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 :	Metallurgical Engineering 17th Oct 2022 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 :	549470330
Section Number :	1
Mandatory or Optional :	Mandatory
Number of Questions :	59
Section Marks :	70
Enable Mark as Answered Mark for Review and Clear Response :	Yes
Maximum Instruction Time :	0
Is Section Default? :	null

Question Number : 1 Question Id : 54947023455 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 most advantage of giving homework to students?

Options :

Remain busy at home

1. ✖

Study at home

2. ✖

May be checked for their progress

3. ✖

May develop the habit of self study

4. ✔

Question Number : 2 Question Id : 54947023456 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 Father of Computers?

Options :

1. ✖ Pascal

2. ✖ Bill Gates

3. ✔ Charles Babbage

4. ✖ J. V. Neumen

Question Number : 3 Question Id : 54947023457 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

National literary Mission was established in the year _____.

Options :

1. ✖ 1996

2. ✔ 1988

3. ✖ 1999

4. ✖ 2000

Question Number : 4 Question Id : 54947023458 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Who advocated the idea of basic education in India ?

Options :

1. ✖ Dr. Zakir Hussain

2. ✖ Dr. Rajendra Prasad

3. ✔ Mahatma Gandhi

4. ✖ Rabindranath Tagore.

Question Number : 5 Question Id : 54947023459 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The best remedy of the student's problems relating with learning is _____.

Options :

Suggestion for hard work

1. ✖

Supervised study in study hours

2. ✖

Suggestion for private tuition

3. ✖

Diagnostic study

4. ✔

Question Number : 6 Question Id : 54947023460 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Traditional teaching method is known as _____.

Options :

Chalk and teach

1. ✔

Brainstorming

2. ✖

Group discussion

3. ✖

Demonstration

4. ✖

Question Number : 7 Question Id : 54947023461 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Which organization initiated the MOOCs in India?

Options :

CSIR

1. ✖

DST

2. ✖

AICTE

3. ✔

UGC

4. ✖

Question Number : 8 Question Id : 54947023462 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 to carry out research is known as _____ of research.

Options :

1. ✖ Objectives

2. ✖ Synopsis

3. ✔ Design

4. ✖ Hypothesis

Question Number : 9 Question Id : 54947023463 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Evaluation of the depth of any research is based on

Options :

1. ✔ Objectives

2. ✖ Time period

Money spent

3. ✖

Topic

4. ✖

Question Number : 10 Question Id : 54947023464 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Which technique is used when the population is fixed or restricted to sampling?

Options :

Purpose

1. ✖

Cluster

2. ✖

Systematic

3. ✔

Stratified

4. ✖

Question Number : 11 Question Id : 54947023465 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Which one is considered as most comprehensive source of population data?

Options :

Sampling

1. ✖

Census

2. ✔

NSS

3. ✖

Primary Health Studies

4. ✖

Question Number : 12 Question Id : 54947023466 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The following characteristic is not covered in descriptive research.

Options :

What

1. ✖

Where

2. ✖

When

3. ✖

Why

4. ✔

Question Number : 13 Question Id : 54947023467 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The basic characteristic of experimental research is _____

Options :

The independent variable is manipulated

1. ✔

Goals

2. ✖

A hypothesis

3. ✖

Design

4. ✖

Question Number : 14 Question Id : 54947023468 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 aspects, which one is not considered in research ethics?

Options :

1. ✖   Respect intellectual property

2. ✖   Objectivity

3. ✔   Cut and paste

4. ✖   Honesty

Is Section Default? :   null

Question Id : 54947023469 Sub Question Shuffling Allowed : Yes Group Comprehension Questions : No Question Pattern Type : NonMatrix Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Question Numbers : (15 to 21)

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

Throughout human history the leading causes of death have been infection and trauma. Modern medicine has scored significant victories against both, and the major causes of ill health and death are now the chronic degenerative disease, such as coronary artery disease, arthritis, cataract and cancer. These have a long latency period before symptoms appear and a diagnosis is made. It follows that the majority of apparently healthy people are pre-ill.

Many national surveys reveal that malnutrition is common in developing countries. This is not the calorie or micronutrient deficiency associated with developing nation; but multiple micronutrients depletion, usually combined with calorific balance or excess. The incidence and severity of Type B malnutrition will be shown to be worse if newer micronutrients groups such as the essential fatty acids and flavonoids are included in the surveys.

However, the pharmaceutical model has also created an unhealthy dependency culture, in which relatively few of us accept responsibility for maintaining our own health. Instead, we have handed over this responsibility to health professional who knows very little about health maintenance or disease prevention.

Based on pharmaceutical thinking, most intervention studies have attempted to measure the impact of a single micronutrient on the incidence of disease. The classical approach says that if you give a compound formula to test subjects and obtain positive results, you cannot know which ingredient is exerting the benefit, so you must test each ingredient individually.

So do we need to analyze each individual's nutritional status and then tailor a formula specifically for him or her? While we do not have the resources to analyze millions of individual cases and there is no need to do so. The vast majority of people are consuming suboptimal amounts of most micronutrients and most of the micronutrients concerned are very safe. Accordingly, a comprehensive and universal program of micronutrient support is probably the most cost-effective and safest way of improving the general health of the nation.

Sub questions

Question Number : 15 Question Id : 54947023470 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Type B malnutrition will be worse if

Options :

Micronutrients groups are included

1. ✖

Fatty acids and flavonoids are included

2. ✔

Both Micronutrients groups and Fatty acids and flavonoids are included

3. ✖

Fatty acids added

4. ✖

Question Number : 16 Question Id : 54947023471 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 process to know which ingredient is exerting the benefit?

Options :

Give compound formula to test subjects

1. ✖

Test each ingredient individually

2. ✔

Study the impact of single micronutrients

3. ✖

None of these

4. ✖

Question Number : 17 Question Id : 54947023472 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The Pharmaceutical model created

Options :

Business improvement

1. ✖

Nutritional status

2. ✖

Most unhealthy dependency culture

3. ✔

None of these

4. ✖

Question Number : 18 Question Id : 54947023473 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

What is required to improve general health of the nation?

Options :

1. ✖   A comprehensive program

2. ✖   Universal program of micronutrient support system

3. ✔   All options

4. ✖   Give money to households

Question Number : 19 Question Id : 54947023474 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

What does classical approach say to measure the impact of a single micronutrient on the incidence of disease?

Options :

1. ✔   You must test each ingredient individually

2. ✖   Those who know very little about health maintenance or disease prevention

A diagnosis is made

3. ✖

Test all the aspects at a time

4. ✖

Question Number : 20 Question Id : 54947023475 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Malnutrition is common in _____.

Options :

Western countries

1. ✖

South Asian countries

2. ✖

East Asian countries

3. ✖

Developing countries

4. ✔

Question Number : 21 Question Id : 54947023476 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Micronutrient support is

Options :

1. ✖   Most cost-effective

2. ✖   Safest

3. ✔   Both cost-effective and safest

4. ✖   Not desirable

Is Section Default? :   null

Question Number : 22 Question Id : 54947023477 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Encoding refers to _____.

Options :

1. ✖   Creating disturbance

2. ✖   Referring the message

With the assistance of symbols to express an idea

3. ✔

To interpret a message

4. ✖

In the progress of two- way communication, the sender is at one end while the
_____ is at the other end

Options :

Receiver

1. ✔

Message

2. ✖

Transform

3. ✖

Make ready

4. ✖

What type of communication is being followed in Video conferencing?

Options :

Only visual

1. ✖

Two way visual

2. ✖

Two way Audio-visual

3. ✔

One way audio- visual

4. ✖

Question Number : 25 Question Id : 54947023480 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

In the communication, conversation comes under the category of _____.

Options :

Non- verbal

1. ✖

Verbal

2. ✔

Drafted

3. ✖

Facial

4. ✖

Question Number : 26 Question Id : 54947023481 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 as semantic barrier of communication?

Options :

Attention of the receiver is diverted

1. ✖

Humming

2. ✖

Signal is lost   before reaching the receiver

3. ✖

Receiver is not able to understand the meaning of the message

4. ✔

Question Number : 27 Question Id : 54947023482 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

It is desirable to start the class room communication with _____.

Options :

1. ✖ Commands

2. ✔ Narration

3. ✖ Authority

4. ✖ Variability

Question Number : 28 Question Id : 54947023483 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 agency in India is announcing the central government programs and policies?

Options :

1. ✖ PTI

2. ✖ AIR

PIB

3. ✔

UTI

4. ✖

Question Number : 29 Question Id : 54947023484 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Who is considered as father of reasoning?

Options :

Aristotle

1. ✔

Plato

2. ✖

Rossow

3. ✖

Mantesquo

4. ✖

Question Number : 30 Question Id : 54947023485 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 missing element in the following series: ABD, EFH, IJL, MNP and QRT.

Options :

1. ✖   ZXB

2. ✖   XYZ

3. ✖   WXY

4. ✔   UVX

Question Number : 31 Question Id : 54947023486 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 wrong number in the following number series: 583, 643, 800 and 691.

Options :

1. ✖   583

2. ✖   643

3. ✔ 800

4. ✖ 691

For example, in certain language, CLASS is written as DMBTT. What will be the code for BLUE?

Options :

1. ✖ DMVG

2. ✔ CMVF

3. ✖ CNWH

4. ✖ DNWG

In the following, which is the largest amongst 5/8, 2/3, 7/9, 3/5?

Options :

5/8

1. ✗

2/3

2. ✗

3/5

3. ✗

7/9

4. ✔

Question Number : 34 Question Id : 54947023489 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Suppose the length and breadth of a rectangle are in the ratio 3:1. If the breath is 7 cm, then the length of the rectangle should be _____.

Options :

21 cm

1. ✔

18 cm

2. ✗

16 cm

3. ✖

14 cm

4. ✖

If the average of the 12 numbers is 15. Suppose a number 41 is also included, then what will be the average of these 13 numbers?

Options :

16

1. ✖

18

2. ✖

19

3. ✖

17

4. ✔

' Should India make efforts to exploit renewable energy to fulfill its energy requirements'?

      I. Yes, most of the non- renewable sources of using at present are exhaustible.

      II. No, exploiting renewable energy requires a huge investment and India is not in a position to invest that much amount of money.

Options :

    Only argument I is strong

1. ✔

    Only argument II is strong

2. ✖

    Either I or II is strong

3. ✖

    Neither I nor II is strong

4. ✖

Question Number : 37 Question Id : 54947023492 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Induction reasoning consists the following.

Options :

Starts with a general idea and reaches to specific conclusion

1. ✖

'If' and 'then' statements are figured

2. ✖

Drawing a general conclusion from a set of specific observations

3. ✔

'Top –down' thinking

4. ✖

Question Number : 38 Question Id : 54947023493 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Deduction reasoning involves …….

Options :

Conclusions are drawn from a set of specific observations

1. ✖

It quick way to make decisions

2. ✖

' Bottom- up' logic

3. ✖

Moving from general to the specific

4. ✔

Question Number : 39 Question Id : 54947023494 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Flow: River:: Stagnant : ?

Options :

Stream

1. ✖

Rain

2. ✖

Pool

3. ✔

Canal

4. ✖

Question Number : 40 Question Id : 54947023495 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 'Anumana' refers to _____.

Options :

Perception

1. ✖

Inference

2. ✔

Implication

3. ✖

Comparison

4. ✖

Question Number : 41 Question Id : 54947023496 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 'Anupalabdhi'?

Options :

Postulation

1. ✖

Verbal testing

2. ✖

Non-apprehension

3. ✔

Inference

4. ✖

Question Number : 42 Question Id : 54947023497 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 'Hetvabhasa' is associated in the argument " sound is eternal because it is caused"?

Options :

Viruddha or contradictory

1. ✔

Satpratipaksa or inferentially contradicted

2. ✖

Sandyasama or the unproved

3. ✖

Badhita or non- inferentially contradicted

4. ✖

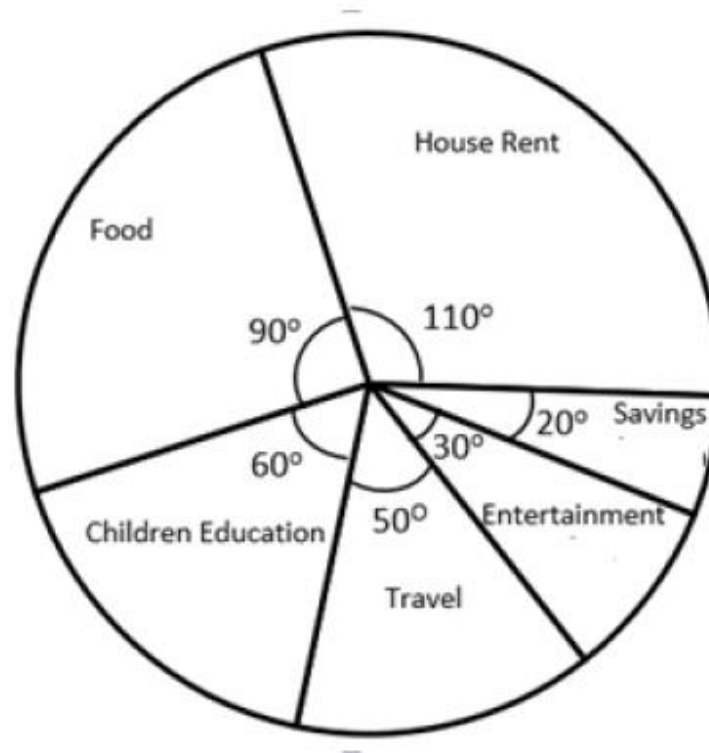**Is Section Default? :**   null

Question Id : 54947023498 Sub Question Shuffling Allowed : Yes Group Comprehension Questions : No Question Pattern Type : NonMatrix Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Question Numbers : (43 to 45)

Note:

Study the following Pie-chart carefully and answer the questions 43 – 45. It gives data on how the monthly income of a person is allocated to different heads.

Sub questions

Question Number : 43 Question Id : 54947023499 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

If the house rent paid in a month is Rs.16500, then the amount allocated on travel in that month, in rupees, is

Options :

6500

1. ✖

7500

2. ✔

8500

3. ✖

9500

4. ✖

Question Number : 44 Question Id : 54947023500 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

If the amount spent in a month on travel is Rs 8000, then total income in that month is

Options :

60,600

1. ✖

57,600

2. ✔

54,400

3. ✖

57,000

4. ✖

Question Number : 45 Question Id : 54947023501 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

If the total income in a month is Rs. 54,000, then the difference in the amounts spent on food and travel in that month, in rupees, is

Options :

6000

1. ✔

7500

2. ✖

9000

3. ✖

10500

4. ✖

Is Section Default? :   null

Question Id : 54947023502 Sub Question Shuffling Allowed : Yes Group Comprehension Questions : No Question Pattern Type : NonMatrix Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Question Numbers : (46 to 49)

Note:

Study the following Table carefully and answer the questions from 46 to 49. It gives data on marks obtained by students in different subjects during 2007-2010.

Year	English		Maths		Science		Social Science	
	High.	Ave.	High.	Ave.	High.	Ave.	High.	Ave.
2007	80	70	94	60	89	70	65	55
2008	82	65	85	62	95	64	66	58
2009	71	56	92	68	97	68	68	48
2010	75	52	91	64	92	75	77	58

Sub questions

Question Number : 46 Question Id : 54947023503 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 overall average of marks in the four subjects in the year 2009?

Options :

1. ✖ 63

2. ✖ 64

65

3. ✖

60

4. ✔

Question Number : 47 Question Id : 54947023504 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Suppose that there were 40 students in science in the year 2009, how much total marks did they receive when combined together?

Options :

2800

1. ✖

2720

2. ✔

2560

3. ✖

3000

4. ✖

Question Number : 48 Question Id : 54947023505 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

In which year, the difference between the highest and the average marks in Maths was maximum?

Options :

1. ✗   2009

2. ✗   2010

3. ✔   2007

4. ✗   2008

Question Number : 49 Question Id : 54947023506 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

In which year, the difference between the highest and the average marks in social sciences was least ?

Options :

1. ✗   2009

2. ✗   2010

2007

3. ✖

2008

4. ✔

Is Section Default? :   null

Question Number : 50 Question Id : 54947023507 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 acronyms, data is transferred securely across the world wide web.

Options :

HTTP

1. ✖

HTTPS

2. ✔

POP

3. ✖

IMAP

4. ✖

Question Number : 51 Question Id : 54947023508 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Which software is needed to create slideshows?

Options :

Paint

1. ✖

Microsoft Word

2. ✖

Windows X P

3. ✖

Micro Soft Power Point

4. ✔

Question Number : 52 Question Id : 54947023509 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Joystick _____ device.

Options :

Input

1. ✔

Output

2. ✖

Storage

3. ✖

Network

4. ✖

Question Number : 53 Question Id : 54947023510 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Python is _____.

Options :

An operating system

1. ✖

Programming Language

2. ✔

An application program

3. ✖

A compiler

4. ✖

Question Number : 54 Question Id : 54947023511 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Speed of internet is measured in _____.

Options :

1. ✖ GHZ

2. ✔ GBPS

3. ✖ GB

4. ✖ DPI

Question Number : 55 Question Id : 54947023512 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

VIDWAN scheme of MHRD is aimed at _____.

Options :

1. ✔ Creating a database to national research network

2. ✖ Making available e-resources

3. ✖ Promoting entrepreneurship among faculty

4. ✖ Awarding National professorship to faculty

Question Number : 56 Question Id : 54947023513 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The UGC portal ' e-SARTS is for _____.

Options :

1. ✖ Special Assistance for Research in Technology and Sciences

2. ✖ Special Assistance for Research and Training in Sciences

3. ✖ Support for Academic and Research Training in Social Sciences

4. ✔ Scholarship – Fellowship Award Registration Tracking System

Question Number : 57 Question Id : 54947023514 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 millennium goals , which one is not considered?

Options :

1. ✖   Achieve Universal Primary education

2. ✔   Ensure healthy lives and promote well being for all at all ages

3. ✖   Ensure environmental sustainability

4. ✖   Eradicate extreme poverty and hunger

Question Number : 58 Question Id : 54947023515 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The sustainable goals proposed by the United Nations will be achieved by the end of year.

Options :

1. ✖   2045

2. ✖   2040

2035

3. ✖

2030

4. ✔

Question Number : 59 Question Id : 54947023516 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 most adverse consequence of modern agriculture ?

Options :

Decrease in animals and their natural habitats

1. ✖

Water pollution due to usage of chemical fertilizers and pesticides

2. ✔

Soil erosion

3. ✖

Employment opportunities increase

4. ✖

Question Number : 60 Question Id : 54947023517 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 gas is occurring abundantly in the air naturally?

Options :

Water vapor

1. ✖

Carbon dioxide

2. ✖

Nitrogen

3. ✔

Oxygen

4. ✖

Question Number : 61 Question Id : 54947023518 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

In India, the first nuclear reactor was set up at _____.

Options :

Bombay

1. ✔

Kalpakam

2. ✖

Hyderabad

3. ✖

Tarapur

4. ✖

Question Number : 62 Question Id : 54947023519 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 as natural disaster ?

Options :

Cyclone

1. ✖

Earthquake

2. ✖

Tsunami

3. ✖

Short circuit fire

4. ✔

Question Number : 63 Question Id : 54947023520 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The species whose population has been reduced considerably and is at the verge of extinction, is called as _____ species.

Options :

1. ✖ Rare

2. ✔ Endangered

3. ✖ Vulnerable

4. ✖ Indeterminate

Question Number : 64 Question Id : 54947023521 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 traditional Universities, which one is not established in the year 1857?

Options :

1. ✖ Bombay

2. ✔ Delhi

Calcutta

3. ✖

Madras

4. ✖

Question Number : 65 Question Id : 54947023522 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Which organization is established in India to promote, review, encourage, assist, and coordinate social science research

Options :

NCAR

1. ✖

NCERT

2. ✖

CSIR

3. ✖

ICSSR

4. ✔

Question Number : 66 Question Id : 54947023523 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

In which year the first Open University in India was established?

Options :

1. ✖ 1986

2. ✖ 1980

3. ✔ 1982

4. ✖ 1985

Question Number : 67 Question Id : 54947023524 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The NCTE established in India to strengthen _____.

Options :

1. ✔ Teacher education

2. ✖ Technical education

Computer education

3. ✖

Medical education

4. ✖

Question Number : 68 Question Id : 54947023525 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 establishing the National Skills qualification framework in the country ?

Options :

Technology development

1. ✖

Social development

2. ✖

To develop competencies at different levels

3. ✔

Rural development

4. ✖

Question Number : 69 Question Id : 54947023526 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 main purpose of establishing National program for Technology Enhanced Learning (NPTEL) by the MHRD?

Options :

To promote Engineering education

1. ✔

To promote higher education

2. ✖

To promote technology in agriculture

3. ✖

To develop pollution free technologies

4. ✖

Question Number : 70 Question Id : 54947023527 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 explicit objective of value education?

Options :

To inculcate economic values

1. ✖

To inculcate political values

2. ✖

To inculcate cultural values

3. ✖

To inculcate moral values

4. ✔

Metallurgical Engineering

Section Id :	549470331
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 : 54947023528 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The solution of the differential equation $ydx - 2xdy = 0$ represents a family of ___.

Options :

Straight lines

1. ✖

2. ✔ Parabolas

3. ✘ Circles

4. ✘ Catenaries

Question Number : 72 Question Id : 54947023529 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 linearly independent Eigen vectors of $\begin{bmatrix} 2 & 1 \\ 0 & 2 \end{bmatrix}$ is ____.

Options :

1. ✘ 0

2. ✔ 1

3. ✘ 2

4. ✘ Infinite

Question Number : 73 Question Id : 54947023530 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

If $f = \tan^{-1}\left(\dfrac{y}{x}\right)$ then $div(grad\ f) = $ _____ .

Options :

1. ✖   1

2. ✖ -1

3. ✔   0

4. ✖   2

Question Number : 74 Question Id : 54947023531 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

If X is uniformly distributed random variable that takes the values between 0 and 1.The value of $E(X^3)$ will be _____.

Options :

1. ✖   0

2. ✖ $\dfrac{1}{2}$

3. ✔ $\dfrac{1}{4}$

4. ✘ $\dfrac{1}{8}$

Question Number : 75 Question Id : 54947023532 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 convergence of the Newton-Raphson method is ____.

Options :

1. ✘ 0

2. ✘ 1

3. ✔ 2

4. ✘ 3

Question Number : 76 Question Id : 54947023533 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

All the points in the set $S = \left\{ \dfrac{\alpha+i}{\alpha-i} \middle/ \alpha \in R, i = \sqrt{-1} \right\}$ lie on a ____.

Options :

1. ✗ straight line whose slope is -1

2. ✓ circle whose radius is 1

3. ✗ straight line whose slope is 1

4. ✗ circle whose radius is $\sqrt{2}$

Question Number : 77 Question Id : 54947023534 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Temperature profile in steady state heat transfer is

Options :

1. ✗ Asymptotic

2. ✗ Hyperbolic

3. ✗ Parabolic

4. ✓ Linear

Question Number : 78 Question Id : 54947023535 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Cementation is defined as

Options :

1. ✔ Precipitation of a metal from an aqueous solution

2. ✘ Gaseous reduction of metals from aqueous solution

3. ✘ Electrolytic dissolution of aqueous solution

4. ✘ Electrolytic dissolution of metallic solution

Question Number : 79 Question Id : 54947023536 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

If a process is chemical reaction controlled, it means

Options :

1. ✘ Diffusion is fast

2. ✘ Chemical reaction is fast

3. ✔ Chemical reaction is slow

4. ✘ External mass transfer is slow

Question Number : 80 Question Id : 54947023537 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The rate constant of a reaction depends on

Options :

1. ✔ Temperature

2. ✖ Time

3. ✖ Extent of reaction

4. ✖ Products

Question Number : 81 Question Id : 54947023538 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Bernoulli" s equation is applied to

Options :

1. ✔ Orifice meter

2. ✖ Pyrometer

3. ✖ Pyconometer

4. ✖ Turbometer

Question Number : 82 Question Id : 54947023539 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Viscosity of a liquid

Options :

1. ✖ Increases with increase in temperature

2. ✔ Decreases with increase in temperature

3. ✖ Decreases with decrease in time

4. ✖ Independent of temperature

Question Number : 83 Question Id : 54947023540 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

A metal is electrochemically polarized which is higher than the standard reduction potential of the metal. The overvoltage will be

Options :

1. ✖ Negative

2. ✖ Zero

3. ✔ Positive

4. ✖ Initially positive and then negative

Question Number : 84 Question Id : 54947023541 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

In the Ellingham diagram of oxides, following is not applicable

Options :

1. ✖ Reduction of oxides

2. ✖ Oxidation of metals

3. ✖ Formation of sulphides

4. ✔ Reaction rate

Question Number : 85 Question Id : 54947023542 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Example of Intensive property

Options :

1. ✖ Volume

2. ✔ Chemical potential

Enthalpy

3. ✖

Entropy

4. ✖

Question Number : 86 Question Id : 54947023543 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

All spontaneous process are accompanied by an increase in the entropy of system and surroundings. This refers to

Options :

Zeroeth law of thermodynamics

1. ✖

Second law of thermodynamics

2. ✔

First law of thermodynamics

3. ✖

Third law of thermodynamics

4. ✖

Question Number : 87 Question Id : 54947023544 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

For a typical real gas, above T_{cr},

Options :

Two phase separation always occurs

1. ✖

2. ✖ Two phase separation may occur

3. ✖ Two phase separation will occur

4. ✔ Two phases separation does not occur

Question Number : 88 Question Id : 54947023545 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Diffusivity is the coefficient relating flux to

Options :

1. ✖ Concentration

2. ✖ Temperature

3. ✔ Concentration gradient

4. ✖ Temperature gradient

Question Number : 89 Question Id : 54947023546 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Condition for rimming steel

Options :

1. ✔ Low Silicon and Low carbon

2. ✘ High Silicon and Low Carbon

3. ✘ High Carbon and Low Silicon

4. ✘ High Silicon and High Carbon

Question Number : 90 Question Id : 54947023547 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Monazite is ore of

Options :

1. ✘ Nickel

2. ✘ Manganese

3. ✔ Thorium

4. ✘ Zinc

Question Number : 91 Question Id : 54947023548 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

In the Bayer's process, bauxite is digested under pressure using

Options :

1. ✗ HCl

2. ✗ H₂SO₄

3. ✗ NH₃

4. ✔ NaOH

Question Number : 92 Question Id : 54947023549 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Density of the matte (mixture of sulphides) is

Options :

1. ✔ In between that of slag and metal

2. ✗ More than that of metal

3. ✗ Equal to that of slag

4. ✗ less than that of slag

Question Number : 93 Question Id : 54947023550 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Scaffold in Blast furnace is not because of

Options :

1. ✔ Chlorides

2. ✘ refractoriness

3. ✘ Fusion zone lowering

4. ✘ Alkali oxides

Question Number : 94 Question Id : 54947023551 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

In Kroll's Process, which is used as reducing agent?

Options :

1. ✔ Magnesium

2. ✘ Aluminium

3. ✘ Carbon

4. ✘ Zinc

Question Number : 95 Question Id : 54947023552 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response

Parkes process is for

Options :

1. ✖ Zinc

2. ✖ Aluminium

3. ✔ Silver

4. ✖ Copper

Question Number : 96 Question Id : 54947023553 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

In pig iron (India), the main source of sulphur is

Options :

1. ✖ Quartzite

2. ✖ Limestone

3. ✖ Coke

4. ✔ Iron ore

Mineral surface is made hydrophobic by the addition of

Options :

1. ✖ Eucalyptus oil

2. ✖ Lime

3. ✖ Sodium cyanide

4. ✔ Xanthates

Copper can be reduced from acidic copper sulphate solution by

Options :

1. ✖ Ag

2. ✔ Fe

3. ✖ C

4. ✖ Pb

Question Number : 99 Question Id : 54947023556 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Powdered materials are blown into the liquid steel to control sulphur and oxygen in the following _____ process.

Options :

1. ✖ AOD

2. ✔ TN

3. ✖ LD

4. ✖ Rotor

Question Number : 100 Question Id : 54947023557 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Heat transfer by radiation is maximum in _____ furnace.

Options :

1. ✖ Blast Furnace

2. ✔ OHF

3. ✖ Kiln

4. ✖ Induction

Question Number : 101 Question Id : 54947023558 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

For increasing the resolving power of an optical microscope use _____ colour light.

Options :

1. ✖ Red

2. ✖ Yellow

3. ✖ Green

4. ✔ Blue

Question Number : 102 Question Id : 54947023559 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The most malleable, ductile low resistivity material is

Options :

1. ✖ Copper

2. ✖ Aluminium

3. ✔ Silver

Zinc

4. ✖

Question Number : 103 Question Id : 54947023560 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The distance between two dislocations is

Options :

1. ✔ Inversely proportional to the square root of dislocation density

2. ✖ Inversely proportional to the square of dislocation density

3. ✖ Inversely proportional to the number of dislocation

4. ✖ Inversely proportional to the size dislocations

Question Number : 104 Question Id : 54947023561 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 shows elastic anisotropy?

Options :

1. ✔ Aluminium single crystal

2. ✖ Polycrystalline aluminium

3. ✖   Polycrystalline graphite

4. ✖   Composite with randomly oriented fibers

Question Number : 105 Question Id : 54947023562 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The % of Cementite in Ledeburite just below eutectic is

Options :

1. ✖   60

2. ✔   40

3. ✖   80

4. ✖   70

Question Number : 106 Question Id : 54947023563 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

At what temperature does time dependent deformation become measurable?

Options :

1. ✔ $0.5 \, T_m$

2. ✖ 1 T$_m$

3. ✖ 1.5 T$_m$

4. ✖ 0.9 T$_m$ Where T$_m$ is absolute melting temperature

Question Number : 107 Question Id : 54947023564 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Which among the following is a main factor to determine the three dimension view of a specimen?

Options :

1. ✖ Magnification

2. ✖ Resolution

3. ✔ Depth of field

4. ✖ Depth of focus

Question Number : 108 Question Id : 54947023565 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Solute atoms which causes the yield point phenomena in mild steels are

Options :

1. ✔ Carbon & Nitrogen

2. ✘ Nitrogen & Oxygen

3. ✘ Boron & Chromium

4. ✘ Nitrogen & Hydrogen

Question Number : 109 Question Id : 54947023566 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Temper brittleness of the steel is eliminated by the addition of

Options :

1. ✘ Cu

2. ✘ V

3. ✔ Mo

4. ✘ Cr

Question Number : 110 Question Id : 54947023567 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

After the recrystallization, grain growth is due to

Options :

1. ✖ Vacancies

2. ✖ External energy

3. ✔ Internal energy

4. ✖ Dislocations

Question Number : 111 Question Id : 54947023568 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Strengthening of micro-alloyed steels is mainly due to

Options :

1. ✖ Dispersion hardening

2. ✖ Work hardening

3. ✔ Grain boundary pinning

4. ✖ Precipitation Hardening

Question Number : 112 Question Id : 54947023569 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 addition can eliminate stretcher strains?

Options :

1. ✔ Vanadium

2. ✖ Copper

3. ✖ Manganese

4. ✖ Nitrogen

Question Number : 113 Question Id : 54947023570 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Grain size determination using X-ray diffraction is based on

Options :

1. ✖ Debye rings

2. ✖ Lattice parameter

3. ✖ Extra lines

Line broadening
4. ✔

Question Number : 114 Question Id : 54947023571 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Room temperature slip system in FCC Metal single crystal is

Options :

1. ✔ (1 1 1) [110]

2. ✖ (1 1 0) [111]

3. ✖ (1 0 0) [110]

4. ✖ (1 1 1) [111]

Question Number : 115 Question Id : 54947023572 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The crystal which shows the maximum yield strength is one containing

Options :

1. ✔ No dislocations

2. ✖ Very few dislocations

3. ✖ High dislocations

4. ✖ Volume imperfections

Question Number : 116 Question Id : 54947023573 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The term anelasticity is used to denote stress and

Options :

1. ✔ Time dependent plastic strain

2. ✖ Time dependent elastic strain

3. ✖ Time independent elastic strain

4. ✖ Strain at which plastic instability occurs

Question Number : 117 Question Id : 54947023574 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

At the point of plastic instability in a tension test

Options :

1. ✔ True strain is equal to strain hardening exponent

2. ✖   True strain is equal to Bauschinger strain

3. ✖   Materials exhibits the super plasticity

4. ✖   Materials fails by intergranular fractures

Question Number : 118 Question Id : 54947023575 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Deflection of a cantilever beam under load on doubling its width the deflection will

Options :

1. ✔   Double

2. ✖   Triple

3. ✖   Becomes half

4. ✖   Remains constant

Question Number : 119 Question Id : 54947023576 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The tensile load-elongation curve of a metal does not describe

Options :

1. ✖ Work hardening

2. ✔ Anisotropy index

3. ✖ Yield stress

4. ✖ Necking strain

Question Number : 120 Question Id : 54947023577 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The unit of fracture toughness is

Options :

1. ✖ $MPa\text{-}m^2$

2. ✖ $MPa\text{-}m$

3. ✖ N/m^2

4. ✔ $MPa\text{-}m^{1/2}$

Question Number : 121 Question Id : 54947023578 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Tresca and von-mises criteria for yielding differ in terms of

Options :

1. ✖ Principal strains

2. ✖ Strain energy

3. ✖ Fracture criterion

4. ✔ Principal stresses

Question Number : 122 Question Id : 54947023579 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The energy of a dislocation is

Options :

1. ✖ Proportional to b

2. ✖ Proportional to 1/b

3. ✔ Proportional to b^2

4. ✖ Independent of b

Question Number : 123 Question Id : 54947023580 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Paris law is given by

Options :

1. ✗ $da/dN = A\Delta K$

2. ✗ $da/dN = a/\Delta K$

3. ✗ $da = A(da/dN)^m$

4. ✓ $da/dN = A\Delta K^m$

Question Number : 124 Question Id : 54947023581 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

For B scale, the indenter used in Rockwell hardness test softer materials is

Options :

1. ✗ Diamond cone

2. ✓ 1.6 mm diameter steel ball

3. ✗ 3.2 mm diameter steel ball

4. ✗ Diamond square pyramid

During welding steel preheating of steel is done to remove

Options :

1. ✖ Nitrogen

2. ✖ Carbon

3. ✖ Oxygen

4. ✔ Hydrogen

Extrusion pressure is proportional to

Options :

1. ✖ Reduction in area (r)

2. ✔ Log R

3. ✖ Extrusion Ratio (R)

4. ✖ Log r

Question Number : 127 Question Id : 54947023584 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Maximum reduction in wire drawing is equal to

Options :

1. ✖ $e_{-n(n+1)}$

2. ✔ $1 - e^{-n(n+1)}$

3. ✖ $1-e^{n(n+1)}$

4. ✖ $e^{-(n+1)}$

Question Number : 128 Question Id : 54947023585 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 related to

Options :

1. ✖ Bend degree

2. ✖ Elasticity

3. ✖ Sheet thickness

Sheet bend radius

4. ✔

Purpose of Sweep pattern in molding is to get _____ shape

Options :

Elliptical

1. ✖

Rectangular

2. ✖

Uniform symmetrical

3. ✔

Complicated

4. ✖

Casting defect hot tears are caused by

Options :

Sand shearing from the cope surface

1. ✖

Discontinuity in metal casting resulting from hindered contraction

2. ✔

3. ✖ Two streams of metals that are too cold to figure properly

4. ✖ Excessive gaseous substances not able to escape

Question Number : 131 Question Id : 54947023588 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 exclusively cold working process?

Options :

1. ✔ Spinning

2. ✖ Extrusion

3. ✖ Deep drawing

4. ✖ Rolling

Question Number : 132 Question Id : 54947023589 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

In rolling, when back tension is applied, neutral point moves

Options :

1. ✔ Towards exit

2. ✖ Vertically up

3. ✖ Does not change

4. ✖ Towards the entry

Question Number : 133 Question Id : 54947023590 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The main purpose of riser is

Options :

1. ✖ Permit escape of gases

2. ✖ Flow of metal towards cavity

3. ✔ Feeding metal to the casting

4. ✖ To control pressure

Question Number : 134 Question Id : 54947023591 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

In hot forging, flash gutter is provided because

Options :

1. ✖ Flash crack can be avoided

2. ✖ load requirement is reduced

3. ✔ Effective die filling can be ensured

4. ✖ Excessive scaling can be avoided

Question Number : 135 Question Id : 54947023592 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 a secondary steel making process

Options :

1. ✖ Bessemer

2. ✔ AOD

3. ✖ LD-AC

4. ✖ Open Hearth

Question Number : 136 Question Id : 54947023593 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Ultrasonic waves are generated using

Options :

1. ✔ Piezo electric effect

2. ✘ Seebeck effect

3. ✘ Peltier effect

4. ✘ Thomson effect

Question Number : 137 Question Id : 54947023594 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Cold cracking of steel weldments is due to

Options :

1. ✘ Cold weather

2. ✔ Hydrogen

3. ✘ Oxygen

4. ✘ Nitrogen

Question Number : 138 Question Id : 54947023595 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

In the reaction N2 + 3H2 ----> 2NH3 + 92.37 KJ, the formation of NH3 will be favoured by

Options :

Low temperature

1. ✖

Low pressure and high temperature

2. ✔

High temperature

3. ✖

Low temperature and high pressure

4. ✖

Question Number : 139 Question Id : 54947023596 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

In general, superplastic behaviour for certain materials is exhibited at

Options :

Low temperature and high strain rate

1. ✖

High temperature and low strain rate

2. ✔

High temperature and high strain rate

3. ✖

Low temperature and low strain rate

4. ✖

For large quantity production of small castings, _____ pattern is used

Options :

1. ✖ Gated

2. ✔ Match plate

3. ✖ Cope and drag

4. ✖ Loose