of both the electrodes go on increasing

Question Number : 85 Question Id : 97103632516 Display Question Number : Yes Is Question

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

Zeroth law of thermodynamics is concerned with

Options :

1. ✖ Internal Energy

2. ✖ Enthalpy

3. ✔ Thermal equilibrium

4. ✖ Entropy

Question Number : 86 Question Id : 97103632517 Display Question Number : Yes Is Questi

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

The rate of corrosion is high if

Options :

1. ✖ Anodic areas are small and cathodic areas are large

2. ✔ Anodic areas are large and cathodic areas are small

3. ✖ Both anodic and cathodic areas are large

4. ✖ Anode and Cathode does not depend on the area

Question Number : 87 Question Id : 97103632518 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 a factor which does not influence the rate of reaction?

Options :

1. ✖ Nature of reactants

2. ✖ Concentration of reactants

3. ✖ Temperature

4. ✔ Molecularity of reaction

Question Number : 88 Question Id : 97103632519 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The first law of Thermodynamics is associated with

Options :

1. ✖ Entropy

2. ✔ Internal energy

3. ✖ Reversibility

4. ✖ Irreversibility

Question Number : 89 Question Id : 97103632520 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

When diffusion rate is dependent on both time and position, it is termed as

Options :

1. ✔ Non-steady state diffusion

2. ✖ Steady state diffusion

3. ✖ Diffusion couple

4. ✖ Heat transfer diffusion

Question Number : 90 Question Id : 97103632521 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

If the rate of a reaction does not depend on the concentration of the reactants, it is

Options :

1. ✖ Bimolecular reaction

2. ✖ Trimolecular reaction

3.

✔ Zero order of reaction

4. ✖ Second order of reaction

Question Number : 91 Question Id : 97103632522 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

What kind of corrosion is difficult to monitor and is very dangerous for metals?

Options :

1. ✖ Crevice corrosion

2. ✖ Galvanic corrosion

3. ✖ Stress corrosion

4. ✔ Pitting corrosion

Question Number : 92 Question Id : 97103632523 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

All naturally occurring processes proceed spontaneously in a direction which leads to

Options :

1. ✖ Increase in enthalpy

2.

✔ Decrease in free energy

3. ✖ Decrease in entropy

4. ✖ Increase in free energy

Question Number : 93 Question Id : 97103632524 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 copper ore contains highest theoretical percentage copper content ?

Options :

1. ✖ Chalcopyrite

2. ✖ Azurite

3. ✔ Cuprite

4. ✖ Enargite

Question Number : 94 Question Id : 97103632525 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Bauxite ore is leached under high pressure and at temperature of 220℃ in

Options :

1. ✖ NaCl

2. ✔ NaOH

3. ✖ KOH

4. ✖ KCl

Question Number : 95 Question Id : 97103632526 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The ore of Lead is

Options :

1. ✖ Ferrite

2. ✖ Pyrite

3. ✖ Azurite

4. ✔ Galena

Question Number : 96 Question Id : 97103632527 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Extraction of magnesium from sea water is called

Options :

1. ✖ Kroll's process

2. ✔ Dow process

3. ✖ Electrolytic process

4. ✖ Smelting Process

Question Number : 97 Question Id : 97103632528 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruct Time : 0

Picthblende is an ore of

Options :

1. ✖ Gold

2. ✖ Silver

3. ✔ Uranium

4. ✖ Titanium

Question Number : 98 Question Id : 97103632529 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Haematite is also called as

Options :

1. ✖ Orange ore of iron

2. ✔ Red ore of iron

3. ✖ Pink ore of iron

4. ✖ Black ore of iron

Question Number : 99 Question Id : 97103632530 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Calorific value of solid and non-volatile liquid fuels is measured with the help of a

Options :

1. ✔ Bomb calorimeter

2. ✖ Spectrometer

3. ✖ Viscometer

4. ✖ Titrations

Question Number : 100 Question Id : 97103632531 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Coal can be converted into coke by the process of

Options :

1. ✖ Smelting

2. ✖ Roasting

3. ✔ Carbonization

4. ✖ Melting

Question Number : 101 Question Id : 97103632532 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The breaking , cracking , peeling off or fracturing of a refractory material due to temperature changes is

Options :

1. ✖ Thermal fracturing

2. ✔ Thermal spalling

3. ✖ Thermal cracking

4. ✖ Dimensional stability

Question Number : 102 Question Id : 97103632533 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 non oxide refractory ?

Options :

1. ✖ Alumina

2. ✖ Zirconia

3. ✖ Magnesia

4. ✔ Silicides

Question Number : 103 Question Id : 97103632534 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Pack carburising uses

Options :

1. ✖ Sodium cyanide

2. ✔ Charcoal

3. ✖ Hydrocarbons

4. ✖ Calcium carbide

Question Number : 104 Question Id : 97103632535 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Killed steels

Options :

1. ✖ Have minimum impurity level

2. ✖ Have almost zero percentage of phosphorus and sulphur

3. ✖ Are produced by LD process

4. ✔ Are free from oxygen

Question Number : 105 Question Id : 97103632536 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 having FCC crystal structure?

Options :

1. ✔ Gold

2. ✖ Cadmium

3. ✖ Tungsten

4. ✖ Iron

Question Number : 106 Question Id : 97103632537 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 binary system is **not** having complete solid solubility?

Options :

1. ✔ Iron-carbon binary system

2. ✖ Copper-gold binary system

3. ✖ Copper-nickel binary system

4. ✖ Nickel-palladium binary system

Question Number : 107 Question Id : 97103632538 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 electron compound having valency electron to atom ratio of 5:2

Options :

1. ✖ Cu_5Zn_8

2. ✖ Fe_5Zn_{21}

3. ✖ Cu_3Sn

4. ✔ NiAl

Question Number : 108 Question Id : 97103632539 Display Question Number : Yes Is Quest Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The crystal structure of WC is

Options :

1. ✔ HCP

2. ✖ FCC

3. ✖ BCC

4. ✖ SC

Question Number : 109 Question Id : 97103632540 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The etchant used for Aluminium alloys is

Options :

1. ✖ Nital

2. ✖ Ferric chloride solution

3. ✔ Keller's reagent

4. ✖ Picric acid

Question Number : 110 Question Id : 97103632541 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The force necessary for binding of atoms into solid is

Options :

1. ✖ Magnetic

2. ✖ Nuclear

3. ✔ Electromagnetic force

4. ✖ Gravitational

Question Number : 111 Question Id : 97103632542 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 bonding would be expected for rubber?

Options :

1. ✖ Covalent

2. ✖ Ionic

3. ✖ Metallic

4. ✔ Van der Waals

Question Number : 112 Question Id : 97103632543 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

X-rays in the crystal interact with

Options :

1. ✖ Nucleus

2. ✔ Orbital electrons

3. ✖ Nucleus and orbital electrons

4. ✖ Magnetic field produced by electrons

Question Number : 113 Question Id : 97103632544 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

As the applied voltage increases, the minimum wavelength of X-radiation from a metal

Options :

1. ✖ Increases

2. ✔ Decreases

3. ✖ Remains unaltered

4. ✖ Variable with metal

Question Number : 114 Question Id : 97103632545 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 relates

Options :

1. ✖ Light reflection

2. ✖ Light refraction

3.

✖ Light transmission

4. ✔ Light absorption

Question Number : 115 Question Id : 97103632546 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

At high temperature a ferromagnetic material becomes

Options :

1. ✖ Diamagnetic

2. ✔ Paramagnetic

3. ✖ Hard ferromagnet

4. ✖ Soft ferromagnet

Question Number : 116 Question Id : 97103632547 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

When the temperature of intrinsic semiconductor is increased

Options :

1. ✖ Resistance of semiconductor is also increased

2. ✖ Conduction is decreased

3. ✔ Energy of atoms is increased

4. ✖ Holes are created

Question Number : 117 Question Id : 97103632548 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The increasing order of Shear modulus (GPa) is

Options :

1. ✖ Tungsten, Magnesium, Brass, Nickel

2. ✔ Magnesium, Brass, Nickel, Tungsten

3. ✖ Brass, Tungsten, Magnesiun, Nickel

4. ✖ Nickel, Brass, Tungsten, Magnesium

Question Number : 118 Question Id : 97103632549 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 having highest yield strength (MPa)

Options :

1. ✖ Nickel

2. ✖ Iron

3. ✖ Copper

4. ✔ Molybednum

Question Number : 119 Question Id : 97103632550 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The ability to absorb energy during elastic deformation is known as ------

Options :

1. ✖ Toughness

2. ✖ Stress

3. ✖ Elasticity

4. ✔ Resilience

Question Number : 120 Question Id : 97103632551 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The strain hardening coefficient for low carbon steel in annealed condition is

Options :

1. ✔ 0.21

2. ✖ 0.44

3. ✖ 0.16

4. ✖ 0.17

Question Number : 121 Question Id : 97103632552 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The slip direction {110} of BCC crystal is

Options :

1. ✔ <211>

2. ✖ <112>

3. ✖ <111>

4. ✖ <121>

Question Number : 122 Question Id : 97103632553 Display Question Number : Yes Is Question

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

Recrystallization temperature decreases with

Options :

1. ✔ Increasing percentage cold work

2. ✖ Decreasing percentage cold work

3. ✖ Unaffected by cold work

4. ✖ Exponential rise in cold work

Question Number : 123 Question Id : 97103632554 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The magnitude of K_{Ic} decreases with

Options :

1. ✖ Decreasing strain rate and decreasing temperature.

2. ✖ Increasing strain rate and decreasing temperature

3. ✖ Increasing strain rate and increasing temperature

4. ✔ Decreasing strain rate and increasing temperature

Question Number : 124 Question Id : 97103632555 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 detect the subsurface defects?

Options :

1. ✖ Optical microscopy

2. ✖ Scanning electron microscopy

3. ✔ Radiography

4. ✖ Visual inspection

Question Number : 125 Question Id : 97103632556 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The order of stages of creep curve is

Options :

1. ✖ Tertiary stage, Viscous stage and Transient stage

2. ✖ Tertiary stage, transient stage and Viscous stage

3. ✖ Viscous stage, Tertiary stage and Transient stage

4. ✔ Transient stage, Viscous stage and Tertiary stage

Question Number : 126 Question Id : 97103632557 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The effect of temperature on long-time load-bearing properties is measured by

Options :

1. ✖ Tensile test

2. ✖ Hardness test

3. ✖ Fracture test

4. ✔ Stress rupture test

Question Number : 127 Question Id : 97103632558 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 processes does not improve fatigue strength of a component?

Options :

1. ✔ Electroplating

2. ✖ Nitriding

3. ✖ Case carburizing

4. ✖ Shot peening

Question Number : 128 Question Id : 97103632559 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The alloying element which decreases the susceptibility to temper embrittlement in steels is

Options :

1. ✖ Carbon

2. ✖ Nickel

3. ✔ Molybednum

4. ✖ Copper

Question Number : 129 Question Id : 97103632560 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

As per the general colour code, surface to be left unmachined is marked on a pattern by

Options :

1. ✖ Red colour

2. ✖ Black colour

3. ✔ Yellow colour

4. ✖ Blue colour

Question Number : 130 Question Id : 97103632561 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Upsetting is a process of

Options :

1. ✔ Increasing cross section of a bar

2. ✖ Reducing cross section of a bar

3. ✖ Bending of a bar

4. ✖ Joining two pieces of bars

Question Number : 131 Question Id : 97103632562 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

In a gating system, the ratio 1: 3: 2 represents

Options :

1. ✖ Sprue base area: runner area: ingate area

2. ✖ Pouring basin area: ingate area: runner area

3. ✖ Sprue base area: ingate area: casting area

4. ✔ Runner area: ingate area: casting area

Question Number : 132 Question Id : 97103632563 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Blanking and piercing operation can be performed simultaneously in a

Options :

1. ✖ Simple die

2. ✖ Progressive die

3. ✖ Combination die

4. ✔ Compound die

Question Number : 133 Question Id : 97103632564 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 a solid state welding process?

Options :

1. ✖ Electrons beam welding

2. ✔ Friction welding

3. ✖ Thermit welding

4. ✖ Percussion welding

Question Number : 134 Question Id : 97103632565 Display Question Number : Yes Is Quest

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

Time : 0

Cold working of metals is carried out

Options :

1. ✖ Below lower critical temperature

2. ✖ Below upper critical temperature

3. ✔ Below recrystallization temperature

4. ✖ Below 15 °C

Question Number : 135 Question Id : 97103632566 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 an electric resistance method of welding?

Options :

1. ✖ Electroslag welding

2. ✔ Percussion welding

3. ✖ Seam welding

4. ✖ Flash welding

Question Number : 136 Question Id : 97103632567 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The ultrasonic waves are generated based on the principle of

Options :

1. ✖ Seeback effect

2. ✔ Piezoelectric effect

3. ✖ Heat effect

4. ✖ Hall effect

Question Number : 137 Question Id : 97103632568 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The following are the main factors which affect thermography measurements

Options :

1. ✖ Emissivity, surroundings and atmosphere

2. ✔ Emissivity, surface nature of object and temperature

3. ✖ Emmisivity, surface area of object and frequency of radiation

4. ✖ Emissivity, operating frequency and atmosphere

Question Number : 138 Question Id : 97103632569 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

In deep drawing, the ratio of sheet metal blank thickness to its diameter should be

Options :

1. ✖ Equal to zero percent

2. ✖ Equal to minus one percent

3. ✔ Less than one percent

4. ✖ Greater than one percent

Question Number : 139 Question Id : 97103632570 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Spring back effect is found in

Options :

1. ✖ Forging

2. ✔ Bending

3. ✖ Rolling

4. ✖ Drawing

Question Number : 140 Question Id : 97103632571 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 materials produces Luder bands?

Options :

1. ✔ Mild steel

2. ✖ Stainless steel

3. ✖ High speed steel

4. ✖ High carbon steel

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