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 :	Marine Engineering 5th May 2024 Shift 1
Duration :	120
Total Marks :	140
Display Marks:	No
Share Answer Key With Delivery Engine :	Yes
Calculator :	None
Magnifying Glass Required? :	No
Ruler Required? :	No
Eraser Required? :	No
Scratch Pad Required? :	No
Rough Sketch/Notepad Required? :	No
Protractor Required? :	No
Show Watermark on Console? :	Yes
Highlighter :	No
Auto Save on Console?	Yes
Change Font Color :	No
Change Background Color :	No
Change Theme :	No
Help Button :	No
Show Reports :	No

Show Progress Bar :	No
Is this Group for Examiner? :	No
Examiner permission :	Cant View
Show Progress Bar? :	No

Research Methodology

Section Id :	971036563
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 : 97103639622 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 primary focus of Reflective Teaching?

Options :

1. ✖ Memorization

2. ✖ Understanding

3. ✔ Critical thinking

4. ✖ Repetition

Question Number : 2 Question Id : 97103639623 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

What are the characteristics of adult learners?

Options :

1. ✖ Dependence on the teacher

2. ✔ Students have their own motivation

3. ✖ Passive learning style

4. ✖ Fixed mindset

Question Number : 3 Question Id : 97103639624 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

In teaching, what does the term "Learner centred" approach emphasize?

Options :

1. ✖ Teacher's authority

2. ✔ Student involvement and active participation

3. ✖ Memorization of facts

4. ✖ Rote learning

Question Number : 4 Question Id : 97103639625 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Which is an example of an online teaching platform?

Options :

1. ✖ Digital Repository

2. ✖ Virtual Symposium

3. ✔ Swayam Prabha

4. ✖ Cybernetic Laboratory

Question Number : 5 Question Id : 97103639626 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

What is a key characteristic of modern evaluation system?

Options :

1. ✖ Rigid structure

2. ✖ Sole reliance on exams

3. ✔ Continuous assessment

4. ✖ Limited feedback

Question Number : 6 Question Id : 97103639627 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 a VPN (Virtual Private Network) in ICT?

Options :

1. ✔ To provide a secure connection over a public network

2. ✖ To increase computer speed

3. ✖ To enhance graphics processing

4. ✖ To store large amounts of data

Question Number : 7 Question Id : 97103639628 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 Computer-Based Testing (CBT) in education?

Options :

1. ✖ Simplify teacher workload

2.

✖ Increase paper usage

3. ✔ Enhance test security

4. ✖ Reduce access to exams

Question Number : 8 Question Id : 97103639629 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 key characteristic of a quantitative research method?

Options :

1. ✖ Emphasis on subjective experiences

2. ✔ Focus on numbers and statistical analysis

3. ✖ Narrative storytelling

4. ✖ Historical analysis

Question Number : 9 Question Id : 97103639630 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 primary goal of descriptive research?

Options :

1.

✖ Establishing cause and effect relationships

2. ✖ Exploring new theories

3. ✔ Describing and summarizing data

4. ✖ Analysing historical events

Question Number : 10 Question Id : 97103639631 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Which approach to research emphasizes the objective measurement of observable phenomena?

Options :

1. ✖ Qualitative approach

2. ✖ Historical approach

3. ✔ Positivistic approach

4. ✖ Post-positivistic approach

Question Number : 11 Question Id : 97103639632 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction

Time : 0

What is common characteristic of qualitative research methods?

Options :

1. ✖ Large sample sizes

2. ✖ Emphasis on statistical analysis

3. ✔ In-depth exploration of phenomena

4. ✖ Experimental manipulations

Question Number : 12 Question Id : 97103639633 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruct

Time : 0

What is the first step in the research process?

Options :

1. ✖ Analysis of findings

2. ✔ Formulation of research questions

3. ✖ Data Collection

4. ✖ Conducting literature review

Question Number : 13 Question Id : 97103639634 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

In research writing, what is the purpose of referencing?

Options :

1. ✖ To confuse the reader

2. ✖ To demonstrate the author's intelligence

3. ✔ To enable verification

4. ✖ To save space in the document

Question Number : 14 Question Id : 97103639635 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

How does ICT (Information and Communication Technology) contribute to research?

Options :

1. ✖ By discouraging collaboration

2. ✖ By limiting access to information

3. ✔ By facilitating data collection, analysis, and dissemination

4. ✖ By promoting unethical practices

Question Number : 15 Question Id : 97103639636 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 key characteristic of effective communication?

Options :

1. ✖ Confusion

2. ✖ Misunderstanding

3. ✔ Clarity

4. ✖ Ambiguity

Question Number : 16 Question Id : 97103639637 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Which is an example of non-verbal communication?

Options :

1. ✖ Written letter

2. ✖ Text message

3. ✔ Facial expressions

4. ✖ Phone call

Question Number : 17 Question Id : 97103639638 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Which ICT tool is used for storing, organizing, and manipulating data?

Options :

1. ✖ Browser

2. ✔ Spreadsheet

3. ✖ Presentation software

4. ✖ Email client

Question Number : 18 Question Id : 97103639639 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

In a classroom setting, what is an essential aspect of effective communication?

Options :

1. ✖ One-way communication

2. ✖ Lack of feedback

3. ✔ Clear instructions and feedback

4. ✖ Ambiguous messages

Question Number : 19 Question Id : 97103639640 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

What is a common barrier to effective communication?

Options :

1. ✖ Active listening

2. ✖ Clarity in expression

3. ✔ Language differences

4. ✖ Open communication channels

Question Number : 20 Question Id : 97103639641 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Which form of communication reaches a large and diverse audience simultaneously?

Options :

1. ✖ Interpersonal communication

2. ✖ Group communication

3. ✔ Mass-Media communication

4. ✖ Intra-cultural communication

Is Section Default? : null

Question Id : 97103639642 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:

In terms of labour, for decades the relatively low cost and high quality of Japanese workers conferred considerable competitive advantage across numerous durable goods and consumer electronics industries (eg. Machinery, automobiles, televisions, radios). Then labour-based advantages shifted to South Korea, then to Malaysia, Mexico and other nations. Today, China appears to be capitalizing best on the basis of labour. Japanese firms still remain competitive in markets for such durable goods, electronics and other products, but the labour force is no longer sufficient for competitive advantage over manufacturers in other industrializing nations. Such shifting of labour-based advantage is clearly not limited to manufacturing industries. Today, a huge number of IT and service jobs are moving from Europe and North America to India, Singapore, and like countries with relatively well-educated, low-cost workforces possessing technical skills. However, as educational levels and technical skills continue to rise in other countries, India, Singapore, and like nations enjoying labour-based competitive advantage today are likely to find such advantage cannot be sustained through emergence of new competitors. In terms of capital, for centuries the days of gold coins and later even paper money restricted financial flows. Subsequently regional concentrations were formed where large banks, industries and markets coalesced. But today capital flows internationally at rapid speed. Global commerce no longer requires regional interactions among business players. Regional capital concentrations in places such as New York, London and Tokyo still persist, of course, but the capital concentrated there is no longer sufficient for competitive advantage over other capitalists distributed worldwide. Only if an organization is able to combine, integrate and apply its resources (eg. Land, labour, capital, IT) in an effective manner that is not readily imitable by competitors can such an organization enjoy competitive advantage sustainable overtime. In a knowledge-based theory of the firm, this idea is extended to view organizational knowledge as a resource with atleast the same level of power and importance as the traditional economic inputs.

Sub questions

Question Number : 21 Question Id : 97103639643 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Which country enjoyed competitive advantages in automobile industry for decades?

Options :

1. ✖ South Korea

2. ✔ Japan

3. ✖ Mexico

4. ✖ Malaysia

Question Number : 22 Question Id : 97103639644 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Why labour-based competitive advantages of India and Singapore cannot be sustained in IT and service sectors?

Options :

1. ✖ Due to diminishing levels of skill

2. ✖ Due to capital-intensive technology making inroads

3. ✔ Because of new competitors

4. ✖ Because of shifting of labour-based advantage in manufacturing industries.

Question Number : 23 Question Id : 97103639645 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

How can an organisation enjoy competitive advantage sustainable overtime?

Options :

1. ✖ Through regional capital flows

2. ✖ Through regional interactions among business players.

3. ✖ By making large banks, industries and markets coalesced.

4. ✔ By effective use of various instrumentalities

Question Number : 24 Question Id : 97103639646 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 ensure competitive advantages in specific markets?

Options :

1. ✖ Access to capital

2. ✖ Common office buildings

3. ✔ Superior knowledge

4. ✖ Common metals

Question Number : 25 Question Id : 97103639647 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The passage also mentions about the trend of

Options :

1. ✔ Global financial flow

2. ✖ Absence of competition in manufacturing industry

3. ✖ Regionalisation of capitalists

4. ✖ Organizational incompatibility

Is Section Default? : null

Question Number : 26 Question Id : 97103639648 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 mass-media in society?

Options :

1. ✖ To confuse people

2. ✖ To entertain only

3. ✔ To inform, educate, and entertain

4. ✖ To restrict information flow

Question Number : 27 Question Id : 97103639649 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

What can enhance group communication?

Options :

1. ✖ Lack of diversity in the group

2. ✖ Conflict avoidance

3. ✔ Open and honest communication

4. ✖ Minimal interaction

Question Number : 28 Question Id : 97103639650 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

What letter comes next in the series: A, C, E, G, ___?

Options :

1. ✖ H

2. ✔ I

3. ✖ F

4. ✖ J

Question Number : 29 Question Id : 97103639651 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 next number in the series: 2, 5, 10, 17, ___?

Options :

1. ✖ 22

2. ✖ 24

3. ✔ 26

4. ✖ 28

Question Number : 30 Question Id : 97103639652 Display Question Number : Yes Is Questio

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

Time : 0

What is the missing number in the series: 8, 12, 18, __, 36?

Options :

1. ✖ 22

2. ✖ 24

3. ✖ 25

4. ✔ 26

Question Number : 31 Question Id : 97103639653 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

If the price of a product increases from Rs.50 to Rs.60, what is the percentage increase?

Options :

1. ✖ 10%

2. ✖ 15%

3. ✔ 20%

4. ✖ 25%

Question Number : 32 Question Id : 97103639654 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

If the cost price of an item is $40 and it is sold for $60, what is the profit percentage?

Options :

1. ✖ 20%

2. ✖ 30%

3. ✖ 40%

4. ✔ 50%

Question Number : 33 Question Id : 97103639655 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

If a shirt is purchased for Rs.30 and sold for Rs.25, what is the loss incurred?

Options :

1. ✔ Rs.5

2. ✖ Rs.10

3. ✖ Rs.15

4. ✖ Rs.20

Question Number : 34 Question Id : 97103639656 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

If the interest is calculated on both the principal and accumulated interest, it is known as

Options :

1. ✖ Simple Interest

2. ✔ Compound Interest

3. ✖ Discounting

4. ✖ Percentage

Question Number : 35 Question Id : 97103639657 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

If a car travels at a speed of 60 km/h, how far will it travel in 2 hours?

Options :

1. ✖ 150 km

2. ✔ 120 km

3. ✖ 180 km

4. ✖ 90 km

Question Number : 36 Question Id : 97103639658 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 classical square of opposition used for in logic?

Options :

1. ✖ Evaluating analogies

2. ✔ Establishing the validity of arguments

3. ✖ Distinguishing deductive and inductive reasoning

4. ✖ Analysing fallacies

Question Number : 37 Question Id : 97103639659 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The structure of categorical propositions in logic are typically represented by

Options :

1. ✔ Venn diagrams

2. ✖ Analogies

3. ✖ Indian Logic

4. ✖ Deductive reasoning

Question Number : 38 Question Id : 97103639660 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 reasoning involves drawing specific conclusions from general principles?

Options :

1. ✖ Deductive reasoning

2. ✔ Inductive reasoning

3. ✖ Analogical reasoning

4. ✖ Fallacious reasoning

Question Number : 39 Question Id : 97103639661 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 a QR code in ICT?

Options :

1. ✖ To send emails

2. ✖ To scan documents

3. ✔ To store and retrieve information quickly

4. ✖ To create animations

Question Number : 40 Question Id : 97103639662 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Which Indian Pramana deals with verbal testimony as a means of knowledge?

Options :

1. ✖ Pratyaksha

2. ✖ Anumana

3. ✔ Shabda

4. ✖ Upamana

Question Number : 41 Question Id : 97103639663 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 cloud computing service in ICT?

Options :

1. ✖ Microsoft Excel

2. ✔ Google Drive

3. ✖ Adobe Photoshop

4. ✖ Windows Media Player

Question Number : 42 Question Id : 97103639664 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

What is causation in research?

Options :

1. ✖ The process of proving a hypothesis

2. ✖ The final conclusion of a research study

3. ✖ The outcome of hypothesis testing

4. ✔ The relationship between variables where one influences the other

Question Number : 43 Question Id : 97103639665 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Identify the type of argument presented: ' just as a sword is the weapon of a warrior, a pen is the weapon of a writer'.

Options :

1. ✔ Analogical

2. ✖ Deductive

3. ✖ Inductive

4. ✖ Hypothetical

Question Number : 44 Question Id : 97103639666 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 given below it.
Production of sugar by six major production units of India in Million Tonnes

PRODUCTION UNITS						
MONTH	A	B	C	D	E	F
APRIL	310	180	169	137	140	120
MAY	318	179	177	162	140	122
JUNE	320	160	188	173	135	130
JULY	326	167	187	180	146	130
AUGUST	327	150	185	178	145	120

In which month the unit B has a contribution of approximately 15% in the total sugar production?

Options :

1. ✖ August

2. ✖ June

3. ✔ July

4. ✖ April

Question Number : 45 Question Id : 97103639667 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 given below it.
Production of sugar by six major production units of India in Million Tonnes

PRODUCTION UNITS						
MONTH	A	B	C	D	E	F
APRIL	310	180	169	137	140	120
MAY	318	179	177	162	140	122
JUNE	320	160	188	173	135	130
JULY	326	167	187	180	146	130
AUGUST	327	150	185	178	145	120

Which of the following units shows continuous increase in the production of sugar over months?

Options :

1. ✔ A

2. ✖ B

3. ✖ C

4. ✖ D

Question Number : 46 Question Id : 97103639668 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 given below it.
Production of sugar by six major production units of India in Million Tonnes

PRODUCTION UNITS						
MONTH	A	B	C	D	E	F
APRIL	310	180	169	137	140	120
MAY	318	179	177	162	140	122
JUNE	320	160	188	173	135	130
JULY	326	167	187	180	146	130
AUGUST	327	150	185	178	145	120

In the case of Unit E, in which of the following pairs of months the production of sugar was equal?

Options :

1. ✖ April & June

2. ✖ June & July

3. ✖ July & August

4. ✔ April & May

Question Number : 47 Question Id : 97103639669 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 given below it.
Production of sugar by six major production units of India in Million Tonnes

PRODUCTION UNITS						
MONTH	A	B	C	D	E	F
APRIL	310	180	169	137	140	120
MAY	318	179	177	162	140	122
JUNE	320	160	188	173	135	130
JULY	326	167	187	180	146	130
AUGUST	327	150	185	178	145	120

In the month of June, how many units have a share of more than 25% of the total production of sugar?

Options :

1. ✔ One

2. ✖ Three

3. ✖ Two

4. ✖ Four

Question Number : 48 Question Id : 97103639670 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 given below it.
Production of sugar by six major production units of India in Million Tonnes

PRODUCTION UNITS						
MONTH	A	B	C	D	E	F
APRIL	310	180	169	137	140	120
MAY	318	179	177	162	140	122
JUNE	320	160	188	173	135	130
JULY	326	167	187	180	146	130
AUGUST	327	150	185	178	145	120

What was approximate percentage decrease in sugar production of unit B in June as compared to April?

Options :

1. ✖ 8 %

2. ✔ 10 %

3. ✖ 15 %

4. ✖ 18 %

Question Number : 49 Question Id : 97103639671 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

What is considered as scientific misconduct?

Options :

1. ✔ Redundant publications

2. ✖ Transparent reporting of research methods

3. ✖ Acknowledging sources properly

4. ✖ Conducting research with integrity

Question Number : 50 Question Id : 97103639672 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Which term refers to communication within an organization's internal network?

Options :

1. ✖ Internet

2. ✔ Intranet

3. ✖ E-mail

4. ✖ Extranet

Question Number : 51 Question Id : 97103639673 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 primary purpose of a web browser?

Options :

1. ✖ Sending emails

2. ✔ Accessing websites

3. ✖ Creating documents

4. ✖ Playing videos

Question Number : 52 Question Id : 97103639674 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 digital initiative in higher education?

Options :

1. ✖ Sending traditional mail

2. ✔ Conducting online courses

3. ✖ Using landline phones

4. ✖ Reading printed textbooks

Question Number : 53 Question Id : 97103639675 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

What does "CC" stand for in an email?

Options :

1. ✔ Carbon Copy

2. ✖ Courtesy Copy

3. ✖ Computer Copy

4. ✖ Central Copy

Question Number : 54 Question Id : 97103639676 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 advantage of audio-conferencing?

Options :

1. ✖ Real-time visual interaction

2. ✔ Cost-effectiveness

3. ✖ Faster data transmission

4. ✖ Physical presence required

Question Number : 55 Question Id : 97103639677 Display Question Number : Yes Is Question

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

How does ICT contribute to governance?

Options :

1. ✖ By slowing down bureaucratic processes

2. ✖ By reducing transparency

3. ✔ By improving communication and decision-making

4. ✖ By increasing paperwork

Question Number : 56 Question Id : 97103639678 Display Question Number : Yes Is Questi

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

In a research study investigating the relationship between sleep duration and academic performance, "sleep duration" is an example of a

Options :

1. ✖ Hypothesis

2. ✖ Concept

3. ✔ Variable

4. ✖ Causation

Question Number : 57 Question Id : 97103639679 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

In the context of ICT, what does the term "Extranet" refer to?

Options :

1. ✖ Communication within an organization

2. ✖ Publicly accessible network

3. ✔ Restricted network for specific users

4. ✖ Email communication

Question Number : 58 Question Id : 97103639680 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Which set of goals focuses on ending poverty, ensuring health, education, and environmental sustainability worldwide?

Options :

1. ✖ Kyoto Protocol

2. ✖ Rio Summit Goals

3. ✔ Sustainable Development Goals

4. ✖ Montreal Protocol

Question Number : 59 Question Id : 97103639681 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 term for human-induced activities that have a significant impact on the environment?

Options :

1. ✖ Natural activities

2. ✔ Anthropogenic activities

3. ✖ Environmental activities

4. ✖ Sustainable activities

Question Number : 60 Question Id : 97103639682 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Which software tool is commonly used for statistical analysis in research?

Options :

1. ✖ Microsoft Excel

2. ✖ Adobe Photoshop

3. ✔ SPSS (Statistical Package for the Social Sciences)

4. ✖ Microsoft Word

Question Number : 61 Question Id : 97103639683 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 significance of using graphics in data presentation?

Options :

1. ✖ To confuse readers

2. ✖ To hide important findings

3. ✔ To simplify complex data

4. ✖ To increase word count

Question Number : 62 Question Id : 97103639684 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Which resource is classified as a renewable energy source?

Options :

1. ✖ Nuclear energy

2.

✖ Fossil fuels

3. ✔ Solar energy

4. ✖ Geothermal energy

Question Number : 63 Question Id : 97103639685 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

What international agreement aims to phase out substances responsible for ozone depletion?

Options :

1. ✖ Rio Summit

2. ✔ Montreal Protocol

3. ✖ Kyoto Protocol

4. ✖ Paris Agreement

Question Number : 64 Question Id : 97103639686 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 learning was emphasized in ancient India, focusing on traditional subjects like philosophy and literature?

Options :

1. ✖ Non-conventional learning

2. ✔ Conventional learning

3. ✖ Technical education

4. ✖ Skill-based education

Question Number : 65 Question Id : 97103639687 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

National Sample Survey Organization conducts survey on education and employment every _____.

Options :

1. ✖ One year

2. ✔ Five years

3. ✖ Six years

4. ✖ Ten years

Question Number : 66 Question Id : 97103639688 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction

Time : 0

What marked the evolution of higher learning and research in Post Independence India?

Options :

1. ✖ Shift towards skill-based education

2. ✖ Emphasis on non-conventional learning

3. ✔ Establishment of new institutions and universities

4. ✖ Decline in professional education

Question Number : 67 Question Id : 97103639689 Display Question Number : Yes Is Questi

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

What does plagiarism refer to in research ethics?

Options :

1. ✖ Collaborating with other researchers

2. ✖ Citing sources properly

3. ✔ Using someone else's ideas without credit

4. ✖ Sharing research findings openly

Question Number : 68 Question Id : 97103639690 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

ICSSR is promoting research in the field of ----------.

Options :

1. ✖ Sciences

2. ✖ Technical education

3. ✔ Social sciences

4. ✖ Medicine

Question Number : 69 Question Id : 97103639691 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

What aspect of education is concerned with the moral and ethical development of students?

Options :

1. ✖ Skill-based education

2. ✔ Value education

3. ✖ Technical education

4. ✖ Non-conventional learning

Question Number : 70 Question Id : 97103639692 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Which Indian city hosted the 2023 International Film Festival of India (IFFI)?

Options :

1. ✖ Mumbai

2. ✖ Hyderabad

3. ✔ Goa

4. ✖ Kolkata

Marine Engineering

Section Id :	971036564
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 : 97103639693 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The Eigen values of $\begin{bmatrix} 2 & \sqrt{2} \\ \sqrt{2} & 2 \end{bmatrix}$ are

Options :

1. ✖ $1 \pm \sqrt{3}$

2. ✖ $1 \pm \sqrt{5}$

3. ✔ $2 \pm \sqrt{2}$

4. ✖ $4, -2$

Question Number : 72 Question Id : 97103639694 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Solution of the system of equations

$x + y + z = 6, 2x + 3y - 2z = 2, 5x + y + 2z = 13$ is

Options :

1. ✖ $x = -1, y = 2, z = 3$

2. ✖ $x = 1, y = -1, z = -3$

3. ✔ $x=1, y=2, z=3$

4. ✖ $x=0, y=1, z=2$

Question Number : 73 Question Id : 97103639695 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The maximum and minimum values of

$3x^4-2x^3-6x^2+6x+1$ in the interval $(0,2)$ are

Options :

1. ✔ $\left(2\frac{7}{16}, 2\right)$

2. ✖ $(-1, 3)$

3. ✖ $\left(3\frac{1}{2}, 1\right)$

4. ✖ $\left(2, \frac{7}{2}\right)$

Question Number : 74 Question Id : 97103639696 Display Question Number : Yes Is Question

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

If $\phi = \log(x^2 + y^2 + z^2)$ then $curl(grad\phi)$ is

Options :

1. ✖ -1

2. ✖ -2

3. ✖ 3

4. ✔ 0

Question Number : 75 Question Id : 97103639697 Display Question Number : Yes Is Questi

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

The integrating factor of $(x^2y - 2xy^2)dx - (x^3 - 3x^2y)dy = 0$ is

Options :

1. ✖ $e^{x^2y^2}$

2. ✔ $\frac{1}{x^2y^2}$

3. ✖ $\frac{x^2}{y^2}$

4.

✖ $\frac{x}{y}$

Question Number : 76 Question Id : 97103639698 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

What is the value of $\int_C \frac{e^{2z}dz}{(z-1)(z-2)}$, where C is the circle $|z|=3$.

Options :

1. ✖ $2ie^4$

2. ✔ $2\pi i(e^4-e^2)$

3. ✖ $2\pi(e^3-1)$

4. ✖ $2(e^4-e^2)$

Question Number : 77 Question Id : 97103639699 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

A box X contains 2 white and 4 black balls. Another box Y contains 5 white and 7 black balls. A ball is transferred from the box X to the box Y. Then a ball is drawn from the box Y. What is the probability that it is white.

Options :

1. ✖ $\frac{18}{17}$

2. ✖ $\frac{2}{3}$

3. ✔ $\frac{16}{39}$

4. ✖ $\frac{19}{23}$

Question Number : 78 Question Id : 97103639700 Display Question Number : Yes Is Questi

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

A die is tossed thrice. A success is 'getting 1 or 6' on a toss. The values of mean and variance of the number of successes are respectively.

Options :

1. ✖ $2, \frac{3}{2}$

2. ✔ $1, \frac{2}{3}$

3. ✖ $0,1$

4.

✖ $2, \frac{4}{3}$

Question Number : 79 Question Id : 97103639701 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Solution of the system of non-linear equations:

$x^2 + y = 11$ and $y^2 + x = 7$ is

Options :

1. ✖ $x = 2.7, y = -1.2$

2. ✖ $x = 2.9, y = 1.84$

3. ✔ $x = 3.5844, y = -1.8482$

4. ✖ $x = 3.8222, y = 0.8122$

Question Number : 80 Question Id : 97103639702 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

What is the value of $\int_0^1 \frac{dx}{1+x}$ by Simpson's rule

Options :

1. ✖ 0.82324

2. ✖ 0.51234

3. ✔ 0.69315

4. ✖ 0.9

Question Number : 81 Question Id : 97103639703 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The law stating that the algebraic sum of moments of a system of coplanar forces about a moment centre is equal to the moment of their resultant force about the same moment centre is known as

Options :

1. ✖ D' Alembert principle

2. ✖ Lami's theorem

3. ✖ Law of transmissibility of forces

4. ✔ Varignon's theorem

Question Number : 82 Question Id : 97103639704 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The velocity ratio of a single purchase crab winch can be increased by

Options :

1. ✔ Increasing the length of the handle

2. ✖ Increasing the radius of the load drum

3. ✖ Increasing the number of teeth of the pinion

4. ✖ Increasing the length of the handle and pinion

Question Number : 83 Question Id : 97103639705 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Shear force is unbalanced _____ to the left or right of the section.

Options :

1. ✖ Horizontal force

2. ✔ Vertical force

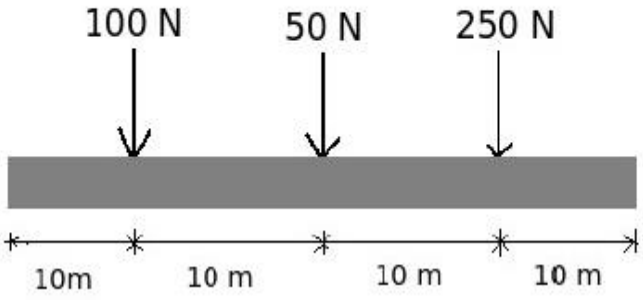
3. ✖ Inclined force

4. ✖ Conditional force

Question Number : 84 Question Id : 97103639706 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction

Time : 0

What is the maximum shear force acting on the beam shown below.



Options :

1. ✖ 125 N

2. ✔ 200 N

3. ✖ 4000 N

4. ✖ 8000 N

Question Number : 85 Question Id : 97103639707 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 contraflexure, the value of bending moment is _____

Options :

1. ✔ Zero

2. ✖ Maximum

3. ✖ Can't be determined

4. ✖ Minimum

Question Number : 86 Question Id : 97103639708 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The safe stress for a hollow steel column which carries an axial load of 2100 kN is 125 MN/m^2. If the external diameter of the column is 30 cm, what will be the internal diameter?

Options :

1. ✖ 25 cm

2. ✔ 26.19 cm

3. ✖ 30.14 cm

4. ✖ 27.9 cm

Question Number : 87 Question Id : 97103639709 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The moment of inertia of a solid cylinder of mass 'm', radius 'R' and length 'l' about the longitudinal axis or polar axis is

Options :

1. ✔ $mR^2/2$

2. ✖ $mR^2/4$

3. ✖ $mR^2/8$

4. ✖ $mR^2/6$

Question Number : 88 Question Id : 97103639710 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The strain energy will be higher in which shaft under the same torque

Options :

1. ✖ Solid shaft

2. ✔ Hollow shaft

3. ✖ Same in Solid as well as hollow shaft

4. ✖ Stepped shaft

Question Number : 89 Question Id : 97103639711 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

A member subjected to couple produces rotational motion about its longitudinal axis called as _____.

Options :

1. ✖ Longitudinal

2. ✖ Transverse

3. ✔ Torsional

4. ✖ Rotational

Question Number : 90 Question Id : 97103639712 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruct Time : 0

A seamless cylinder of storage capacity of 0.03 m^3 is subjected to an internal pressure of 21 MPa. The ultimate strength of material of cylinder is 350 N/mm^2. Determine the length of the cylinder if it is twice the diameter of the cylinder.

Options :

1. ✔ 540 mm

2. ✖ 270 mm

3. ✖ 400 mm

4. ✖ 350 mm

Question Number : 91 Question Id : 97103639713 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The buoyant force acting on the air-ship as it rises in the air will be...

Options :

1. ✖ Buoyant force increases

2. ✔ Buoyant force decreases

3. ✖ Buoyant force remains constant

4. ✖ Buoyant force first increases then decreases

Question Number : 92 Question Id : 97103639714 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

By which method the denser object floats on the less dense fluid?

Options :

1. ✔ By changing the shape of object

2. ✖ By altering the forces acting on the object

3. ✖ By changing the force on the object

4. ✖ By changing the acceleration on the object

Question Number : 93 Question Id : 97103639715 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The centre of gravity of the volume of a liquid displaced is called as....

Options :

1. ✖ Centre of pressure

2. ✔ Centre of buoyancy

3. ✖ Metacentre

4. ✖ Buoyancy Forces

Question Number : 94 Question Id : 97103639716 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The force of buoyancy depends upon the...

Options :

1. ✔ Weight of the liquid displaced

2. ✖ Viscosity of liquid

3. ✖ Compressibility of liquid

4.

✖ Density of liquid

Question Number : 95 Question Id : 97103639717 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The body floating in the liquid is said to be neutral if it's metacentre is

Options :

1. ✔ Coincide with the centre of gravity

2. ✖ Above the centre of gravity

3. ✖ Below the centre of gravity

4. ✖ Nice between centre of buoyancy and centre of gravity

Question Number : 96 Question Id : 97103639718 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Interms of environmental impact, what is a notable downside of using steel extensively

Options :

1. ✖ Easily recyclable

2. ✖ Non-toxic production process

3. ✖ Rapid decomposition

4. ✔ High energy consumption in production

Question Number : 97 Question Id : 97103639719 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 primary purpose of an offshore structure in the oil and gas industry?

Options :

1. ✔ Extraction of underwater resources

2. ✖ Protection against sea storms

3. ✖ Providing passage for ships and boats

4. ✖ Residential purposes

Question Number : 98 Question Id : 97103639720 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 offshore structure is most suitable for shallow water conditions?

Options :

1. ✖ Fixed Offshore Structures

2. ✔ Floating Offshore Structures

3. ✖ Submersible Offshore Structures

4. ✖ Compliant Offshore Structures

Question Number : 99 Question Id : 97103639721 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Why is the jack-up rig commonly used in geological survey and exploratory drilling operations?

Options :

1. ✔ Mobility

2. ✖ High payload capacity

3. ✖ Low maintenance cost

4. ✖ Strong resistance to ice impacts

Question Number : 100 Question Id : 97103639722 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Which offshore structure type would NOT typically be used in water depths of over 1500 meters?

Options :

1. ✔ Fixed Offshore Structures

2. ✖ Spar Platforms

3. ✖ Tension Leg Platforms

4. ✖ Floating Offshore Structures

Question Number : 101 Question Id : 97103639723 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 type of corrosion is caused by the formation and collapse of vapor bubbles in a liquid near the metal surface?

Options :

1. ✖ Filiform corrosion

2. ✖ Fretting corrosion

3. ✔ Cavitation damage

4. ✖ Crevice corrosion

Question Number : 102 Question Id : 97103639724 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Corrosion between the dissimilar metals is called as _____

Options :

1. ✔ Galvanic corrosion

2. ✖ Dry corrosion

3. ✖ Oxidation corrosion

4. ✖ Concentration cell corrosion

Question Number : 103 Question Id : 97103639725 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

What is cathodic protection?

Options :

1. ✖ Cathodes placed on the hull of the ship

2. ✖ Anodes placed on the stern of the ship

3. ✖ Protection of the hull of the ship

4. ✔ The prevention of corrosion by electrochemical techniques

Question Number : 104 Question Id : 97103639726 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 types of corrosion in which stainless steels are more susceptible than ordinary steels?

Options :

1. ✖ Pitting corrosion

2. ✖ Stress-corrosion cracking

3. ✖ Intergranular corrosion

4. ✔ Stress-corrosion cracking, pitting and intergranular corrosion

Question Number : 105 Question Id : 97103639727 Display Question Number : Yes Is Quest

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

Time : 0

Which of the following metal is the best material selection combination for the ship propeller?

Options :

1. ✖ Titanium

2. ✔ Nickel and its alloys

3. ✖ Steel

4. ✖ Aluminum and its alloys

Question Number : 106 Question Id : 97103639728 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

A large two-stroke/cycle direct reversing diesel engine is to be reversed. Prior to the admission of starting air you must _____

Options :

1. ✖ Line up the engine for restarting with light diesel oil

2. ✔ Reposition the fuel injection cam

3. ✖ Change the intake and exhaust valve cam positions

4. ✖ Place the starting cam in the intermediate position

Question Number : 107 Question Id : 97103639729 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

A two stroke diesel engine exhaust temperature will be lower than a four stroke diesel engine of the same displacement because the _____

I. scavenging air is cooling the exhaust gases

II. exhaust cycle time is longer

Options :

1. ✔ I only

2. ✖ II only

3. ✖ Both I and II

4. ✖ None of the above

Question Number : 108 Question Id : 97103639730 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Crank web deflection readings will give a positive indication of _____

Options :

1. ✔ Worn main bearing journals

2. ✖ Torsional stress deformation

3. ✖ Slack thrust bearings

4. ✖ Bearing shells shim dimensions

Question Number : 109 Question Id : 97103639731 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

In an operating diesel engine, which of the following conditions is an indication of a leaking air starting valve?

Options :

1. ✖ Noise coming from that air starting valve.

2.

✖ Continuous operation of the starting air compressor.

3. ✖ Zero air pressure in the air starting system.

4. ✔ Overheated starting air pipe to the cylinder head.

Question Number : 110 Question Id : 97103639732 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

In which of the following areas of a crosshead engine a permanently connected fire extinguishing system is required?

Options :

1. ✖ Exhaust manifolds in excess of 200 mm in diameter.

2. ✖ Crankcases having a gross volume in excess of 0.6 cubic metre.

3. ✖ Turbocharger inlet piping in excess of 300 mm in diameter.

4. ✔ Scavenging spaces in open connection to the cylinders.

Question Number : 111 Question Id : 97103639733 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

On a large diesel engine installation, crankshaft axial alignment is maintained by the _____

Options :

1. ✖ Piston rod guides

2. ✔ Engine thrust bearing

3. ✖ Crosshead bearing

4. ✖ Main shaft flexible coupling

Question Number : 112 Question Id : 97103639734 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Water leaking through the stern tube stuffing box is used to accomplish which of the following actions?

Options :

1. ✖ Cooling

2. ✖ Lubrication

3. ✖ Flushing

4. ✔ Cooling, lubrication and flushing

Question Number : 113 Question Id : 97103639735 Display Question Number : Yes Is Question

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

A vertical shaft having a rudder attached to its lower end and having a yoke, quadrant, or tiller fitted to its upper portion by which it may be turned, is the _____

Options :

1. ✖ Rudder frame

2. ✖ Rudder post

3. ✔ Rudder stock

4. ✖ Stern post

Question Number : 114 Question Id : 97103639736 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

If a radial piston hydraulic pump fails to deliver rated fluid volume, the cause can be _____.

Options :

1. ✖ Contaminated fluid

2. ✖ Pitted thrust rings

3. ✖ Worn pintle bearings

4. ✔

Obstructed suctions passage

Question Number : 115 Question Id : 97103639737 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 best describes an oil lubricated stern tube bearing installation?

Options :

1. ✖ It receives its oil supply from a branch line of the main lube oil system.

2. ✔ No shaft liner is needed in the area of the babbitted bearing surface.

3. ✖ The system pressure must be lowered when maneuvering in port to prevent blowing the outer oil seal

4. ✖ For precise regulation of the bearing temperature, the system is required to have its own oil cooler.

Question Number : 116 Question Id : 97103639738 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

A sample of an ideal gas is taken through a closed cycle presented by a P-V diagram. The process 1-2 is perfectly isothermal. Which of the following is true about the change in internal energy and heat added to the gas during the process 3-1?

Options :

1. ✖ $\Delta U = 0, Q > 0$

2. ✖ $\Delta U > 0, Q > 0$

3. ✖ $\Delta U < 0, Q < 0$

4. ✔ $\Delta U = 0, Q < 0$

Question Number : 117 Question Id : 97103639739 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

In an adiabatic process, which of the following statements is NOT true?

Options :

1. ✖ No heat is transferred to or from the system.

2. ✖ The process occurs without any heat exchange with the surroundings.

3. ✔ The entropy of the system remains constant.

4. ✖ The adiabatic process can be reversible or irreversible.

Question Number : 118 Question Id : 97103639740 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Three containers filled with 1 kg of each: water, ice, and water vapor at the same temperature T = 0°C. Which of the following is true about the internal energy of the substances?

Options :

1. ✖ U water > U ice > U vapor

2. ✖ U ice > U water > U vapor

3. ✖ U vapor > U ice > U water

4. ✔ U ice = U water = U vapor

Question Number : 119 Question Id : 97103639741 Display Question Number : Yes Is Quest Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

According to the first law of thermodynamics, which of the following statement is correct?

Options :

1. ✖ Energy can be created but not destroyed.

2. ✔ The change in internal energy of a system is equal to the heat added to the system minus the work done by the system.

3. ✖ The internal energy of a system remains constant during any process.

4. ✖ Work done by the system is always greater than the heat added to the system.

Question Number : 120 Question Id : 97103639742 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

In a gas turbine power plant, which of the following components is responsible for compressing air before combustion?

Options :

1. ✖ Combustor

2. ✖ Turbine

3. ✔ Compressor

4. ✖ Nozzle

Question Number : 121 Question Id : 97103639743 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 refrigeration cycles does not use a compressor?

Options :

1. ✖ Vapour compression cycle

2. ✔ Absorption refrigeration cycle

3. ✖ Air refrigeration cycle

4. ✖ Thermoelectric refrigeration cycle

Question Number : 122 Question Id : 97103639744 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 refrigerants has been widely used but phased out due to its detrimental effect on the ozone layer?

Options :

1. ✖ R-134a

2. ✖ R-410A

3. ✔ R-22

4. ✖ R-123

Question Number : 123 Question Id : 97103639745 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 specific heat capacity of a substance?

Options :

1. ✔ The amount of heat required to raise the temperature of 1 kilogram of the substance by 1 degree Celsius.

2. ✖ The amount of heat required to raise the temperature of the substance by 1 degree Celsius.

3. ✖ The temperature at which the substance changes phase.

4. ✖ The ratio of the change in temperature to the change in heat.

Question Number : 124 Question Id : 97103639746 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 zeroth law of thermodynamics, if object A is in thermal equilibrium with object B, and object B is in thermal equilibrium with object C, what can be concluded?

Options :

1. ✔ Object A must be in thermal equilibrium with object C.

2. ✖ Object C must be in thermal equilibrium with object A.

3. ✖ Object A and object C may or may not be in thermal equilibrium.

4. ✖ The temperature of object A is greater than the temperature of object C.

Question Number : 125 Question Id : 97103639747 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

An ideal heat engine operates between two temperatures 600 K and 900 K. What is the efficiency of the engine?

Options :

1. ✖ 50%

2. ✖ 80%

3. ✖ 100%

4. ✔ 33%

Question Number : 126 Question Id : 97103639748 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruct Time : 0

Which of the following is an incorrect statement?

Options :

1. ✖ Corrosion is an irreversible process

2. ✔ Corrosion is a non-spontaneous process

3. ✖ Corrosion is a degradation process

4. ✖ Corrosion is a spontaneous process

Question Number : 127 Question Id : 97103639749 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Which of the following are necessary in the process of corrosion?

Options :

1. ✖ Anode

2. ✖ Cathode

3. ✖ Electrolyte

4. ✔ Anode, Cathode and Electrolyte

Question Number : 128 Question Id : 97103639750 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

What are the advantages of corrosion?

Options :

1. ✖ Protection of metals by surficial oxide layer

2. ✖ Zn-carbon electrochemical reactions in the battery

3. ✖ Decrease in the strength of material

4. ✔ Protection of metals by the surficial oxide layer and Zn-carbon electrochemical reactions in the battery

Question Number : 129 Question Id : 97103639751 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 corrosion takes place evenly throughout a material's whole surface?

Options :

1. ✖ Galvanic corrosion

2. ✖ Intergranular corrosion

3. ✖ Pitting corrosion

4. ✔ Uniform corrosion

Question Number : 130 Question Id : 97103639752 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 corrosion can occur in the absence of oxygen?

Options :

1. ✖ Galvanic corrosion

2. ✖ Intergranular corrosion

3. ✖ Pitting corrosion

4. ✔ Uniform corrosion

Question Number : 131 Question Id : 97103639753 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 abbreviation of MIC?

Options :

1. ✖ Micro-integrated corrosion

2. ✖ Micro-infected corrosion

3. ✔ Microbiologically influenced corrosion

4. ✖ Microorganism-infected corrosion

Question Number : 132 Question Id : 97103639754 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 True about fatigue crack?

Options :

1. ✖ A fatigue crack is a crack that forms in a material as a result of constant stress

2. ✖ A fatigue crack is a crack that forms in a material as a result of non-repetitive cyclic loading

3. ✔ A fatigue crack is a crack that forms in a material as a result of repetitive cyclic loading

4. ✖ A fatigue crack is a crack that forms in a material as a result of repetitive non-cyclic cyclic loading

Question Number : 133 Question Id : 97103639755 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Which is widely employed as a sacrificial anode in applications involving water-immersed steel structures, such as pipelines?

Options :

1. ✖ Aluminium

2. ✖ Titanium

3. ✖ Iron

4. ✔ Zinc

Question Number : 134 Question Id : 97103639756 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 aid in the management of paint viscosity, ensures appropriate application and reduces sagging or leaking?

Options :

1. ✖ Deformers

2.

✔ Thickeners

3. ✖ Rheology modifiers

4. ✖ Wetting agents

Question Number : 135 Question Id : 97103639757 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 chemical name of rust?

Options :

1. ✖ Hydrated Ferro oxide

2. ✔ Hydrated ferric oxide

3. ✖ Hydrated ferrous oxide

4. ✖ Hydro Ferro oxide

Question Number : 136 Question Id : 97103639758 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Cad converts 2-D drawing into 3-D models with

Options :

1. ✔ Extrusion

2. ✖ Fillet

3. ✖ Chamfer

4. ✖ Offset

Question Number : 137 Question Id : 97103639759 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The process in which the detailed specifications materials, dimensions, tolerances and surface rough made is known as

Options :

1. ✖ Decision process

2. ✖ Analysis process

3. ✔ Implementation process

4. ✖ Refinement process

Question Number : 138 Question Id : 97103639760 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 devices do not produce a hard copy?

Options :

1. ✖ Impact printers

2. ✖ Plotters

3. ✔ CRT terminals

4. ✖ Non-impact printers

Question Number : 139 Question Id : 97103639761 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Which CAD display configurability allows work without any host support?

Options :

1. ✖ One with no secondary storage capacity

2. ✖ Low intelligence

3. ✔ High intelligence

4. ✖ Medium intelligence

Question Number : 140 Question Id : 97103639762 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 produces the best quality graphics reproduction?

Options :

1. ✖ Dot matrix printers

2. ✖ Laser printers

3. ✖ Inkjet printers

4. ✔ Plotters

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