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|---|---|
| **Question Paper Name:** | 88 Electronic Science 19th Dec S1 Set 2 |
| **Subject Name:** | 88 Electronic Science |
| **Creation Date:** | 2018-12-19 17:19:04 |
| **Duration:** | 180 |
| **Total Marks:** | 300 |
| **Display Marks:** | Yes |
| **Share Answer Key With Delivery Engine:** | Yes |
| **Actual Answer Key:** | Yes |

## Paper I

| | |
|---|---|
| **Group Number :** | 1 |
| **Group Id :** | 913943153 |
| **Group Maximum Duration :** | 60 |
| **Group Minimum Duration :** | 60 |
| **Revisit allowed for view? :** | No |
| **Revisit allowed for edit? :** | No |
| **Break time:** | 30 |
| **Mandatory Break time:** | Yes |
| **Group Marks:** | 100 |

## 00 General Aptitude

| | |
|---|---|
| **Section Id :** | 913943153 |
| **Section Number :** | 1 |
| **Section type :** | Online |
| **Mandatory or Optional:** | Mandatory |
| **Number of Questions:** | 42 |
| **Number of Questions to be attempted:** | 42 |
| **Section Marks:** | 100 |
| **Display Number Panel:** | Yes |
| **Group All Questions:** | No |

| | |
|---|---|
| **Sub-Section Number:** | 1 |
| **Sub-Section Id:** | 913943585 |
| **Question Shuffling Allowed :** | Yes |

**Question Number : 1 Question Id : 91394311607 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 2 Wrong Marks : 0**

In the following list identify these statements which are indicative of helping behaviour of effective teaching. Select from the code to give your answer.

(a) Instructional variety marked by multiple devices used.
(b) Using the ideas of students while making presentations.
(c) Student's success rate as evident in correctly understanding the assignments.
(d) Engagement in learning tasks.
(e) Teacher affect as manifest in relations with students.
(f) Probing to add and seek classifications of ideas.

**Code :**

Options :

91394345601. (b), (e) and (f)

91394345602. (a), (b) and (c)

91394345603. (d), (e) and (a)

91394345604. (b), (c) and (d)

निम्नांकित सूची में उन कथनों की पहचान करें जो प्रभावी शिक्षण के सहायक व्यवहार को दर्शाते हैं। कूट में से सही उत्तर चुनें।

(a) प्रयुक्त विविध प्रविधियों वाली अनुदेशात्मक विविधता।
(b) प्रस्तुति करते समय छात्रों के विचारों का प्रयोग करना।
(c) छात्र की सफलता दर जो कार्य की सही समझ में प्रदर्शित होती है।
(d) अधिगम कार्य में संलग्नता।
(e) छात्रों के साथ संबंध में प्रदर्शित शिक्षक प्रभाव।
(f) विचारों की स्पष्टता प्राप्त करने के उद्देश्य से जाँच-परख।

**कूट :**

Options :

91394345601. (b), (e) और (f)

91394345602. (a), (b) और (c)

91394345603. (d), (e) और (a)

91394345604. (b), (c) और (d)

From the list given below identify these statements which relate to the characteristics of a teaching act.  Select from the code to indicate your answer.

(a)    Teaching is a personal act to facilitate self development.

(b)    The goal of all teaching is to cause learning.

(c)    Teaching invariably implies changing the opinion of others.

(d)    Teaching is triadic rather than dyadic in nature.

(e)    Teaching means selling ideas.

(f)    Teaching means reaching the mind of students.

**Code :**

**Options :**

91394345605. (a), (b) and (c)

91394345606. (c), (d) and (e)

91394345607. (b), (d) and (f)

91394345608. (f), (e) and (d)

नीचे दी गई सूची में से उन कथनों की पहचान करें जो शिक्षण कार्य की विशेषता से संबंधित हैं। दिए गए कूट में से अपना उत्तर चुनें।

(a) शिक्षण स्व:विकास को सुगम बनाने वाली एक वैयक्तिक गतिविधि है।

(b) सभी शिक्षणों का ध्येय अधिगम कराना होता है।

(c) व्यक्तियों के शिक्षण का निहितार्थ दूसरों का मत परिवर्तित करना है।

(d) शिक्षण अपनी प्रकृति में द्विक होने की बजाये त्रिक है।

(e) शिक्षण का अर्थ है विचारों का विक्रय।

(f) शिक्षण का तात्पर्य छात्रों के मस्तिष्क तक पहुँचना है।

कूट :

Options :

91394345605. (a), (b) और (c)

91394345606. (c), (d) और (e)

91394345607. (b), (d) और (f)

91394345608. (f), (e) और (d)

For promoting competence and excellence in and through education, which of the needs of Maslow's hierarchy has to be addressed ?

Options :

91394345609. Need for love and belongingness

91394345610. Need for self esteem

91394345611. Safety needs

91394345612. Need for self - actualization

शिक्षण में, शिक्षण के माध्यम से सक्षमता और उत्कृष्टता को बढ़ावा देने के लिए मास्लो के पदानुक्रम की किन आवश्यकताओं को संतुष्ट किया जाना चाहिए?

Options :

91394345609. प्रेम और अपनत्व की आवश्यकता

91394345610. आत्म सम्मान की आवश्यकता

91394345611. सुरक्षा की आवश्यकतायें

91394345612. आत्म-सिद्धि की आवश्यकता

निम्नांकित में से कौन प्रभावी शिक्षण में बाधक कारक हैं? कूट में से सही उत्तर चुनें :

(a) शिक्षक की आत्म-सामर्थ्य

(b) शिक्षक का विषय ज्ञान

(c) शिक्षक की निम्न योग्यता और तत्परता

(d) शिक्षक में नियोजन और शिक्षण कौशल का अभाव

(e) भाषिक कौशलों पर शिक्षक की पकड़

(f) शिक्षक की असंगत देह-भाषा

कूट :

Options :

91394345613. (c), (d) और (f)

91394345614. (a), (e) और (c)

91394345615. (b), (c) और (d)

91394345616. (a), (c) और (f)

Which of the following are hindering factors in effective teaching ?  Select from the code to give your answer.

(a) Teacher's self-efficacy.

(b) Teacher's subject knowledge.

(c) Low ability and willingness level of teacher.

(d) Lack of planning and teaching skills in a teacher.

(e) Teachers's mastery of linguistic skills.

(f) Inappropriate body language of the teacher.

Code :

Options :

91394345613. (c), (d) and (f)

91394345614. (a), (e) and (c)

91394345615. (b), (c) and (d)

91394345616. (a), (c) and (f)

In the following characteristics of an evaluation procedure, identify those which describe formative assessment.  Select from the code to indicate your answer.

(a) Evaluation is a post instructional event.

(b) Evaluation occurs during instruction.

(c) Evaluation is carried out by policy makers.

(d) Evaluation takes place periodically.

(e) The aim of evaluation is to improve the process of teaching.

(f) Evaluation is based on participation of students and teacher.

Code :

Options :

91394345617. (a), (b) and (c)

91394345618. (b), (c) and (d)

91394345619. (b), (e) and (f)

91394345620. (c), (d) and (f)

मूल्यांकन प्रक्रिया की निम्नांकित विशेषताओं में से, निर्माणात्मक मूल्यांकन का वर्णन करने वाली विशेषताओं की पहचान करें। कूट में से सही उत्तर चुनें।

(a)  मूल्यांकन उत्तर-अनुदेशात्मक घटना है।

(b)  मूल्यांकन अनुदेश के दौरान घटित होता है।

(c)  मूल्यांकन का कार्य नीति-निर्माता करते हैं।

(d)  मूल्यांकन सावधिक रूप से घटित होता है।

(e)  मूल्यांकन का उद्देश्य शिक्षण प्रक्रिया में सुधार करना है।

(f)  मूल्यांकन छात्रों और शिक्षक की प्रतिभागिता पर आधारित होता है।

कूट :

Options :

91394345617. (a), (b) और (c)

91394345618. (b), (c) और (d)

91394345619. (b), (e) और (f)

91394345620. (c), (d) और (f)

A researcher while writing his/her thesis does not give the rationale underlying use of statistical techniques. This will be best described as a case of :

Options :

91394345621. Ethical misconduct

91394345622. An error of omission

91394345623. An error of commission

91394345624. Technical lapse

अपना शोध-प्रबंध लिखते समय एक शोधार्थी सांख्यिकीय तकनीकों के अनुप्रयोग का तर्काधार नहीं बताता है, इसे निम्न में किसका उत्तम उदाहरण माना जाएगा?

Options :

91394345621. नैतिक कदाचार

91394345622. भूल से हुई त्रुटि

91394345623. जान-बूझ कर की गई त्रुटि

91394345624. तकनीकी चूक

In which type of research, the steps of research have to be cyclic ?

Options :

91394345625. Grounded theory research

91394345626. Action research

91394345627. Experimental research

91394345628. Case study research

किस प्रकार के शोध में, शोध के चरणों को चक्रीय होना चाहिए?

Options :

91394345625. जमीनी सिद्धांत शोध

91394345626. क्रियात्मक शोध

91394345627. प्रायोगिक शोध

91394345628. व्यष्टि अध्ययन शोध

A researcher plans to study the effect of socio-economic status of parents on the school drop-out rate in a district. What type of research will it be ?

Options :

91394345629. Hypothesis formulating research

91394345630. Experimental hypothesis testing research

91394345631. Non Experimental hypothesis testing research

91394345632. Ethnographic research

एक शोधार्थी किसी जिले में विद्यालय को बीच में छोड़ देने वाले छात्रों की दर पर अभिभावकों की सामाजिक-आर्थिक स्थिति के प्रभाव का अध्ययन करने की योजना बनाता है। यह किस प्रकार का शोध होगा?

Options :

91394345629. परिकल्पना निरूपण शोध

91394345630. प्रायोगिक परिकल्पना परीक्षण शोध

91394345631. गैर–प्रायोगिक परिकल्पना परीक्षण शोध

91394345632. नृजातीय शोध

Below are given a few key terms. Identify these which denote qualitative research paradigm.

(a)  Ex post facto method
(b)  Ethnography
(c)  Symbolic interaction
(d)  Descriptive survey
(e)  Narrative
(f)  Experimental method

Code :

Options :

91394345633. (a), (b) and (c)

91394345634. (d), (e) and (f)

91394345635. (a), (b) and (f)

91394345636. (b), (c) and (e)

नीचे कुछ प्रमुख पद दिए गए हैं। उनकी पहचान करें जो गुणात्मक शोध प्रतिमान को प्रदर्शित करते हैं।

(a)  कार्योत्तर विधि
(b)  नृजाति विज्ञान
(c)  सांकेतिक अंत:क्रिया
(d)  विवरणात्मक सर्वेक्षण
(e)  वृतांत परक
(f)  प्रायोगिक विधि

कूट :

Options :

91394345633. (a), (b) और (c)

91394345634. (d), (e) और (f)

91394345635. (a), (b) और (f)

91394345636. (b), (c) और (e)

Question Number : 10  Question Id : 91394311616  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes
Single Line Question Option : No  Option Orientation : Vertical
Correct Marks : 2  Wrong Marks : 0

For which type of research, the action words - 'Control, manipulate and observe' are most relevant ?

Options :

91394345637. Action research

91394345638. Historical Research

91394345639. Experimental research

91394345640. Grounded theory approach based research

Question Number : 10  Question Id : 91394311616  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes
Single Line Question Option : No  Option Orientation : Vertical
Correct Marks : 2  Wrong Marks : 0

किस प्रकार के शोध के लिए, क्रिया-सूचक शब्द 'नियंत्रण, हेर-फेर करना और अवलोकन' – सर्वाधिक प्रासंगिक हैं?

Options :

91394345637. क्रियात्मक शोध

91394345638. ऐतिहासिक शोध

91394345639. प्रायोगिक शोध

91394345640. जमीनी सिद्धांत दृष्टिकोण आधारित शोध

| | |
|---|---|
| Sub-Section Number: | 2 |
| Sub-Section Id: | 913943586 |
| Question Shuffling Allowed : | Yes |

Question Id : 91394311617  Question Type : COMPREHENSION  Sub Question Shuffling Allowed : Yes  Group Comprehension
Questions : No
Question Numbers : (11 to 15)
Question Label : Comprehension

**Read the passage carefully and answer the questions from 11 to 15.**

Smart phones have grown in popularity over the last few years, and applications, or content, rest at the heart of this growth. Content has become more important than hardware and the quality of content is determined by creativity. Creativity emerges as seemingly disparate areas, such as education, industry, and culture. As a result, convergence of virtually all areas is receiving the spotlight today.

Convergence must also take place in the area of policy-making. Breaking down the walls between education and science and technology (S & T) universities and businesses and research and education, and convergence of these areas will bring about synergy and perhaps yield unexpected creative results. When education and S & T merge, one plus one can result in something greater than two. Convergence can take many forms : providing an education that develops divergent thinking and encourages creativity in students at an early age; developing human talents required by business by breaking down the barriers between universities and businesses, and sharing the assets of government funded research institutes with university students. These merges form the platforms for human creativity.

A nation can only become a world leader in S & T when its scientists are cultivated and allowed to research to their heart's content.

Sub questions

Question Number : 11 Question Id : 91394311618 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 2 Wrong Marks : 0

According to the passage use of the smart phones has grown because of developments in :

Options :

91394345641. Technologies

91394345642. Researches

91394345643. Need for applications

91394345644. Interest of people

Question Number : 12 Question Id : 91394311619 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 2 Wrong Marks : 0

In the view of the author of this passage, what determines the quality of content ?

Options :

91394345645. Prevailing traditions

91394345646. Areas of application

91394345647. Creativity and convergence factors

91394345648. Areas of concern

Unique results will flow owing to :

Options :

91394345649. Policy-making

91394345650. Creative results of synergy

91394345651. Removing the hindering factors between research and education

91394345652. Synergy

On the basis of this passage, it can be stated that convergence is :

Options :

91394345653. A linear process developing in a sequential fashion

91394345654. A simple additive process to enhance power

91394345655. An interactive process centred on various elements

91394345656. A multifaceted interactive process

Quality of research in a nation gets enhanced as a result of :

Options :

91394345657. Dedicated spirit of the researchers

91394345658. Hardwork of the researchers

91394345659.　Expert power of the researchers

91394345660.　Variety in researches

**निम्नांकित गद्यांश को सावधानीपूर्वक पढ़ें और प्रश्न 11 से 15 के उत्तर दें।**

पिछले कुछ वर्षों में स्मार्ट फोन की लोकप्रियता काफी बढ़ी है और इसके मूल में उनका अनुप्रयोग अथवा प्रयोज्यता है। प्रयोज्यता हार्डवेयर से अधिक महत्वपूर्ण हो गई है और प्रयोज्यता की गुणवत्ता रचनात्मकता से निर्धारित होती है। रचनात्मकता जाहिर तौर पर असमान क्षेत्रों में उभरती है जैसे शिक्षा, उद्योग और संस्कृति। इसके परिणाम स्वरूप, आज लगभग सभी क्षेत्रों के सुसंयोजन पर जोर दिया जा रहा है।

सुसंयोजन नीति-निर्धारण के क्षेत्र में भी अवश्य होना चाहिए। शिक्षण और विज्ञान एवं प्रौद्योगिकी (एस एंड टी); विश्वविद्यालयों और व्यवसायों तथा शोध और शिक्षण के बीच की दीवार को तोड़ने एवं इन क्षेत्रों के सुसंयोजन से सुसंगति आएगी और संभवतः इसके अप्रत्याशित रचनात्मक नतीजे भी निकलेंगे। जब शिक्षा का विज्ञान एवं प्रौद्योगिकी से सम्मिलन होगा तो एक तथा एक का योग दो से ज्यादा होगा। यह सुसंयोजन कई स्वरूपों में हो सकता है : जैसे एक ऐसी शिक्षा प्रदान करना जो भिन्न सोच विकसित करती है और प्रारंभिक आयु में ही छात्रों की रचनात्मकता को प्रोत्साहित करती है; विश्वविद्यालय और व्यवसाय के बीच की दीवार को तोड़ते हुए व्यवसायों की आवश्यकतानुरूप मानव प्रतिभा विकसित करना तथा सरकार द्वारा वित्त-पोषित शोध संस्थानों की परिसंपत्तियों को विश्वविद्यालय के छात्रों के साथ साझा करना। इन सम्मिलनों से मानवीय रचनात्मकता को नया आयाम मिलेगा।

विज्ञान एवं प्रौद्योगिकी के क्षेत्र में कोई राष्ट्र तभी विश्व नेतृत्व प्रदान कर सकता है जब उसके वैज्ञानिक सम्बुद्ध हों तथा उन्हें अपने नैष्ठिक संकल्पों के अनुरूप शोध की स्वतंत्रता हो।

**Sub questions**

गद्यांश के अनुसार स्मार्ट फोन का प्रयोग निम्नांकित में से किस में विकास के कारण बढ़ा है?

Options :

91394345641.　प्रौद्योगिकियाँ

91394345642.　शोध

91394345643.　अनुप्रयोगों की आवश्यकता

91394345644.　लोक रुचि

इस गद्यांश के लेखक के अनुसार, प्रयोज्यता की गुणवत्ता किससे निर्धारित होती है?

Options :

91394345645. प्रचलित परंपराओं से

91394345646. अनुप्रयोग के क्षेत्र से

91394345647. रचनात्मकता और सुसंयोजन कारकों से

91394345648. हित क्षेत्रों से

किसके माध्यम से विलक्षण परिणाम होंगे ?

Options :

91394345649. नीति-निर्माण

91394345650. सुसंगति के रचनात्मक परिणाम

91394345651. शोध एवं शिक्षा के मध्य के अवरोधकों को हटाना

91394345652. सुसंगति

गद्यांश के आधार पर यह कहा जा सकता है कि सुसंगति है :

Options :

91394345653. क्रमिक रूप से विकसित होने वाली एक उद्ग्र प्रक्रिया

91394345654. शक्ति संवर्धन की एक सामान्य योगात्मक प्रक्रिया

91394345655. विभिन्न पक्षों पर आधारित एक अंत:क्रियात्मक प्रक्रिया

91394345656.  एक बहुविध अंत:क्रियात्मक प्रक्रिया

किसी राष्ट्र में शोध की गुणवत्ता में किसके परिणामस्वरूप बढ़ोत्तरी होती है?

Options :

91394345657.  शोधार्थियों की समर्पित भावना

91394345658.  शोधार्थियों का कठोर श्रम

91394345659.  शोधार्थियों की विशेषज्ञता शक्ति

91394345660.  शोधों में विविधता

| Sub-Section Number: | 3 |
| --- | --- |
| Sub-Section Id: | 913943587 |
| Question Shuffling Allowed : | Yes |

Which of the following sequence **correctly** depicts the linear communication model between teacher and students.

Options :

91394345661.  Encode → Symbols → Message → Channel

91394345662.  Channel → Message → Symbols → Encode

91394345663.  Message → Channel → Symbols → Encode

91394345664.  Symbols → Message → Encode → Channel

निम्नांकित में से कौन सा अनुक्रम शिक्षक और छात्रों के बीच उदग्र संप्रेषण प्रतिमान को सही रूप में प्रदर्शित करता है?

Options :

91394345661. कूट संकेतन → संकेत → संदेश → चैनल

91394345662. चैनल → संदेश → संकेत → कूट संकेतन

91394345663. संदेश → चैनल → संकेत → कूट संकेतन

91394345664. संकेत → संदेश → कूट संकेतन → चैनल

A university teacher makes a very effective expository presentation in his/her class without caring for its effect on the students.  This is an example of a/an :

Options :

91394345665. Linear Communication Model

91394345666. Interactive Communication Model

91394345667. Transactional Communication Model

91394345668. Authoritarian Communication Model

एक विश्वविद्यालय शिक्षक अपनी कक्षा में बहुत प्रभावी वर्णनात्मक प्रस्तुति करता/करती है, छात्रों पर इसके प्रभाव के बारे में चिन्ता किए बगैर/ यह निम्नांकित में से किसका उदाहरण है?

Options :

91394345665. उद्ग्र संप्रेषण प्रतिमान

91394345666. अंत:क्रियात्मक संप्रेषण प्रतिमान

91394345667. क्रियान्विति परक संप्रेषण प्रतिमान

91394345668. सत्तात्मक संप्रेषण प्रतिमान

Below are given two sets. **Set - I** specifies the sensory modes while **Set - II** offer illustration of speech communication to go with them. Match the two sets and indicate your answer by selecting the appropriate code.

| **Set - I** | | **Set- II** | |
|---|---|---|---|
| **(Sensory modes)** | | **(Illustrative speech)** | |
| (a) | Sight mode | (i) | It leaves a bad taste in my mouth. |
| (b) | Hearing mode | (ii) | I can't put my finger on the problem. |
| (c) | Touch mode | (iii) | Something is fishy. |
| (d) | Smell mode | (iv) | That looks good to me. |
| (e) | Taste mode | (v) | That sounds fine to me. |

Code :

| (a) | (b) | (c) | (d) | (e) |
|---|---|---|---|---|

Options :

91394345669.   (iv)   (v)   (ii)   (iii)   (i)

91394345670.   (i)   (ii)   (iii)   (iv)   (v)

91394345671.   (ii)   (iii)   (iv)   (v)   (i)

91394345672.   (ii)   (iii)   (i)   (iv)   (v)

नीचे दो समूह दिए गए हैं। **समूह-I** में इन्द्रिय-संवेदी प्रकारता विनिर्दिष्ट हैं जबकि **समूह-II** में उनके अनुरूप संभाषिक संप्रेषण का वर्णन है। दोनों समूहों को सुमेलित करें और उपयुक्त कूट का चयन करते हुए अपना उत्तर दें।

| **समूह-I** | | **समूह-II** | |
|---|---|---|---|
| **( इन्द्रिय-संवेदी प्रकारता )** | | **( दृष्टान्त परक संभाषण )** | |
| (a) | दृश्य प्रकारता | (i) | इससे मेरे मुँह में बुरा स्वाद आता है। |
| (b) | श्रवण प्रकारता | (ii) | मैं समस्या पर अपनी उँगली नहीं रख सकता। |
| (c) | स्पर्श प्रकारता | (iii) | कुछ सड़ांध है। |
| (d) | घ्राण प्रकारता | (iv) | यह मुझे सही लगता है। |
| (e) | रस प्रकारता | (v) | मुझे सुनने में यह ठीक लगता है। |

कूट :

| (a) | (b) | (c) | (d) | (e) |
|---|---|---|---|---|

Options :

91394345669.   (iv)   (v)   (ii)   (iii)   (i)

91394345670.    (i)    (ii)    (iii)    (iv)    (v)

91394345671.    (ii)    (iii)    (iv)    (v)    (i)

91394345672.    (ii)    (iii)    (i)    (iv)    (v)

Question Number : 19 Question Id : 91394311626 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

Which of the following is a powerful indicator of mis-communication in a classroom transaction ?

Options :

91394345673.    Volley of questions relevant to the subject.

91394345674.    'Yawning' by most of the students.

91394345675.    Purposely non-participative moves of students.

91394345676.    Volley of questions irrelevant to the subject.

Question Number : 19 Question Id : 91394311626 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

निम्नांकित में से कौन कक्षा क्रियान्विति में कु-संप्रेषण का एक सशक्त संसूचक है?

Options :

91394345673.    विषय के प्रति प्रासंगिक प्रश्नों की झड़ी

91394345674.    अधिकांश छात्रों का 'उबासी लेना'

91394345675.    छात्रों द्वारा सोद्देश्य अप्रतिभागी संचलन

91394345676.    विषय के प्रति अप्रासंगिक प्रश्नों की झड़ी

Question Number : 20 Question Id : 91394311627 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

In which model of communication 'noises' are introduced as an important variable ?

91394345677. Linear Model of Communication

91394345678. Participative Model of Communication

91394345679. Transactional Model of Communication

91394345680. Assertive Model of Communication

Question Number : 20 Question Id : 91394311627 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 2 Wrong Marks : 0

किस संप्रेषण प्रतिमान में 'शोर' को महत्वपूर्ण चर के रूप में प्रवर्तित किया जाता है?

Options :

91394345677. संप्रेषण का उदग्र प्रतिमान

91394345678. संप्रेषण का प्रतिभागिता परक प्रतिमान

91394345679. संप्रेषण का क्रियान्विति परक प्रतिमान

91394345680. संप्रेषण का आग्रही प्रतिमान

Question Number : 21 Question Id : 91394311628 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 2 Wrong Marks : 0

Aman travelled 300 km by train and 200 km by taxi, and he completed this journey in 5 hours and 30 minutes. However, if he travels 260 km by train and 240 km by taxi, it will take 6 minutes more to complete the journey. The speed of the train is :

Options :

91394345681. 100 km/hour

91394345682. 120 km/hour

91394345683. 80 km/hour

91394345684. 110 km/hour

Question Number : 21  Question Id : 91394311628  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes
Single Line Question Option : No  Option Orientation : Vertical
Correct Marks : 2  Wrong Marks : 0

अमन ने 300 कि.मी. की यात्रा ट्रेन से और 200 कि.मी. की यात्रा टैक्सी से की और उसे उसमें 5 घंटे 30 मिनट का समय लगा। बहरहाल, यदि वह 260 कि.मी. ट्रेन से और 240 कि.मी. टैक्सी से यात्रा करता है तो उसे यात्रा पूरी करने में 6 मिनट का समय और लगेगा। ट्रेन की गति है :

Options :

91394345681.  100 कि.मी/घंटा

91394345682.  120 कि.मी/घंटा

91394345683.  80 कि.मी/घंटा

91394345684.  110 कि.मी/घंटा

Question Number : 22  Question Id : 91394311629  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes
Single Line Question Option : No  Option Orientation : Vertical
Correct Marks : 2  Wrong Marks : 0

The present age of the father is twice that of the elder son. Ten years hence the age of the father will be three times that of the younger son. If the difference in ages of the two sons is as 15 years, the present age of the father is :

Options :

91394345685.  110 years

91394345686.  70 years

91394345687.  60 years

91394345688.  50 years

Question Number : 22  Question Id : 91394311629  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes
Single Line Question Option : No  Option Orientation : Vertical
Correct Marks : 2  Wrong Marks : 0

पिता की वर्तमान आयु बड़े पुत्र की आयु की दुगुनी है। आज से दस वर्ष बाद पिता की आयु छोटे पुत्र की आयु की तीन गुना होगी। यदि दोनों पुत्रों की आयु में अंतर 15 वर्ष हो तो पिता की वर्तमान आयु है :

Options :

91394345685.  110 वर्ष

91394345686. 70 वर्ष

91394345687. 60 वर्ष

91394345688. 50 वर्ष

In the sequence of numbers 2, 8, 24, 64, 160, $x$,........., the term $x$ is :

Options :

91394345689. 320

91394345690. 384

91394345691. 192

91394345692. 224

संख्याओं के क्रम 2, 8, 24, 64, 160, $x$,........., में $x$ पद का मान है :

Options :

91394345689. 320

91394345690. 384

91394345691. 192

91394345692. 224

In a certain code, PLEADING is written as FMHCQMFB. How is SHOULDER written in that code ?

Options :

91394345693. KCDQTIPV

91394345694. QDCKVPIT

91394345695. QDCKTIPV

91394345696. TIPVQDCK

किसी कतिपय कूट में PLEADING को FMHCQMFB लिखा जाता है।  उस कूट में SHOULDER  को कैसे लिखा जाएगा ?

Options :

91394345693. KCDQTIPV

91394345694. QDCKVPIT

91394345695. QDCKTIPV

91394345696. TIPVQDCK

In conveying the same meanings, which of the following is incongruous ?

Options :

91394345697. Unique

91394345698. Beautiful

91394345699. Rare

91394345700. Exceptional

समान अर्थ संप्रेषित करने में निम्नांकित में से कौन असंगत है?

Options :

91394345697. अनूठा

91394345698. सुंदर

91394345699. दुर्लभ

91394345700. अपवादात्मक

Question Number : 26  Question Id : 91394311633  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes
Single Line Question Option : No  Option Orientation : Vertical
Correct Marks : 2  Wrong Marks : 0

In terms of the relationship indicated below, which word will correctly pair to replace the question mark (?) ?

Scrub : wash : : Sob : ___?___ .

Options :

91394345701. Cry

91394345702. Water

91394345703. Sad

91394345704. Tease

Question Number : 26  Question Id : 91394311633  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes
Single Line Question Option : No  Option Orientation : Vertical
Correct Marks : 2  Wrong Marks : 0

नीचे दर्शाये गए संबंध के अनुसार, कौन सा शब्द खाली स्थान भरने के लिए उपयुक्त होगा ?

रगड़ना : धोना : : सुबकना : ___?___ .

Options :

91394345701. रोना

91394345702. पानी

91394345703. उदास

91394345704. चिढ़ना

Given below are two premises with four conclusions drawn from them (taking singly or together). Which conclusions are validly drawn ? Select the **correct** answer from the code given below.

Premises :     (i)    All lawyers are extroverts.

                   (ii)   Some wisemen are extroverts.

Conclusions :   (a)   All lawyers are wisemen.

                   (b)   All wisemen are lawyers.

                   (c)   Some extroverts are wisemen.

                   (d)   All extroverts are lawyers.

Code :

Options :

91394345705. (a) only

91394345706. (b) and (c) only

91394345707. (a) and (c) only

91394345708. (c) only

नीचे दो आधार वाक्य दिए गए हैं जिनसे चार निष्कर्ष निकलते हैं (अकेले या एक साथ)। कौन सा निष्कर्ष सही है? नीचे दिए गए कूट में से सही उत्तर चुनें।

आधार वाक्य :     (i)    सभी अधिवक्ता बहिर्मुखी होते हैं।

                   (ii)   कुछ बुद्धिमान लोग बहिर्मुखी होते हैं।

निष्कर्ष :       (a)   सभी अधिवक्ता बुद्धिमान हैं।

                   (b)   सभी बुद्धिमान अधिवक्ता हैं।

                   (c)   कुछ बहिर्मुखी बुद्धिमान हैं।

                   (d)   सभी बहिर्मुखी अधिवक्ता हैं।

कूट :

Options :

91394345705. सिर्फ (a)

91394345706. सिर्फ (b) और (c)

91394345707. सिर्फ (a) और (c)

91394345708. सिर्फ (c)

Question Number : 28  Question Id : 91394311635  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes
Single Line Question Option : No  Option Orientation : Vertical
Correct Marks : 2  Wrong Marks : 0

## Which is an example of a **correct** deductive argument ?

Options :

91394345709. There are 24 CDs on the top shelf of my bookcase and 14 on the lower shelf. There are no other CDs in my bookcase. Therefore, there are 38 CDs in my bookcase.

91394345710. No one got an 'A' grade on yesterday's test. Jatin wasn't in school yesterday. Jatin will make up the test today and get an 'A' grade.

91394345711. All human beings are in favor of world peace. Terrorists don't care about world peace. Terrorists bring about destruction.

91394345712. You have to be 16 years old to get a driver's license. Abhi will be 16 years old tomorrow. Therefore, Abhi can now buy a car.

Question Number : 28  Question Id : 91394311635  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes
Single Line Question Option : No  Option Orientation : Vertical
Correct Marks : 2  Wrong Marks : 0

## निम्नांकित में से कौन एक सही निगमनात्मक तर्क का उदाहरण है?

Options :

91394345709. मेरे बुक-केस के ऊपरी शेल्फ में 24 और निचले शेल्फ में 14 सीडी हैं। मेरे बुक-केस में कोई और सीडी नहीं है। इसलिए, मेरे बुक-केस में 38 सीडी हैं।

91394345710. कल की परीक्षा में किसी को 'A' ग्रेड नहीं मिला। जतिन कल स्कूल में नहीं था। जतिन आज परीक्षा देगा और 'A' ग्रेड प्राप्त करेगा।

91394345711. सभी मनुष्य विश्व शांति के पक्ष में हैं। आतंकवादी विश्व शांति की परवाह नहीं करते। आतंकवादी विनाश करते हैं।

91394345712. ड्राइविंग लाइसेंस पाने के लिए आपको 16 वर्ष का होना चाहिए। अभि कल 16 वर्ष का हो जाएगा। इसलिए, अब अभि एक कार खरीद सकता है।

Question Number : 29  Question Id : 91394311636  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes
Single Line Question Option : No  Option Orientation : Vertical

In a certain flight crew, the positions of the pilot, copilot and flight engineer are held by Mr. Ajit, Mr. Bhavesh and Mr. Chirag, though not necessarily in that order. The following statements are **true** for all the three :

(i)   The copilot is the only child and earns the least.

(ii)  Chirag is married to Bhavesh's sister and earns more than the pilot.

Who is the copilot ?

Options :

91394345713.  Ajit

91394345714.  Bhavesh

91394345715.  Chirag

91394345716.  Either Ajit or Chirag

कतिपय विमान चालक दल में श्री अजित, श्री भवेश और श्री चिराग पायलट, सह-पायलट और फ्लाइट इंजीनियर हैं, हाँलाकि जरूरी नहीं कि यह इसी क्रम में हो। निम्नांकित कथन इन तीनों के लिए **सही** हैं :

(i)   सह-पायलट अकेली संतान है और सबसे कम कमाता है।

(ii)  चिराग की शादी भवेश की बहन से हुई है और वह पायलट से अधिक कमाता है।

सह पायलट कौन है?

Options :

91394345713.  अजित

91394345714.  भवेश

91394345715.  चिराग

91394345716.  या तो अजित या चिराग

Ravi and Kunal are good in Hockey and Volleyball. Sachin and Ravi are good in Hockey and Baseball. Gaurav and Kunal are good in Cricket and Volleyball. Sachin, Gaurav and Mandeep are good in Football and Baseball. Who is good in Hockey, Cricket and Volleyball ?

Options :

91394345717.  Sachin

91394345718.  Kunal

91394345719.  Ravi

91394345720.  Gaurav

Question Number : 30  Question Id : 91394311637  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes
Single Line Question Option : No  Option Orientation : Vertical

Correct Marks : 2  Wrong Marks : 0

रवि और कुणाल हॉकी और वॉलीबॉल के अच्छे खिलाड़ी हैं।  सचिन और रवि हॉकी और बेसबाल के अच्छे खिलाड़ी हैं। गौरव और कुणाल क्रिकेट और वॉलीबाल के अच्छे खिलाड़ी हैं। सचिन, गौरव और मनदीप फुटबॉल और बेसबॉल के अच्छे खिलाड़ी हैं।  हॉकी, क्रिकेट और वॉलीबॉल का अच्छा खिलाड़ी कौन है?

Options :

91394345717.  सचिन

91394345718.  कुणाल

91394345719.  रवि

91394345720.  गौरव

Sub-Section Number:        4
Sub-Section Id:              913943588
Question Shuffling Allowed :   Yes

Question Id : 91394311638  Question Type : COMPREHENSION  Sub Question Shuffling Allowed : Yes  Group Comprehension
Questions : No
Question Numbers : (31 to 35)
Question Label : Comprehension

Consider the following two tables (I and II) that show the production (in Tonnes) of four products P, Q, R and S during the years 2010-2015 and the selling price per Tonne (in ₹ thousands) respectively. In accordance with the tables I and II, answer the questions that follow (Questions 31 - 35) :

I : Production Yearwise (in Tonnes)

| Product →<br>Year ↓ | P | Q | R | S |
|---|---|---|---|---|
| 2010 | 45 | 99 | 75 | 115 |
| 2011 | 25 | 41 | 93 | 158 |
| 2012 | 40 | 108 | 107 | 166 |
| 2013 | 38 | 60 | 63 | 139 |
| 2014 | 76 | 41 | 132 | 88 |
| 2015 | 56 | 70 | 120 | 97 |

II : Selling Price
(in ₹ thousands)

| Product | Price Per Tonne |
|---|---|
| P | ₹ 9 |
| Q | ₹ 4 |
| R | ₹ 13 |
| S | ₹ 3 |

Where,

Stability of production of a given product during 2010-2015

$$= \frac{\text{Average Production}}{\text{Maximum Production} - \text{Minimum Production}}$$

and Revenue (in ₹ thousands) from selling a product

$= \text{Production of a Product} \times \text{Selling Price}$

**Sub questions**

Question Number : 31  Question Id : 91394311639  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes
Single Line Question Option : No  Option Orientation : Vertical
Correct Marks : 2  Wrong Marks : 0

In which year, the annual growth rate of production (of all the products together) is highest ?

Options :

91394345721. 2011

91394345722. 2012

91394345723. 2014

91394345724. 2015

Question Number : 32  Question Id : 91394311640  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes
Single Line Question Option : No  Option Orientation : Vertical
Correct Marks : 2  Wrong Marks : 0

What is the stability of the production of P during 2010 - 2015 ?

Options :

91394345725. 0.92

91394345726. 1.04

91394345727. 1.43

91394345728. 1.63

In which year, the total revenue of all the four products is lowest ?

Options :

91394345729. 2011

91394345730. 2012

91394345731. 2013

91394345732. 2010

Which of the products P, Q, R and S fetches the lowest revenue ?

Options :

91394345733. P

91394345734. Q

91394345735. R

91394345736. S

## Which of the following statements is **true** ?

**Options :**

91394345737.　Product R fetches second highest revenue across products in the year 2011.

91394345738.　Sum of revenue of P, Q and S is more than the revenue of R in the year 2014.

91394345739.　Cumulative revenue of P and Q is more than the revenue of S in the year 2013.

91394345740.　Sum of revenue of P, Q, and S is more than the revenue of R in the year 2012.

निम्नांकित दो सारणियों ( I और II) पर विचार करें जो चार उत्पादों P, Q, R, S का वर्ष 2010-2015 के दौरान उत्पादन (टन में) और क्रमशः प्रति टन विक्रय मूल्य (हजार ₹ में) दर्शाती हैं।  सारणी I और II के अनुसार निम्नांकित प्रश्नों (प्रश्न 31 से 35) का उत्तर दें :

I : वर्षवार उत्पादन (टन में)

| वर्ष ↓ 　 उत्पाद → | P | Q | R | S |
|---|---|---|---|---|
| 2010 | 45 | 99 | 75 | 115 |
| 2011 | 25 | 41 | 93 | 158 |
| 2012 | 40 | 108 | 107 | 166 |
| 2013 | 38 | 60 | 63 | 139 |
| 2014 | 76 | 41 | 132 | 88 |
| 2015 | 56 | 70 | 120 | 97 |

II : विक्रय मूल्य (हजार ₹ में)

| उत्पाद | मूल्य प्रति टन |
|---|---|
| P | ₹ 9 |
| Q | ₹ 4 |
| R | ₹ 13 |
| S | ₹ 3 |

जहाँ,

वर्ष 2010-2015 के दौरान किसी दिए गए उत्पाद के उत्पादन की स्थिरता

$$= \frac{\text{औसत उत्पादन}}{\text{अधिकतम उत्पादन} - \text{न्यूनतम उत्पादन}}$$

और किसी उत्पाद की बिक्री से प्राप्त आय (हजार ₹ में)

= किसी उत्पाद का उत्पादन × विक्रय मूल्य

**Sub questions**

## किस वर्ष में उत्पादन (सभी उत्पादों का एक साथ) की वार्षिक वृद्धि दर उच्चतम है?

Options :

91394345721.
2011

91394345722.
2012

91394345723.
2014

91394345724.
2015

## वर्ष 2010 - 2015 के दौरान P के उत्पादन की स्थिरता क्या है?

Options :

91394345725.
0.92

91394345726.
1.04

91394345727.
1.43

91394345728.
1.63

## सभी चार उत्पादों से प्राप्त कुल आय किस वर्ष में न्यूनतम है?

Options :

91394345729.
2011

91394345730.
2012

91394345731.
2013

91394345732.

Question Number : 34 Question Id : 91394311642 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 2 Wrong Marks : 0

P, Q, R और S में से किस उत्पाद से प्राप्त आय निम्नतम है?

Options :

91394345733. P

91394345734. Q

91394345735. R

91394345736. S

Question Number : 35 Question Id : 91394311643 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 2 Wrong Marks : 0

निम्न में से कौन सा कथन सही है?

Options :

91394345737. वर्ष 2011 में सभी उत्पादों में से उत्पाद R से प्राप्त आय दूसरी सबसे ज्यादा है।

91394345738. वर्ष 2014 में P, Q और S से प्राप्त कुल आय का योग R से प्राप्त आय से अधिक है।

91394345739. वर्ष 2013 में P और Q से प्राप्त कुल आय S से प्राप्त आय से अधिक है।

91394345740. वर्ष 2012 में P, Q और S से प्राप्त कुल आय R से प्राप्त आय से अधिक है।

| Sub-Section Number: | 5 |
| Sub-Section Id: | 913943589 |
| Question Shuffling Allowed : | Yes |

Question Number : 36 Question Id : 91394311644 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 2 Wrong Marks : 0

A virus hoax is an untrue virus warning email. When you receive a virus hoax such as the one below, what is the appropriate action ?

| Subject : Warning! |
| A new Virus has been detected in your computer. Format your hard disk and re-install all softwares immediately. |

Options :

91394345741. Ignore this email

91394345742. Reply to the sender

91394345743. Forward this email to your friends

91394345744. Format your hard disk and re-install all software immediately

Question Number : 36 Question Id : 91394311644 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 2 Wrong Marks : 0

एक 'वॉयरस हॉक्स' वॉयरस की मिथ्या सूचना प्रदायी सचेतक इमेल है। जब आपको निम्नानुसार एक 'वॉयरस हॉक्स' प्राप्त होता है तो उचित कार्रवाई क्या होगी ?

| विषय : चेतावनी ! |
| आपके कंप्यूटर में एक नये वायरस का पता चला है। अपने हार्ड डिस्क को तत्काल फॉर्मेट करें और सभी सॉफ्टवेयर को री-इंस्टॉल करें। |

Options :

91394345741. इस इमेल की अनदेखी करना

91394345742. प्रेषक को उत्तर देना

91394345743. अपने मित्रों को यह मेल अग्रेषित करना

91394345744. तत्काल अपना हार्ड डिस्क फॉर्मेट करना और सभी सॉफ्टवेयर को री-इंस्टॉल करना

Question Number : 37 Question Id : 91394311645 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 2 Wrong Marks : 0

There are two sets given below. **Set - I** specifies the IT related acronyms, while **Set - II** indicates their meanings. Match the two and give your answer by selecting the **appropriate code.**

| | **Set - I** (Acronyms) | | **Set - II** (Meanings) |
|---|---|---|---|
| (a) | DPI | (i) | Measures resolution of a laser printer |
| (b) | CRT | (ii) | An example of read-only storage |
| (c) | NIC | (iii) | A type of computer monitor |
| (d) | CD-ROM | (iv) | Enables a computer to connect to other computers |

**Code :**

Options :

| | (a) | (b) | (c) | (d) |
|---|---|---|---|---|
| 91394345745. | (ii) | (iv) | (iii) | (i) |
| 91394345746. | (i) | (iv) | (iii) | (ii) |
| 91394345747. | (i) | (iii) | (iv) | (ii) |
| 91394345748. | (ii) | (iii) | (iv) | (i) |

नीचे दो समूह दिए गए हैं। **समूह – I** में आई.टी. से संबंधित शब्द  संक्षेप हैं जबकि **समूह – II** में उनके अर्थ हैं। दोनों समूहों को सुमेलित करें और **उचित कूट** का चयन करते हुए उत्तर दें।

| | **समूह – I** ( शब्द-संक्षेप ) | | **समूह – II** ( अर्थ ) |
|---|---|---|---|
| (a) | डी.पी.आई. | (i) | एक लेजर प्रिंटर की रिजोल्यूशन की माप करता है। |
| (b) | सी.आर.टी. | (ii) | रीड–ओनली स्टोरेज का एक उदाहरण |
| (c) | एन.आइ.सी. | (iii) | एक प्रकार का कंप्यूटर मॉनीटर |
| (d) | सीडी–रोम | (iv) | एक कंप्यूटर को दूसरे कंप्यूटर से जुड़ने में मदद करता है। |

**कूट :**

| | (a) | (b) | (c) | (d) |
|---|---|---|---|---|

Options :

| | (a) | (b) | (c) | (d) |
|---|---|---|---|---|
| 91394345745. | (ii) | (iv) | (iii) | (i) |
| 91394345746. | (i) | (iv) | (iii) | (ii) |
| 91394345747. | (i) | (iii) | (iv) | (ii) |

91394345748. (ii) (iii) (iv) (i)

Which of the following statement(s) regarding the term ICT is/are **True** ?

**P** : ICT is the abbreviation of Information and Collaboration Technology, meaning technology related to information and collaboration, such as computers and the Internet.

**Q** : The gap between people with effective access to ICT and those with very limited or no access at all, is termed as digital divide.

**Options :**

91394345749. **P** only

91394345750. **Q** only

91394345751. **P** and **Q**

91394345752. Neither **P** nor **Q**

आई.सी.टी. पद के बारे में निम्नांकित में से कौन सा कथन **सही है/हैं**?

**P** : आई.सी.टी., सूचना और प्रतिभाग आधारित प्रौद्योगिकी का शब्द-संक्षेप है, यानि सूचना और प्रतिभागिता से संबंधित प्रौद्योगिकी जैसे कंप्यूटर और इंटरनेट।

**Q** : आई.सी.टी. तक प्रभावी पहुँच वाले लोगों और अत्यंत सीमित अथवा शून्य पहुँच वाले लोगों के बीच अंतर को डिजिटल डिवाइड कहा जाता है।

**Options :**

91394345749. सिर्फ **P**

91394345750. सिर्फ **Q**

91394345751. **P** और **Q**

91394345752. न तो **P** और न ही **Q**

The computer software that runs a computer, including scheduling tasks, managing storage and handling communication with peripherals is called :

Options :

91394345753. Device Driver

91394345754. Application Suite

91394345755. Operating System

91394345756. Bluetooth Technology

कंप्यूटर को चलाने वाला कंप्यूटर सॉफ्टवेयर, जिसमें कार्यों की अनुसूची बनाना, भंडारण प्रबंधन और अवआधारकों के साथ संप्रेषण संचालन शामिल है, क्या कहलाता है?

Options :

91394345753. डिवाइस ड्राइवर

91394345754. एप्लीकेशन सुइट

91394345755. ऑपरेटिंग सिस्टम

91394345756. ब्लूटूथ प्रौद्योगिकी

The following list indicates different types of computer file formats. Which of them is devoted exclusively to graphic file formats ?

Options :

91394345757. GIF, JPEG, DOC

91394345758. PNG, GIF, JPEG

91394345759. JPEG, TIFF, HTML

91394345760. TIFF, XLS, PNG

निम्नांकित सूची में विविध प्रकार के कंप्यूटर फाइल फॉर्मेट दिए गए हैं। निम्नांकित में से कौन पूर्णतः ग्राफिक फाइल फॉर्मेट के लिए समर्पित है?

Options :

91394345757. जी.आई.एफ., जे.पी.ई.जी., डी.ओ.सी.

91394345758. पी.एन.जी., जी.आई.एफ., जे.पी.ई.जी.

91394345759. जे.पी.ई.जी., टी.आई.एफ.एफ., एच.टी.एम.एल.

91394345760. टी.आई.एफ.एफ., एक्स.एल.एस., पी.एन.जी.

Following are two sets of items. **Set - I** lists different types of wastes, while **Set - II** indicates methods of their disposal. Match the two sets and give your answer from the code given below :

| Set - I | Set - II |
|---|---|
| (Types of Waste) | (Methods of Disposal) |
| (a) Dry waste | (i) By composting |
| (b) Wet waste | (ii) By burying in landfills |
| (c) Toxic waste | (iii) By dropping them in corporation bins |
| (d) Soiled waste | (iv) By recycling |

Code :

    (a)  (b)  (c)  (d)

Options :

91394345761.  (i)    (ii)   (iii)  (iv)

91394345762. (iv)  (i)   (ii)  (iii)

91394345763. (ii)  (iii)  (iv)  (i)

91394345764. (iii)  (iv)  (i)  (ii)

नीचे मदों के दो समूह दिए गए हैं। **समूह – I** में भिन्न प्रकार के अपशिष्ट हैं, जबकि **समूह – II** में उनके निस्तारण की विधियाँ दी गई हैं। दोनों समूहों को सुमेलित करें और नीचे दिए गए कूट में से सही उत्तर दें :

| समूह – I | समूह – II |
|---|---|
| ( अपशिष्ट का प्रकार ) | (निस्तारण की विधियाँ) |
| (a)  शुष्क अपशिष्ट | (i)  उर्वरक बनाने के द्वारा |
| (b)  गीला अपशिष्ट | (ii)  जमीन में गाड़ने के द्वारा |
| (c)  विषैला अपशिष्ट | (iii)  नगरपालिका के कूड़ेदान में डालने के द्वारा |
| (d)  मलिन अपशिष्ट | (iv)  पुनर्चक्रण के द्वारा |

कूट :

(a)  (b)  (c)  (d)

Options :

91394345761. (i)  (ii)  (iii)  (iv)

91394345762. (iv)  (i)  (ii)  (iii)

91394345763. (ii)  (iii)  (iv)  (i)

91394345764. (iii)  (iv)  (i)  (ii)

For ensuring sustainability in the quality ethos of the university environment which of the following would be considered high priority skill for a vice-chancellor ?

Options :

91394345765. Financial Management Skill

91394345766. Administrative Skill

91394345767.   Technical Management Skill

91394345768.   Human Resource Management Skill

Question Number : 42  Question Id : 91394311650  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes
Single Line Question Option : No  Option Orientation : Vertical
Correct Marks : 2  Wrong Marks : 0

विश्वविद्यालय परिवेश में गुणवत्ता की संस्कृति की समर्थनीयता सुनिश्चित करने के लिए निम्नांकित में से किसे एक कुलपति का उच्च प्राथमिकता कौशल माना जायेगा ?

Options :

91394345765.   वित्तीय प्रबंधन कौशल

91394345766.   प्रशासनिक कौशल

91394345767.   तकनीकी प्रबंधन कौशल

91394345768.   मानव संसाधन प्रबंधन कौशल

Question Number : 43  Question Id : 91394311651  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes
Single Line Question Option : No  Option Orientation : Vertical
Correct Marks : 2  Wrong Marks : 0

The purposes underlying the Renewable Energy Education programmes are :

Options :

91394345769.   Educative and investigative

91394345770.   Diagnostic and evaluative

91394345771.   Corrective and predictive

91394345772.   Preventive and ameliorative

Question Number : 43  Question Id : 91394311651  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes
Single Line Question Option : No  Option Orientation : Vertical
Correct Marks : 2  Wrong Marks : 0

पुनर्नवीकरणीय ऊर्जा शिक्षा कार्यक्रमों के मूलभूत उद्देश्य हैं :

Options :

91394345769. शिक्षणात्मक और अन्वेषणात्मक

91394345770. नैदानिक और मूल्यांकनात्मक

91394345771. संशोधनात्मक और भविष्यसूचक

91394345772. निवारक और सुधारात्मक

Question Number : 44 Question Id : 91394311652 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

For an effective organisational climate within a university system, which of the following measures will be most appropriate ?

Options :

91394345773. Creating an equilibrium between driving forces and restraining forces.

91394345774. Increasing the power of driving forces and decreasing the power of restraining forces.

91394345775. Decreasing the power of restraining forces without caring about the driving forces.

91394345776. Increasing the power of driving forces without caring about the restraining forces.

Question Number : 44 Question Id : 91394311652 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

किसी विश्वविद्यालयी तंत्र के भीतर एक प्रभावी संगठनात्मक परिवेश के लिए निम्नांकित में से कौन सा उपाय सर्वाधिक उपयुक्त होगा ?

Options :

91394345773. चालक बलों और अवरोधक बलों के बीच संतुलन कायम करना।

91394345774. चालक बलों की शक्ति बढ़ाना और अवरोधक बलों की शक्ति घटाना।

91394345775. चालक बलों की परवाह किए बगैर अवरोधक बलों की शक्ति घटाना।

91394345776. अवरोधक बलों की परवाह किए बगैर चालक बलों की शक्ति बढ़ाना।

Question Number : 45 Question Id : 91394311653 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

Below are given a number of roles and functions at the government/non-government level indicating the specific responsibilities of the Ministry of Drinking Water and Sanitation. Identify those statements which indicate the areas of responsibility of this ministry. Select from the code to give your answer :

(a) Overall policy and planning in respect of programmes of drinking water and sanitation.
(b) Funding in respect of the programmes listed in (a).
(c) Coordination of programmes floated.
(d) Supply of food grains at reasonable price to the consumers.
(e) Achieving the goal of zero hunger.
(f) Implementation of Swachh Bharat Abhiyan in rural India.
(g) Monitoring of prices and availability of essential commodities.

Code :

Options :

91394345777. (a), (b), (c), and (g)

91394345778. (a), (b), (d) and (e)

91394345779. (a), (b), (c) and (f)

91394345780. (a), (c), (d) and (e)

नीचे पेयजल और स्वच्छता मंत्रालय के विशिष्ट उत्तरदायित्वों को दर्शाते हुए सरकारी/गैर-सरकारी स्तर पर अनेक भूमिकायें और कार्य दिए गए हैं। उन कथनों की पहचान करें जो इस मंत्रालय के उत्तरदायित्व को दर्शाते हैं। दिए गए कूट में से अपना उत्तर चुनें :

(a) पेयजल और स्वच्छता संबंधी कार्यक्रमों का समग्र नीति-निर्धारण और नियोजन
(b) (a) में वर्णित कार्यक्रमों का वित्त पोषण
(c) चलाये गए कार्यक्रमों का समन्वयन
(d) उपभोक्ताओं को उचित कीमत पर खाद्यान्न की आपूर्ति
(e) क्षुधा शून्यता के लक्ष्य को प्राप्त करना
(f) भारत के ग्रामीण अंचलों में स्वच्छ भारत अभियान को लागू करना
(g) आवश्यक वस्तुओं की उपलब्धता और कीमतों की निगरानी

कूट :

Options :

91394345777. (a), (b), (c) और (g)

91394345778. (a), (b), (d) और (e)

91394345779. (a), (b), (c) और (f)

91394345780. (a), (c), (d) और (e)

Question Number : 46  Question Id : 91394311654  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes
Single Line Question Option : No  Option Orientation : Vertical
Correct Marks : 2  Wrong Marks : 0

Which of the following statements are **correct** about Indira Gandhi National Open University (IGNOU) ?  To indicate your answer, select from the code given below :

(a)   It is an autonomous organisation.
(b)   It is devoted to promotion of open and distance education system.
(c)   It conducts assessment and accredits the State Open Universities.
(d)   It has jurisdiction in respect of Open and Distance learning system in India and to the study centres outside India.

Code :

Options :

91394345781. (a) and (b)

91394345782. (b) and (d)

91394345783. (c) and (d)

91394345784. (d) and (a)

Question Number : 46  Question Id : 91394311654  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes
Single Line Question Option : No  Option Orientation : Vertical
Correct Marks : 2  Wrong Marks : 0

इंदिरा गाँधी राष्ट्रीय मुक्त विश्वविद्यालय (इग्नू) के बारे में निम्नांकित में से कौन से कथन सही हैं? दिए गए कूट में से अपना उत्तर दें :

(a)   यह एक स्वायत्तशासी संगठन है।
(b)   यह मुक्त और दूरस्थ शिक्षा प्रणाली के संवर्धन के लिए समर्पित है।
(c)   यह राज्यों के मुक्त विश्वविद्यालयों का मूल्यांकन और प्रत्यायन करता है।
(d)   भारत में मुक्त और दूरस्थ अधिगम प्रणाली और भारत के बाहर के इसके अध्ययन केंद्र इसके क्षेत्राधिकार में आते हैं।

कूट :

Options :

91394345781. (a) और (b)

91394345782. (b) और (d)

91394345783. (c) और (d)

91394345784. (d) और (a)

The leadership and executive role in higher education system in respect of state universities of India is assigned to :

Options :

91394345785. Chancellor of the University

91394345786. Vice-Chancellor of the University

91394345787. Deans of Faculties

91394345788. Dean of Studies

भारत में राज्यों के विश्वविद्यालयों की उच्च शिक्षा प्रणाली में नेतृत्वात्मक और कार्यपालक भूमिका किसे दी गई है?

Options :

91394345785. विश्वविद्यालय के कुलाधिपति

91394345786. विश्वविद्यालय के कुलपति

91394345787. संकाय प्रमुख

91394345788. अध्ययन केंद्र प्रमुख

Question Number : 48 Question Id : 91394311656 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 2 Wrong Marks : 0

The formal authority for approving the University level courses vests in :

Options :

91394345789. The Academic Council

91394345790. The University Court

91394345791. The Executive Council

91394345792. The Research Degree Committee

Question Number : 48 Question Id : 91394311656 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 2 Wrong Marks : 0

विश्वविद्यालय स्तरीय पाठ्यक्रमों के अनुमोदन के लिए औपचारिक प्राधिकारी है :

Options :

91394345789. विद्या परिषद्

91394345790. विश्वविद्यालय कोर्ट

91394345791. कार्य परिषद्

91394345792. शोध उपाधि समिति

Question Number : 49 Question Id : 91394311657 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 2 Wrong Marks : 0

For promoting human values through College/University programmes which one of the following leadership styles would be the most appropriate ?

Options :

91394345793. Directive Leadership Style

91394345794. Participative Leadership Style

91394345795. Consultative Leadership Style

Question Number : 49 Question Id : 91394311657 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 2 Wrong Marks : 0

विद्यालय/विश्वविद्यालय कार्यक्रमों के माध्यम से मानवीय मूल्यों के संवर्धन के लिए निम्नांकित में से कौन सी नेतृत्व शैली सर्वाधिक उपयुक्त होगी ?

Options :

91394345793. निदेशात्मक नेतृत्व शैली

91394345794. प्रतिभाग आधारित नेतृत्व शैली

91394345795. परामर्शात्मक नेतृत्व शैली

91394345796. प्रत्यायोजनात्मक नेतृत्व शैली

Question Number : 50 Question Id : 91394311658 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 2 Wrong Marks : 0

A post-graduate degree holder student with 55% marks intends to pursue research for the award of Ph.D. degree. What will be the formal requirements in this regard ? To indicate your **correct** answer choose from the code given below :

(a) Appearing in an admission test of a university
(b) Attending a coaching institute
(c) Consulting an expert teacher
(d) Submitting an application for enrollment
(e) Submitting a proposal for the research
(f) Discussing the research proposal with a peer group
(g) Getting the opinion of the experts on the research theme
(h) Getting the proposal approved by the relevant body of the university
(i) Attending mandatory course work

**Code :**

Options :

91394345797. (a), (d), (e), (h) and (i)

91394345798. (b), (c), (f) and (i)

91394345799. (c), (e), (g) and (h)

91394345800. (d), (f), (h) and (i)

Question Number : 50  Question Id : 91394311658  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes
Single Line Question Option : No  Option Orientation : Vertical
Correct Marks : 2  Wrong Marks : 0

55% अंकों वाला एक स्नातकोत्तर उत्तीर्ण छात्र पी.एच.डी. उपाधि प्राप्त करने के लिए शोध करना चाहता है। इसके लिए औपचारिक आवश्यकतायें क्या होंगी? नीचे दिए गए कूट में से **सही** उत्तर चुनें :

(a) किसी विश्वविद्यालय की नामांकन परीक्षा में बैठना

(b) एक कोचिंग संस्थान में जाना

(c) एक विशेषज्ञ शिक्षक से सलाह लेना

(d) नामांकन के लिए आवेदन प्रस्तुत करना

(e) शोध के लिए प्रस्ताव प्रस्तुत करना

(f) एक सहपाठी समूह के साथ शोध प्रस्ताव पर चर्चा करना

(g) शोध के विषय पर विशेषज्ञों की राय लेना

(h) विश्वविद्यालय के संगत निकाय द्वारा प्रस्ताव को अनुमोदित कराना

(i) अनिवार्य पाठ्यक्रम कार्य में भाग लेना

कूट :

Options :

91394345797. (a), (d), (e), (h) और (i)

91394345798. (b), (c), (f) और (i)

91394345799. (c), (e), (g) और (h)

91394345800. (d), (f), (h) और (i)

Paper II

| | |
|---|---|
| Group Number : | 2 |
| Group Id : | 913943154 |
| Group Maximum Duration : | 120 |
| Group Minimum Duration : | 120 |
| Revisit allowed for view? : | No |
| Revisit allowed for edit? : | No |

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| | |
|---|---|
| Section Id : | 913943154 |
| Section Number : | 1 |
| Section type : | Online |
| Mandatory or Optional: | Mandatory |
| Number of Questions: | 96 |
| Number of Questions to be attempted: | 96 |
| Section Marks: | 200 |
| Display Number Panel: | Yes |
| Group All Questions: | No |

| | |
|---|---|
| Sub-Section Number: | 1 |
| Sub-Section Id: | 913943590 |
| Question Shuffling Allowed : | Yes |

Question Number : 51  Question Id : 91394311659  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes
Single Line Question Option : No  Option Orientation : Vertical
Correct Marks : 2  Wrong Marks : 0

A transistor with $\beta = 100$ is to be used in the emitter feedback bias configuration. If $R_e = 2\ k\Omega$, $R_b = 370\ k\Omega$ the stability factor is

Options :

91394345801.    1

91394345802.    1·57

91394345803.    65

91394345804.    32·5

91394345803. 65

91394345804. 32·5

Question Number : 52  Question Id : 91394311660  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes
Single Line Question Option : No  Option Orientation : Vertical
Correct Marks : 2  Wrong Marks : 0

An exact position of Fermi level in an n-type semiconductor is

Options :

91394345805. $E_C - kT \, ln \, \dfrac{N_C}{N_D}$

91394345806. $E_C + kT \, ln \, \dfrac{N_C}{N_D}$

91394345807. $E_C + \dfrac{N_C + N_D}{N_C \, N_D}$

91394345808. $E_C - kT \, ln \, \dfrac{N_C}{N_V}$

Question Number : 53  Question Id : 91394311661  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes
Single Line Question Option : No  Option Orientation : Vertical

Correct Marks : 2  Wrong Marks : 0

The Fourier transform of the signal $x(t) = e^{-at^2}$, a > 0 will be

Options :

91394345809. $\sqrt{\dfrac{\pi}{\omega}}\ e^{-\dfrac{\omega^2}{4a}}$

91394345810. $\sqrt{\dfrac{\pi}{a}}\ e^{-\dfrac{\omega^2}{2a^2}}$

91394345811. $\sqrt{\dfrac{\pi}{a}}\ e^{-\dfrac{\omega^2}{4a}}$

91394345812. $\sqrt{\dfrac{\pi}{\omega}}\ e^{-\dfrac{\omega^2}{2a}}$

Question Number : 53  Question Id : 91394311661  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes
Single Line Question Option : No  Option Orientation : Vertical
Correct Marks : 2  Wrong Marks : 0

The Fourier transform of the signal $x(t) = e^{-at^2}$, a > 0 will be

Options :

91394345809. $\sqrt{\dfrac{\pi}{\omega}}\ e^{-\dfrac{\omega^2}{4a}}$

91394345810. $\sqrt{\dfrac{\pi}{a}}\ e^{-\dfrac{\omega^2}{2a^2}}$

91394345811. $\sqrt{\dfrac{\pi}{a}}\ e^{-\dfrac{\omega^2}{4a}}$

91394345812. $\sqrt{\dfrac{\pi}{\omega}}\ e^{-\dfrac{\omega^2}{2a}}$

Question Number : 54  Question Id : 91394311662  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes
Single Line Question Option : No  Option Orientation : Vertical
Correct Marks : 2  Wrong Marks : 0

If $x(t) = e^{-t} u(t)$ and $y(t) = e^{-3t} u(t)$, then $y(t) * x(t)$ will be

Options :

91394345813. $(e^{-t} - e^{-3t}) u(t)$

91394345814. $\dfrac{e^{-3t} - e^{-t}}{2} u(t)$

91394345815. $\dfrac{e^{-t} + e^{-3t}}{2} u(t)$

91394345816. $\dfrac{e^{-t} - e^{-3t}}{2} u(t)$

Question Number : 54 Question Id : 91394311662 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 2 Wrong Marks : 0

Question Number : 55 Question Id : 91394311663 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 2 Wrong Marks : 0

If density of states in conduction band and density of states in valence band are not equal,
then the Fermi level in intrinsic semiconductor is

Options :

91394345817. $\dfrac{E_C + E_V}{2}$

91394345818.
$$\frac{E_C - E_V}{2} + \frac{N_C + N_V}{2}$$

91394345819.
$$\frac{E_C + E_V}{2} - \frac{kT}{2} ln \frac{N_C}{N_V}$$

91394345820.
$$\frac{E_C + E_V}{2} + \frac{kT}{2} ln \frac{N_C}{N_V}$$

If density of states in conduction band and density of states in valence band are not equal,
then the Fermi level in intrinsic semiconductor is

Options :

91394345817.
$$\frac{E_C + E_V}{2}$$

91394345818.
$$\frac{E_C - E_V}{2} + \frac{N_C + N_V}{2}$$

91394345819.
$$\frac{E_C + E_V}{2} - \frac{kT}{2} ln \frac{N_C}{N_V}$$

91394345820.
$$\frac{E_C + E_V}{2} + \frac{kT}{2} ln \frac{N_C}{N_V}$$

In an n-p-n transistor operating in saturated mode, the output voltage
$V_{CE}$ is

Options :

91394345821.
Greater than $2V_{BE}$

91394345822.
Between $2V_{BE}$ and $V_{BE}$

91394345823.
Less than $V_{BE}$

91394345824.    Equal to $V_{BE}$

In an n-p-n transistor operating in saturated mode, the output voltage $V_{CE}$ is

Options :

91394345821.    Greater than $2V_{BE}$

91394345822.    Between $2V_{BE}$ and $V_{BE}$

91394345823.    Less than $V_{BE}$

91394345824.    Equal to $V_{BE}$

For equation of continuity which of the following is *true* (for steady state currents) ?

Options :

91394345825.    $\nabla \cdot \bar{J} = 0$

91394345826.    $\nabla \cdot \bar{J} = -2$

91394345827.    $\nabla \cdot \bar{J} = 1$

91394345828.    $\nabla \cdot \bar{J} = \infty$

91394345826.    $\nabla \cdot \bar{J} = -2$

91394345827.    $\nabla \cdot \bar{J} = 1$

91394345828.    $\nabla \cdot \bar{J} = \infty$

---

**Question Number : 58 Question Id : 91394311666 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 2 Wrong Marks : 0**

The junction capacitance of a thyristor in the state of reverse blocking is 20 pF. For a charging current of 5 mA, the value of $\dfrac{dv}{dt}$ capability of thyristor to make it ON is

Options :

91394345829.    225 V/μs

91394345830.    200 V/μs

91394345831.    250 V/μs

91394345832.    500 V/μs

---

Which of the following functions implements the Karnaugh map shown below ? 'X' being don't care condition.

| CD \ AB | 00 | 01 | 11 | 10 |
|---|---|---|---|---|
| 00 | 0 | 0 | 1 | 0 |
| 01 | X | X | 1 | X |
| 11 | 0 | 1 | 1 | 0 |
| 10 | 0 | 1 | 1 | 0 |

Options :

91394345833. $\overline{A} B + CD$

91394345834. $D (C + A)$

91394345835. $AD + \overline{A} B$

91394345836. $(C + D) (\overline{C} + D) (A + B)$

91394345835. $AD + \bar{A}B$

91394345836. $(C + D)(\bar{C} + D)(A + B)$

Question Number : 60 Question Id : 91394311668 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 2 Wrong Marks : 0

Consider the logic circuit shown in the figure below, the function $f_1$, $f_2$ and

f (in canonical sum of products form in decimal notation) are
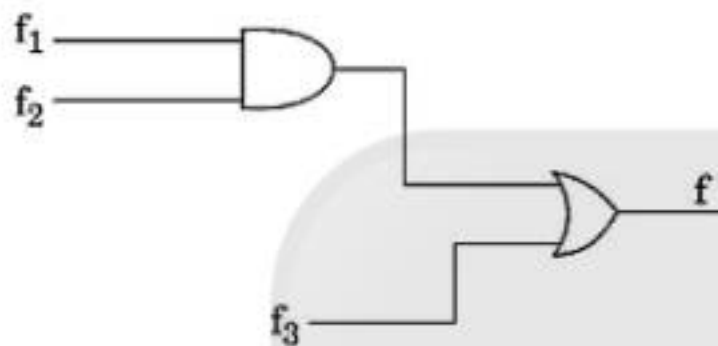


$f_1(w, x, y, z) = \Sigma(8, 9, 10)$

$f_2(w, x, y, z) = \Sigma(7, 8, 12, 13, 14, 15)$

$f(w, x, y, z) = \Sigma(8, 9)$

The function $f_3$ is

Options :

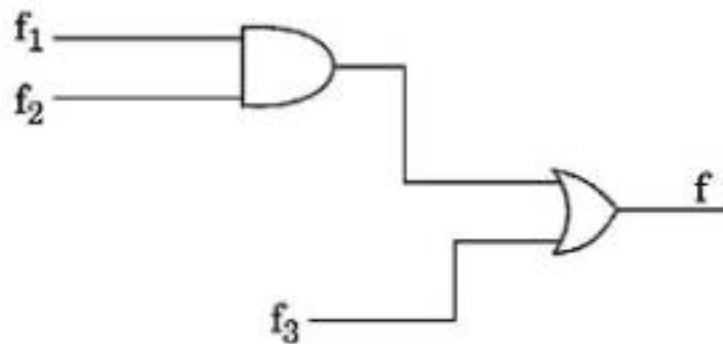91394345837. $\Sigma(9, 10)$

91394345838. $\Sigma(9)$

91394345839. $\Sigma(1, 8, 9)$

91394345840. $\Sigma(8, 10, 18)$

Question Number : 60 Question Id : 91394311668 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 2 Wrong Marks : 0

Consider the logic circuit shown in the figure below, the function $f_1$, $f_2$ and

f (in canonical sum of products form in decimal notation) are



$f_1$ (w, x, y, z) = $\sum$ (8, 9, 10)

$f_2$ (w, x, y, z) = $\sum$ (7, 8, 12, 13, 14, 15)

f (w, x, y, z) = $\sum$ (8, 9)

The function $f_3$ is

Options :

91394345837.   $\sum$ (9, 10)

91394345838.   $\sum$ (9)

91394345839.   $\sum$ (1, 8, 9)

91394345840.   $\sum$ (8, 10, 18)

RAL is an example of

Options :

91394345841.   Immediate Addressing mode

91394345842.   Implicit Addressing mode

91394345843.   Register Indirect Addressing mode

91394345844.   Register Addressing mode

Question Number : 61 Question Id : 91394311669 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 2 Wrong Marks : 0

RAL is an example of

Options :

91394345841. Immediate Addressing mode

91394345842. Implicit Addressing mode

91394345843. Register Indirect Addressing mode

91394345844. Register Addressing mode

Question Number : 62 Question Id : 91394311670 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 2 Wrong Marks : 0

Two machine codes 3EH and 32H are stored in memory locations 2000H and 2001H
respectively. The first machine code (3EH) represents the opcode to load a data byte in the
accumulator, and the second code (32H) represents the data byte to be loaded in the
accumulator. The time required to execute the Opcode Fetch and the Memory Read Cycles
and the entire instruction cycle is, (if clock frequency is 2 MHz).

Options :

91394345845. $3 \cdot 5$ µs

91394345846. $3 \cdot 5$ ms

91394345847. $1 \cdot 5$ µs

91394345848. $0 \cdot 5$ µs

91394345846. 3·5 ms

91394345847. 1·5 µs

91394345848. 0·5 µs

The output of the program

```
main ( )
{
    int i = 1;
    {
        {
            {
                printf("\n%d", i);
            }
            printf("%d", i);
        }
        printf("%d", i);
    }
}
```

is

Options :

91394345849. 1

91394345850. 11

91394345851. 111

91394345852. 3

The output of the program

```
main ( )
{
    int i = 1;
    {
        {
            {
                printf("\n%d", i);
            }
            printf("%d", i);
        }
        printf("%d", i);
    }
}
```

is

**Options :**

91394345849.  1

91394345850.  11

91394345851.  111

91394345852.  3

What is the output of the statement ?

```
int x, y;
scanf ("%d", &x);
y = (x > 5 ? 3 : 4);
```

**Options :**

91394345853.  This statement will store 3 in y if x is greater than 5, otherwise it will store 4 in y.

91394345854.  This statement will store 4 in y if x is greater than 5, otherwise it will store 3 in y.

91394345855. This statement will store 3 in y if x is smaller than 5, otherwise it will store 4 in y.

91394345856. This statement will store 4 in y if x is smaller than 5, otherwise it will store 3 in y.

Question Number : 64 Question Id : 91394311672 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 2 Wrong Marks : 0

What is the output of the statement ?

```
int x, y;
scanf ("%d", &x);
y = (x > 5 ? 3 : 4);
```

Options :

91394345853. This statement will store 3 in y if x is greater than 5, otherwise it will store 4 in y.

91394345854. This statement will store 4 in y if x is greater than 5, otherwise it will store 3 in y.

91394345855. This statement will store 3 in y if x is smaller than 5, otherwise it will store 4 in y.

91394345856. This statement will store 4 in y if x is smaller than 5, otherwise it will store 3 in y.

Question Number : 65 Question Id : 91394311673 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 2 Wrong Marks : 0

The positive RF peaks of an amplitude modulated voltage rise to a maximum value of 12 V and drop to a minimum value of 4 V. The modulating index ($m_a$) assuming single tone modulation is

Options :

91394345857. 3

91394345858. $\dfrac{1}{3}$

91394345859. $\dfrac{1}{4}$

91394345860. $\dfrac{1}{2}$

Question Number : 65   Question Id : 91394311673   Question Type : MCQ   Option Shuffling : Yes   Display Question Number : Yes
Single Line Question Option : No   Option Orientation : Vertical
Correct Marks : 2   Wrong Marks : 0

The positive RF peaks of an amplitude modulated voltage rise to a maximum value of 12 V
and drop to a minimum value of 4 V. The modulating index ($m_a$) assuming single tone
modulation is

Options :

91394345857.   $3$

91394345858.   $\dfrac{1}{3}$

91394345859.   $\dfrac{1}{4}$

91394345860.   $\dfrac{1}{2}$

Question Number : 66   Question Id : 91394311674   Question Type : MCQ   Option Shuffling : Yes   Display Question Number : Yes
Single Line Question Option : No   Option Orientation : Vertical
Correct Marks : 2   Wrong Marks : 0

The plot of modulating index versus carrier amplitude yields a

Options :

91394345861.   Horizontal line

91394345862.   Vertical line

91394345863.   Parabola

91394345864.   Hyperbola

91394345863. Parabola

91394345864. Hyperbola

If '$\alpha$' is the duty cycle, the output of the following circuit is given by



Options :

91394345865. $V_{out} = \alpha V_{in}$

91394345866. $V_{out} = \dfrac{V_{in}}{1 + \alpha}$

91394345867. $V_{out} = \dfrac{1}{\alpha} \cdot V_{in}$

91394345868. $V_{out} = \dfrac{V_{in}}{1 - \alpha}$

If '$\alpha$' is the duty cycle, the output of the following circuit is given by
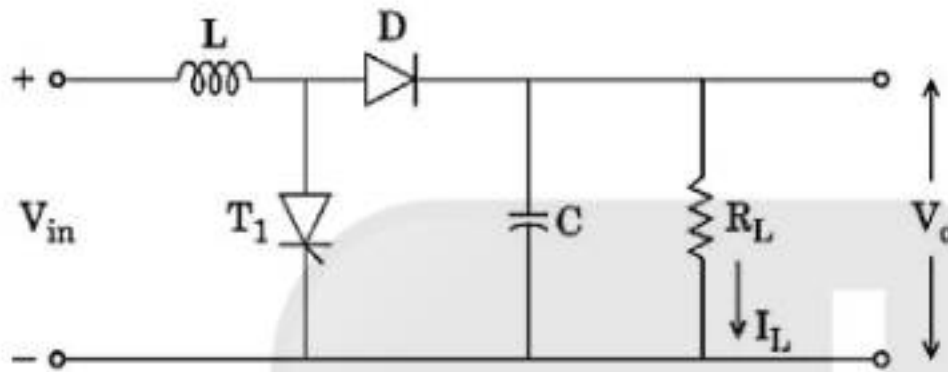


Options :

91394345865. $V_{out} = \alpha V_{in}$

91394345866. $V_{out} = \dfrac{V_{in}}{1 + \alpha}$

91394345867. $V_{out} = \dfrac{1}{\alpha} \cdot V_{in}$

91394345868. $V_{out} = \dfrac{V_{in}}{1 - \alpha}$

**Question Number : 68  Question Id : 91394311676  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes Single Line Question Option : No  Option Orientation : Vertical**
**Correct Marks : 2  Wrong Marks : 0**

In a single mode fiber, the power received is 1% that of the transmitted power. The attenuation of a single mode fiber is of the order of

Options :

91394345869. $- 10$ dBm

91394345870. $- 20$ dBm

91394345871. $- 30$ dBm

91394345872. $- 2$ dBm

Question Number : 69  Question Id : 91394311677  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes
Single Line Question Option : No  Option Orientation : Vertical
Correct Marks : 2  Wrong Marks : 0

Which of the following is *not* correct in respect of a phase-lead compensation network ?

Options :

91394345873.　It increases system bandwidth

91394345874.　It increases gain at higher frequencies

91394345875.　It is used when fast transient response is required

91394345876.　It is used when phase decreases rapidly near crossover frequency

Question Number : 70  Question Id : 91394311678  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes
Single Line Question Option : No  Option Orientation : Vertical
Correct Marks : 2  Wrong Marks : 0

A Hall-effect element is used for the measurement of magnetic field of $0.8$ Wb/m$^2$. The thickness of the element is $2.5$ mm and is of bismuth material. If the current passed through the element is 4A, then the Hall emf developed will be : (Hall coefficient is $5 \times 10^{-7}$)

Options :

91394345877.　$1.4 \times 10^{-4}$ V

91394345878.　$6.4 \times 10^{-4}$ V

91394345879. $2 \times 10^{-7} \, \text{V}$

91394345880. $3 \cdot 2 \times 10^{-4} \, \text{V}$

Question Number : 70  Question Id : 91394311678  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes
Single Line Question Option : No  Option Orientation : Vertical
Correct Marks : 2  Wrong Marks : 0

A Hall-effect element is used for the measurement of magnetic field of $0 \cdot 8 \, \text{Wb/m}^2$. The thickness of the element is $2 \cdot 5 \, \text{mm}$ and is of bismuth material. If the current passed through the element is 4A, then the Hall emf developed will be : (Hall coefficient is $5 \times 10^{-7}$)

Options :

91394345877. $1 \cdot 4 \times 10^{-4} \, \text{V}$

91394345878. $6 \cdot 4 \times 10^{-4} \, \text{V}$

91394345879. $2 \times 10^{-7} \, \text{V}$

91394345880. $3 \cdot 2 \times 10^{-4} \, \text{V}$

Sub-Section Number:          2
Sub-Section Id:              913943591
Question Shuffling Allowed :  Yes

Question Number : 71  Question Id : 91394311679  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes
Single Line Question Option : No  Option Orientation : Vertical
Correct Marks : 2  Wrong Marks : 0

The equivalent circuit of a tunnel diode shown below has the total input impedance
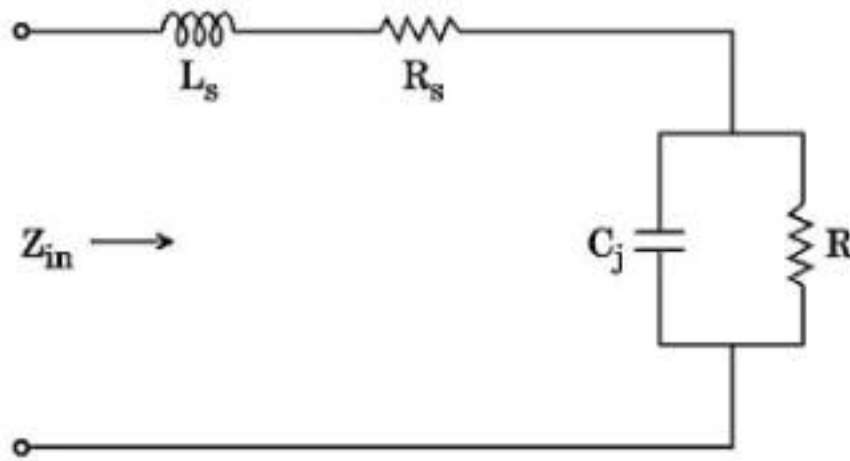


(i) $\left[R_s + \dfrac{-R}{1+(\omega RC_j)^2}\right] + j\left[\omega L_s + \dfrac{-\omega C_j R^2}{1+(\omega RC_j)^2}\right]$

(ii) $R_s + \omega RC_j$

(iii) $\left[R_s + \dfrac{-R}{(1+\omega RC_j)}\right] + \left[\omega L_s + \dfrac{\omega C_j R^2}{1-(\omega RC_j)^2}\right]$

(iv) $\omega L_s + \dfrac{\omega C_j R^2}{1+(\omega RC_j)^2}$

Choose the correct answer from the code given below :

**Code :**

Options :

91394345881.  (i) and (iii) are correct

91394345882.  (i) is correct, but (iii) is wrong

91394345883.  (ii) is correct, but (i) is wrong

91394345884.  (iii) is correct, but (iv) is wrong

The equivalent circuit of a tunnel diode shown below has the total input impedance



(i) $\left[ R_s + \dfrac{-R}{1+(\omega RC_j)^2} \right] + j\left[ \omega L_s + \dfrac{-\omega C_j R^2}{1+(\omega RC_j)^2} \right]$

(ii) $R_s + \omega RC_j$

(iii) $\left[ R_S + \dfrac{-R}{(1+\omega RC_j)} \right] + \left[ \omega L_s + \dfrac{\omega C_j R^2}{1-(\omega RC_j)^2} \right]$

(iv) $\omega L_s + \dfrac{\omega C_j R^2}{1+(\omega RC_j)^2}$

Choose the correct answer from the code given below :

**Code :**

Options :

91394345881.  (i) and (iii) are correct

91394345882.  (i) is correct, but (iii) is wrong

91394345883.  (ii) is correct, but (i) is wrong

91394345884.  (iii) is correct, but (iv) is wrong

The average value of the full wave rectified voltage shown below is



(i)     7·5 V

(ii)    9·55 V

(iii)   10·0 V

(iv)    5·0 V

Choose the correct answer from the code given below :

**Code :**

Options :

91394345885.   (i) and (ii) are correct

91394345886.   (ii) is correct, but (iv) is wrong

91394345887.   (i) is correct, but (iii) is wrong

91394345888.   (iii) is correct, but (ii) is wrong

Question Number : 72  Question Id : 91394311680  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes
Single Line Question Option : No  Option Orientation : Vertical
Correct Marks : 2  Wrong Marks : 0

The average value of the full wave rectified voltage shown below is



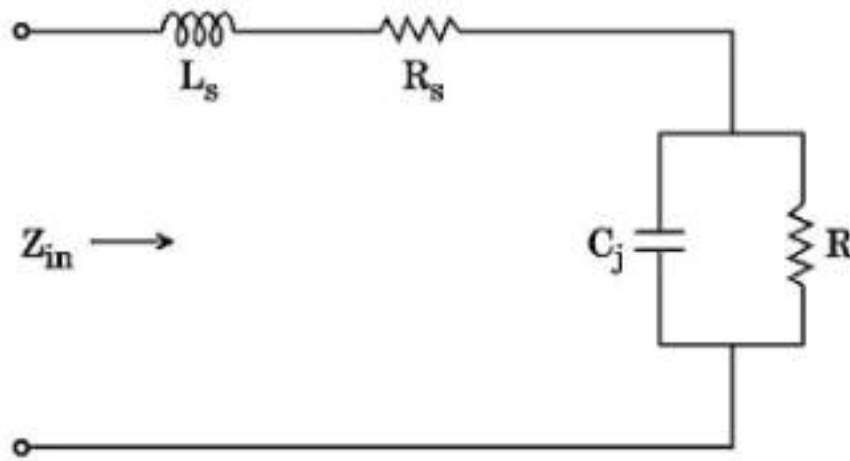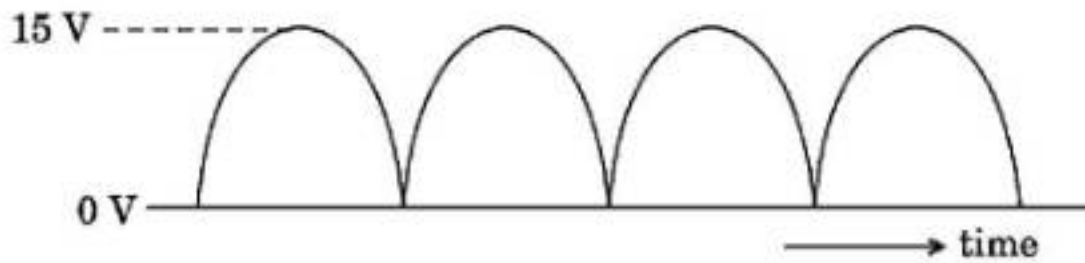(i)     7·5 V

(ii)    9·55 V

(iii)   10·0 V

(iv)    5·0 V
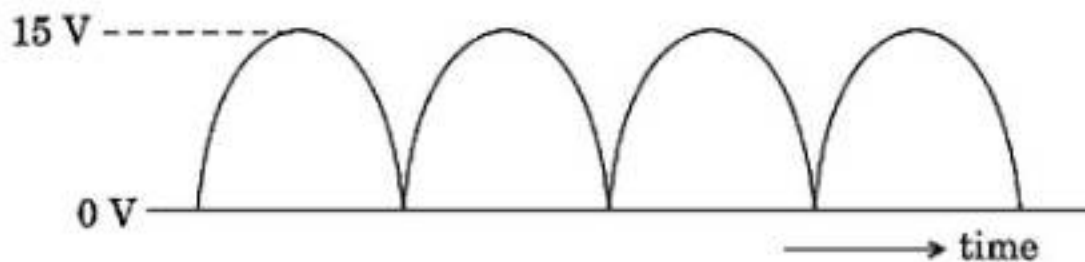
Choose the correct answer from the code given below :

**Code :**

Options :

91394345885. (i) and (ii) are correct

91394345886. (ii) is correct, but (iv) is wrong

91394345887. (i) is correct, but (iii) is wrong

91394345888. (iii) is correct, but (ii) is wrong

Question Number : 73  Question Id : 91394311681  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes
Single Line Question Option : No  Option Orientation : Vertical
Correct Marks : 2  Wrong Marks : 0

Read the following statements regarding state variable analysis.

(i) A purely resistive network has no states at all.

(ii) A purely resistive network has more states than a reactive network.

(iii) Only a reactive network can have states.

(iv) A network with energy storing elements has no states at all.

Which of the above statements are correct ?

Choose the correct answer from the code given below :

**Code :**

Options :

91394345889. (i) and (iii)

91394345890. (i) and (iv)

91394345891. (ii) and (iii)

91394345892. (ii) and (iv)

Question Number : 73  Question Id : 91394311681  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes
Single Line Question Option : No  Option Orientation : Vertical
Correct Marks : 2  Wrong Marks : 0

Read the following statements regarding state variable analysis.

(i) A purely resistive network has no states at all.

(ii) A purely resistive network has more states than a reactive network.

(iii) Only a reactive network can have states.

(iv) A network with energy storing elements has no states at all.

Which of the above statements are correct ?

Choose the correct answer from the code given below :

**Code :**

91394345889.    (i) and (iii)

91394345890.    (i) and (iv)

91394345891.    (ii) and (iii)

91394345892.    (ii) and (iv)

Question Number : 74  Question Id : 91394311682  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes
Single Line Question Option : No  Option Orientation : Vertical
Correct Marks : 2  Wrong Marks : 0

Read the following statements regarding a constant-k low pass filter.

(i)    The cut-off frequency of the filter is $f_c = \dfrac{1}{2\pi\sqrt{LC}}$

(ii)   The cut-off frequency of the filter is $f_c = \dfrac{1}{\pi\sqrt{LC}}$

(iii)  The phase shift in stopband is $\pi$.

(iv)   The phase shift in passband is $2\pi$.

Which of the above statements are correct ?

Choose the correct answer from the code given below :

**Code :**

Options :

91394345893.    (i) and (iii)

91394345894.    (i) and (iv)

91394345895.    (ii) and (iii)

91394345896.    (ii) and (iv)

Question Number : 74  Question Id : 91394311682  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes
Single Line Question Option : No  Option Orientation : Vertical
Correct Marks : 2  Wrong Marks : 0

Read the following statements regarding a constant-k low pass filter.

(i)    The cut-off frequency of the filter is $f_c = \dfrac{1}{2\pi\sqrt{LC}}$

(ii)   The cut-off frequency of the filter is $f_c = \dfrac{1}{\pi\sqrt{LC}}$

(iii)  The phase shift in stopband is $\pi$.

(iv)   The phase shift in passband is $2\pi$.

Which of the above statements are correct ?

Choose the correct answer from the code given below :

**Code :**

Options :

91394345893.    (i) and (iii)

91394345894.    (i) and (iv)

91394345895.    (ii) and (iii)

91394345896.    (ii) and (iv)

A basic equivalent circuit of a tunnel diode consists of series inductance $L_s$, the series resistance $R_s$, the diode capacitance $C_j$ and the negative resistance $-R$. The reactive cut-off frequency is

(i) $\dfrac{1}{2\pi RC_j}\sqrt{\dfrac{R}{R_s}-1}$

(ii) $\dfrac{1}{2\pi}\sqrt{\dfrac{1}{L_sC_j}-\dfrac{1}{(RC_j)^2}}$

(iii) $\dfrac{1}{2\pi}\sqrt{\dfrac{1}{L_sC_j}+\dfrac{1}{(RC_j)^2}}+\dfrac{1}{2\pi}\sqrt{\dfrac{1}{RC_j}}$

(iv) $\dfrac{1}{2\pi RC_j}\sqrt{\dfrac{R}{R_s}-1}+\dfrac{1}{2\pi}\sqrt{\dfrac{1}{L_sC_j}+\dfrac{1}{(RC_j)^2}}$

Choose the correct answer from the code given below :

**Code :**

Options :

91394345897.　(i) is wrong but (ii) is correct

91394345898.　(iii) and (iv) are correct

91394345899.　(iv) is correct but (ii) is wrong

91394345900.　(iii) is correct but (iv) is wrong

A basic equivalent circuit of a tunnel diode consists of series inductance $L_s$, the series resistance $R_s$, the diode capacitance $C_j$ and the negative resistance $-R$. The reactive cut-off frequency is

(i) $\dfrac{1}{2\pi R C_j} \sqrt{\dfrac{R}{R_s} - 1}$

(ii) $\dfrac{1}{2\pi} \sqrt{\dfrac{1}{L_s C_j} - \dfrac{1}{(R C_j)^2}}$

(iii) $\dfrac{1}{2\pi} \sqrt{\dfrac{1}{L_s C_j} + \dfrac{1}{(R C_j)^2}} + \dfrac{1}{2\pi} \sqrt{\dfrac{1}{R C_j}}$

(iv) $\dfrac{1}{2\pi R C_j} \sqrt{\dfrac{R}{R_s} - 1} + \dfrac{1}{2\pi} \sqrt{\dfrac{1}{L_s C_j} + \dfrac{1}{(R C_j)^2}}$

Choose the correct answer from the code given below :

**Code :**

Options :

91394345897.
(i) is wrong but (ii) is correct

91394345898.
(iii) and (iv) are correct

91394345899.
(iv) is correct but (ii) is wrong

91394345900.
(iii) is correct but (iv) is wrong

In a circuit shown below, the voltage at each drain terminal is



(i) $V_{DD} - \dfrac{IR_D}{2}$

(ii) $V_{DD} + \dfrac{IR_D}{2}$

(iii) $V_{DD} - IR_D$

(iv) $V_{DD} + IR_D$

Choose the correct answer from the code given below :

**Code :**

Options :

91394345901. (i) is correct but (iv) is wrong

91394345902. (ii) is correct but (iii) is wrong

91394345903. (iv) is correct but (ii) is wrong

91394345904. (iii) is correct but (i) is wrong

In a circuit shown below, the voltage at each drain terminal is



(i) $V_{DD} - \dfrac{IR_D}{2}$

(ii) $V_{DD} + \dfrac{IR_D}{2}$

(iii) $V_{DD} - IR_D$

(iv) $V_{DD} + IR_D$

Choose the correct answer from the code given below :

**Code :**

Options :

91394345901.　(i) is correct but (iv) is wrong

91394345902.　(ii) is correct but (iii) is wrong

91394345903.　(iv) is correct but (ii) is wrong

91394345904.　(iii) is correct but (i) is wrong

In which of the below mentioned logic families, the transistors operate between cut-off and active (non-saturation) states ?

(i)   Transistor-Transistor Logic (TTL)

(ii)  Schottky TTL

(iii) Diode Transistor Logic (DTL)

(iv) Emitter Coupled Logic (ECL)

Choose the correct answer from the code given below :
**Code :**
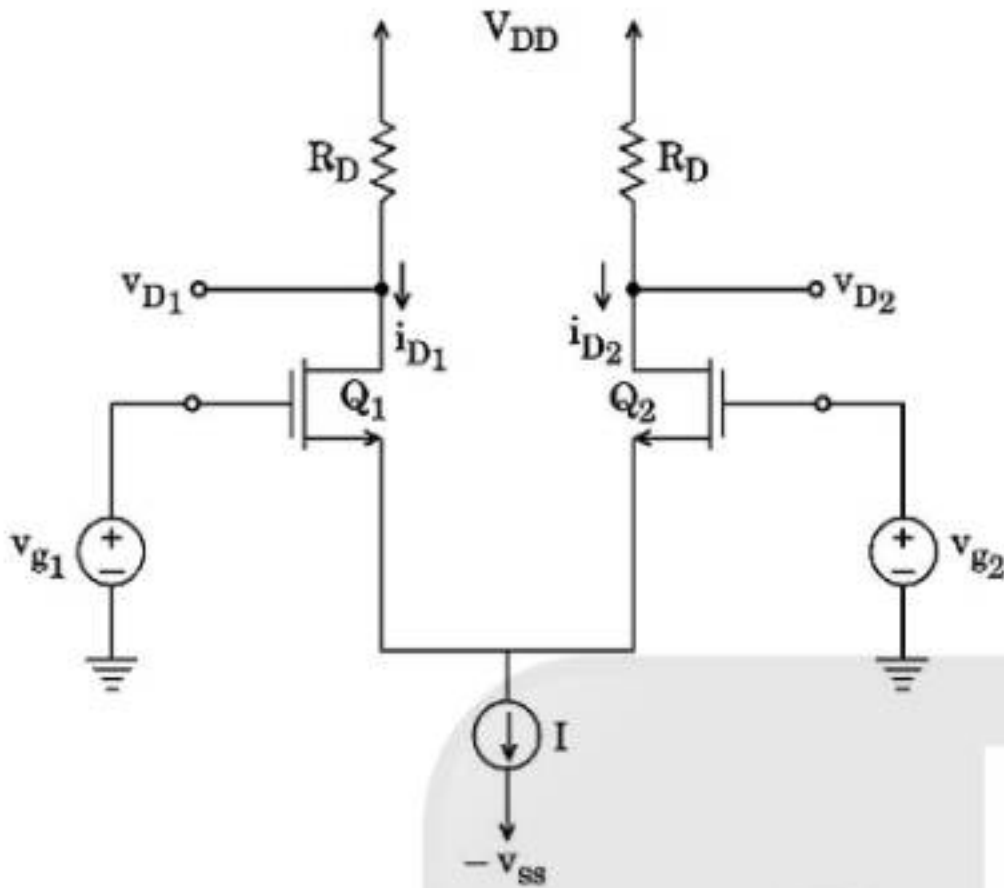
Options :

91394345905.     (i) and (iii) are correct

91394345906.     (ii) and (iii) are correct

91394345907.     (i) and (iv) are correct

91394345908.     (ii) and (iv) are correct

Question Number : 77  Question Id : 91394311685  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes
Single Line Question Option : No  Option Orientation : Vertical
Correct Marks : 2  Wrong Marks : 0

In which of the below mentioned logic families, the transistors operate between cut-off and active (non-saturation) states ?

(i)   Transistor-Transistor Logic (TTL)

(ii)  Schottky TTL

(iii) Diode Transistor Logic (DTL)

(iv) Emitter Coupled Logic (ECL)

Choose the correct answer from the code given below :
**Code :**

Options :

91394345905.     (i) and (iii) are correct

91394345906.     (ii) and (iii) are correct

91394345907.     (i) and (iv) are correct

91394345908.     (ii) and (iv) are correct

Question Number : 78  Question Id : 91394311686  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes
Single Line Question Option : No  Option Orientation : Vertical

Which of the following circuits are correct with reference to the inverter ?

(i)



(ii)



(iii)



(iv)



Which of the above are correct ?

Choose the correct answer from the code given below :

**Code :**

**Options :**

91394345909.    (i), (ii), (iii) and (iv) are correct

91394345910.    (i), (ii) and (iv) are correct

91394345911.    (i), (iii) and (iv) are correct

91394345912.    (ii), (iii) and (iv) are correct

---

**Question Number : 78  Question Id : 91394311686  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes
Single Line Question Option : No  Option Orientation : Vertical**

**Correct Marks : 2  Wrong Marks : 0**

Which of the following circuits are correct with reference to the inverter ?



(i)



(ii)



(iii)



(iv)

Which of the above are correct ?

Choose the correct answer from the code given below :

**Code :**

Options :

91394345909.    (i), (ii), (iii) and (iv) are correct

91394345910.    (i), (ii) and (iv) are correct

91394345911.    (i), (iii) and (iv) are correct

91394345912.    (ii), (iii) and (iv) are correct

Question Number : 79  Question Id : 91394311687  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes
Single Line Question Option : No  Option Orientation : Vertical
Correct Marks : 2  Wrong Marks : 0

In minimum mode 8086 microprocessor

(i)    all control signals are given by microprocessor chip itself

(ii)   the remaining components in the system are latches, transreceivers clock generator,
       memory and I/O devices

(iii)  it has more than one microprocessor

(iv)   facilities are provided for implementing allocation of global resources

Choose the correct answer from the code given below :
**Code :**

Options :

91394345913.    (i) and (iii) are correct

91394345914.    (i), (iii) and (iv) are correct
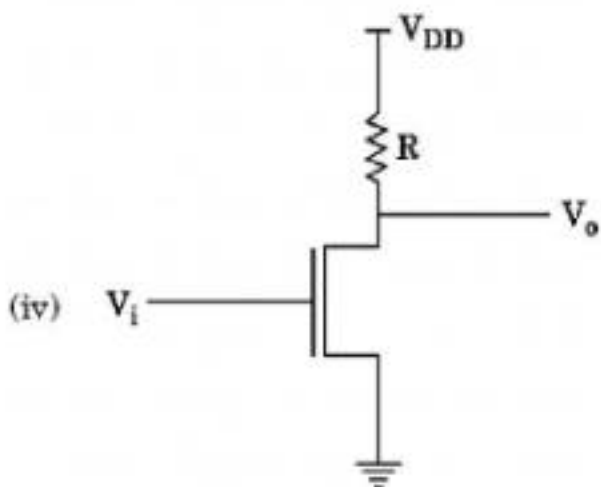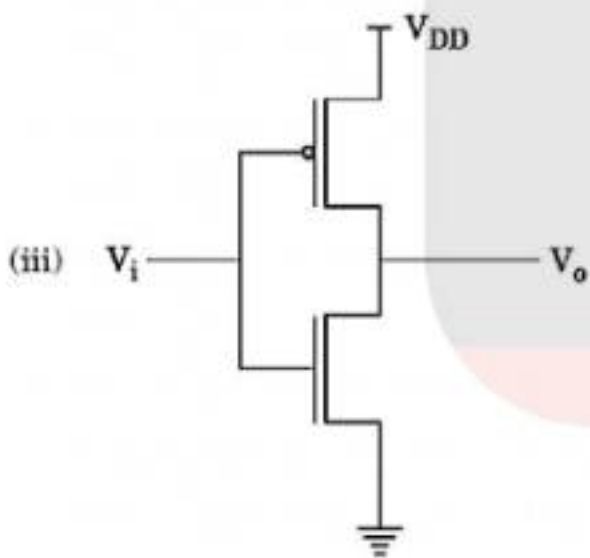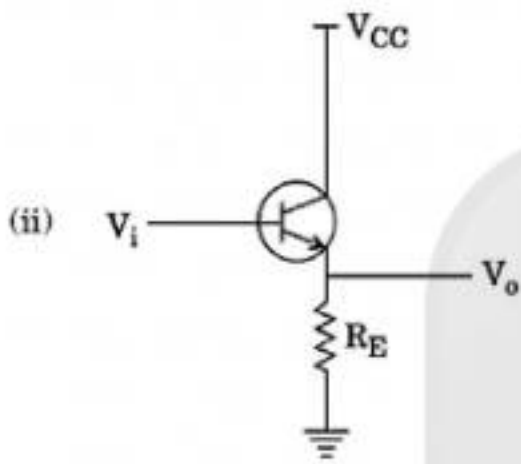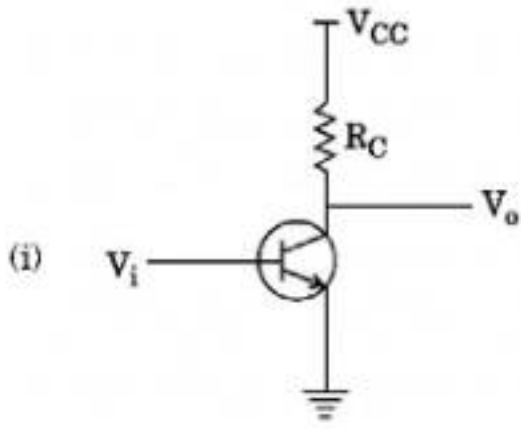
91394345915.    (i) and (ii) are correct

91394345916.    (i) and (iv) are correct

Question Number : 79  Question Id : 91394311687  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes
Single Line Question Option : No  Option Orientation : Vertical
Correct Marks : 2  Wrong Marks : 0

In minimum mode 8086 microprocessor

(i) all control signals are given by microprocessor chip itself

(ii) the remaining components in the system are latches, transreceivers clock generator, memory and I/O devices

(iii) it has more than one microprocessor

(iv) facilities are provided for implementing allocation of global resources

Choose the correct answer from the code given below :

**Code :**

Options :

91394345913. (i) and (iii) are correct

91394345914. (i), (iii) and (iv) are correct

91394345915. (i) and (ii) are correct

91394345916. (i) and (iv) are correct

In Register Indirect Addressing mode the offset address of data is in

(i) BX

(ii) SI

(iii) DI

(iv) DX

Choose the correct answer from the code given below :

**Code :**

Options :

91394345917. (i) and (iv) are correct

91394345918. (i), (ii) and (iii) are correct
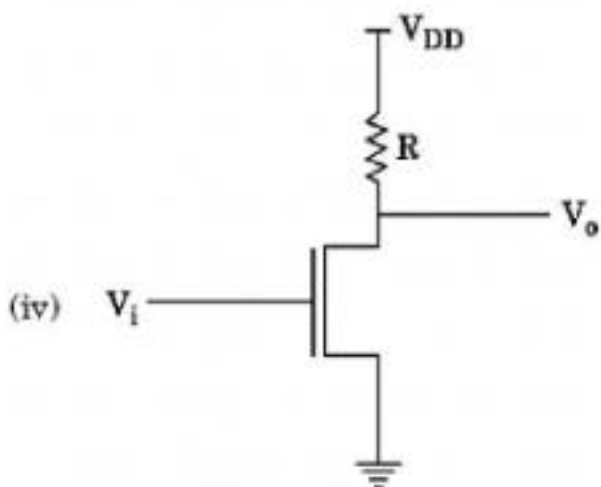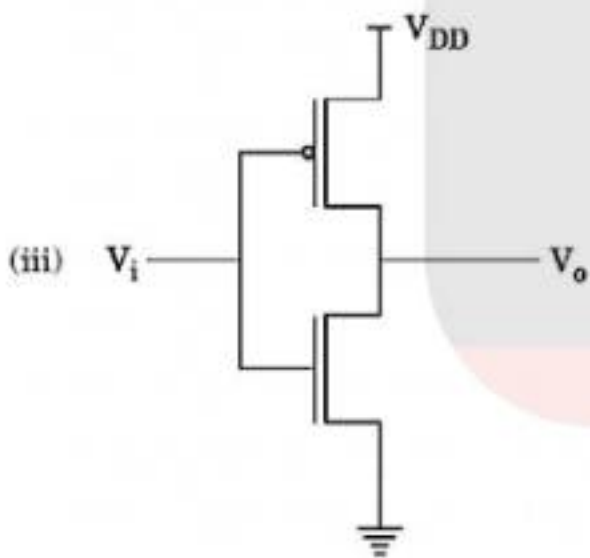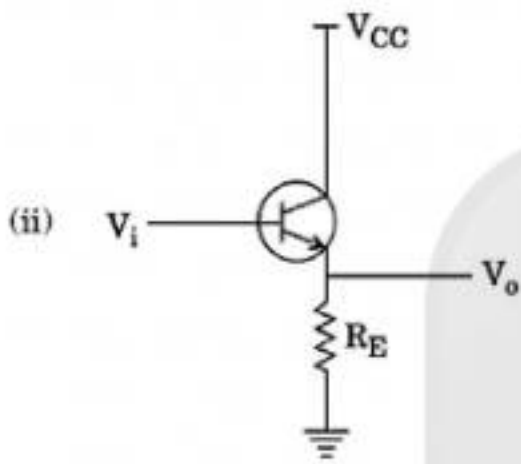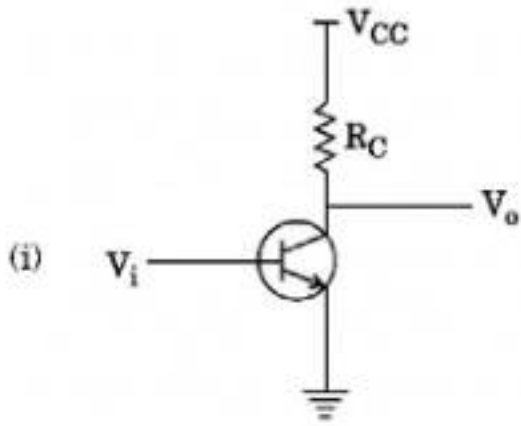
91394345919. (ii), (iii) and (iv) are correct

91394345920. (i), (iii) and (iv) are correct

In Register Indirect Addressing mode the offset address of data is in

(i) BX

(ii) SI

(iii) DI

(iv) DX

Choose the correct answer from the code given below :

**Code :**

Options :

91394345917. (i) and (iv) are correct

91394345918. (i), (ii) and (iii) are correct

91394345919. (ii), (iii) and (iv) are correct

91394345920. (i), (iii) and (iv) are correct

What is the output of this program ?

```
main ( )
{
        int s [5] [2] = {
                            {1234, 56},
                            {1212, 33},
                            {1434, 80},
                            {1312, 78}
                      };
        int i, j;
        for (i = 0; i < = 3; i ++)
        {
            printf ("\n");
            for (j = 0; j < = 1; j++)
            printf ("%d",  *(*(s + i) + j));
        }
}
```

Options :

1234 56

1212 33

1434 80

91394345921. 1312 78

1235 57

1213 34

1435 81

91394345922. 1313 79

1312 78

1434 80

1212 33

91394345923. 1234 56

1212 33

1234 56

1312 78

91394345924. 1434 80

Question Number : 81  Question Id : 91394311689  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes
Single Line Question Option : No  Option Orientation : Vertical
Correct Marks : 2  Wrong Marks : 0

What is the output of this program ?

```
main ( )
{
    int s [5] [2] = {
                        {1234, 56},
                        {1212, 33},
                        {1434, 80},
                        {1312, 78}
                    };
    int i, j;
    for (i = 0; i < = 3; i ++)
    {
        printf ("\n");
        for (j = 0; j < = 1; j++)
        printf ("%d",  *(*(s + i) + j));
    }
}
```

Options :

91394345921.
```
1234 56
1212 33
1434 80
1312 78
```

91394345922.
```
1235 57
1213 34
1435 81
1313 79
```

91394345923.
```
1312 78
1434 80
1212 33
1234 56
```

1212 33
                    1234 56
                    1312 78
91394345924.       1434 80

What will be the output of the program ?

```
main ( )
{
          char s[ ] = "AWb what the heck";
          printf ("n%s",  s);
          printf ("%s", s[3]);


}
```

Options :

91394345925.    AWbWhat the heck

91394345926.    AWbWhat the heckb

91394345927.    W

91394345928.    AWbWhat the heckW

What will be the output of the program ?

```
main ( )
{
          char s[ ] = "AWb what the heck";
          printf ("n%s",  s);
          printf ("%s", s[3]);


}
```

91394345925.    AWbWhat the heck

91394345926.    AWbWhat the heckb

91394345927.    W

91394345928.    AWbWhat the heckW

Question Number : 83  Question Id : 91394311691  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes
Single Line Question Option : No  Option Orientation : Vertical
Correct Marks : 2  Wrong Marks : 0

For an optical fiber, following statements are given :

(i)     Propagation constant is dependent on wavelength

(ii)    Propagation constant is independent of wavelength

(iii)   $GVD = -\dfrac{2\pi C}{\lambda}\,\beta_2$

(iv)   $GVD = -\dfrac{2\pi C}{\lambda^2}\,\beta_2$

Which of the above statements are correct ?

Choose the correct answer from the code given below :

**Code :**

Options :

91394345929.    (ii) and (iii)

91394345930.    (i) and (iii)

91394345931.    (i) and (iv)

91394345932.    (ii) and (iv)

Question Number : 83  Question Id : 91394311691  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes
Single Line Question Option : No  Option Orientation : Vertical
Correct Marks : 2  Wrong Marks : 0

For an optical fiber, following statements are given :

(i) Propagation constant is dependent on wavelength

(ii) Propagation constant is independent of wavelength

(iii) $GVD = -\dfrac{2\pi C}{\lambda}\beta_2$

(iv) $GVD = -\dfrac{2\pi C}{\lambda^2}\beta_2$

Which of the above statements are correct ?

Choose the correct answer from the code given below :

**Code :**

Options :

91394345929. (ii) and (iii)

91394345930. (i) and (iii)

91394345931. (i) and (iv)

91394345932. (ii) and (iv)

For thyristor operation, following statements are given :

(i) The supply voltage must be greater than the forward break over voltage.

(ii) The supply voltage must be less than the forward break over voltage.

(iii) $I_{Latching} < I_{holding}$

(iv) $I_{Latching} > I_{holding}$

Which of the above statements are correct ?

Choose the correct answer from the code given below :

**Code :**

Options :

91394345933. (i) and (iii)

91394345934. (ii) and (iv)

91394345935. (ii) and (iii)

91394345936. (i) and (iv)

Question Number : 84  Question Id : 91394311692  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes
Single Line Question Option : No  Option Orientation : Vertical
Correct Marks : 2  Wrong Marks : 0

For thyristor operation, following statements are given :

(i) The supply voltage must be greater than the forward break over voltage.

(ii) The supply voltage must be less than the forward break over voltage.

(iii) $I_{Latching} < I_{holding}$

(iv) $I_{Latching} > I_{holding}$

Which of the above statements are correct ?

Choose the correct answer from the code given below :

**Code :**

Options :

91394345933. (i) and (iii)

91394345934. (ii) and (iv)

91394345935. (ii) and (iii)

91394345936. (i) and (iv)

Question Number : 85  Question Id : 91394311693  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes
Single Line Question Option : No  Option Orientation : Vertical
Correct Marks : 2  Wrong Marks : 0

Which of the following statements are correct with reference to superheterodyne receivers ?

(i) The main advantage of superheterodyne receiver is its better tracking

(ii) The main advantage of superheterodyne receiver is improvement in sensitivity

(iii) The image channel rejection in superheterodyne receiver comes from IF stages only

(iv) The image channel rejection in superheterodyne receiver comes from RF stage only

Choose the correct answer from the code given below :

**Code :**

Options :

91394345937. (i) and (ii) are correct

91394345938.    (ii) and (iii) are correct

91394345939.    (ii) and (iv) are correct

91394345940.    (i) and (iv) are correct

Question Number : 85 Question Id : 91394311693 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 2 Wrong Marks : 0

Which of the following statements are correct with reference to superheterodyne receivers ?

(i)    The main advantage of superheterodyne receiver is its better tracking

(ii)   The main advantage of superheterodyne receiver is improvement in sensitivity

(iii)  The image channel rejection in superheterodyne receiver comes from IF stages only

(iv)   The image channel rejection in superheterodyne receiver comes from RF stage only

Choose the correct answer from the code given below :

**Code :**

Options :

91394345937.    (i) and (ii) are correct

91394345938.    (ii) and (iii) are correct

91394345939.    (ii) and (iv) are correct

91394345940.    (i) and (iv) are correct

Question Number : 86 Question Id : 91394311694 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 2 Wrong Marks : 0

Which of the following statements are correct w.r.t. the vestigial sideband modulation ?

(i)    As compared to SSB-Sc, the bandwidth of vestigial sideband becomes larger

(ii)   The filter required needs to have a sharp cut-off

(iii)  The transmitted vestige of the undesired sideband compensates the loss of
wanted sideband

(iv)   Vestigial sideband is used in TV for transmission of the picture and sound signals

Choose the correct answer from the code given below :

**Code :**

Options :

91394345941.    (i) and (ii) are correct

91394345942. (i) and (iv) are correct

91394345943. (i) and (iii) are correct

91394345944. (iii) and (iv) are correct

Question Number : 86 Question Id : 91394311694 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 2 Wrong Marks : 0

Which of the following statements are correct w.r.t. the vestigial sideband modulation ?

(i) As compared to SSB-Sc, the bandwidth of vestigial sideband becomes larger

(ii) The filter required needs to have a sharp cut-off

(iii) The transmitted vestige of the undesired sideband compensates the loss of wanted sideband

(iv) Vestigial sideband is used in TV for transmission of the picture and sound signals

Choose the correct answer from the code given below :

**Code :**

Options :

91394345941. (i) and (ii) are correct

91394345942. (i) and (iv) are correct

91394345943. (i) and (iii) are correct

91394345944. (iii) and (iv) are correct

Question Number : 87 Question Id : 91394311695 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 2 Wrong Marks : 0

A lossless air dielectric cylindrical waveguide of inside diameter 2 cm is operated at 10 GHz. For $TM_{11}$ mode propagating in +z direction, following has been evaluated :

(i) Cut-off frequency = 9·148 GHz

(ii) Cut-off frequency = 8·814 GHz

(iii) Wave impedance = 152·269 $\Omega$

(iv) Wave impedance = 15·26 $\Omega$

Which of the above statements are correct ?

Choose the correct answer from the code given below :

**Code :**

Options :

91394345945. (i) and (iii)

91394345946. (ii) and (iii)

91394345947. (ii) and (iv)

91394345948. (i) and (iv)

A lossless air dielectric cylindrical waveguide of inside diameter 2 cm is operated at 10 GHz. For $TM_{11}$ mode propagating in +z direction, following has been evaluated :

(i)     Cut-off frequency = 9·148 GHz

(ii)    Cut-off frequency = 8·814 GHz

(iii)   Wave impedance = 152·269 $\Omega$

(iv)   Wave impedance = 15·26 $\Omega$

Which of the above statements are correct ?

Choose the correct answer from the code given below :

**Code :**

Options :

91394345945. (i) and (iii)

91394345946. (ii) and (iii)

91394345947. (ii) and (iv)

91394345948. (i) and (iv)

# In an optical coupler :



following statements are given

(i) Splitting ratio $= \dfrac{P_2}{P_1 + P_2} \times 100\%$

(ii) Splitting ratio $= \dfrac{P_1}{P_2} \times 100\%$

(iii) Return loss $= 10 \log \left( \dfrac{P_3}{P_0} \right)$

(iv) Return loss $= 10 \log \left( \dfrac{P_3}{P_1 + P_2} \right)$

Which of the above statements are correct ?

Choose the correct answer from the code given below :

**Code :**

91394345949.    (ii) and (iii)

91394345950.    (i) and (iv)

91394345951.    (ii) and (iv)

91394345952.    (i) and (iii)

# In an optical coupler :



following statements are given

(i) Splitting ratio $= \dfrac{P_2}{P_1 + P_2} \times 100\%$

(ii) Splitting ratio $= \dfrac{P_1}{P_2} \times 100\%$

(iii) Return loss $= 10 \log \left( \dfrac{P_3}{P_0} \right)$

(iv) Return loss $= 10 \log \left( \dfrac{P_3}{P_1 + P_2} \right)$

Which of the above statements are correct ?

Choose the correct answer from the code given below :
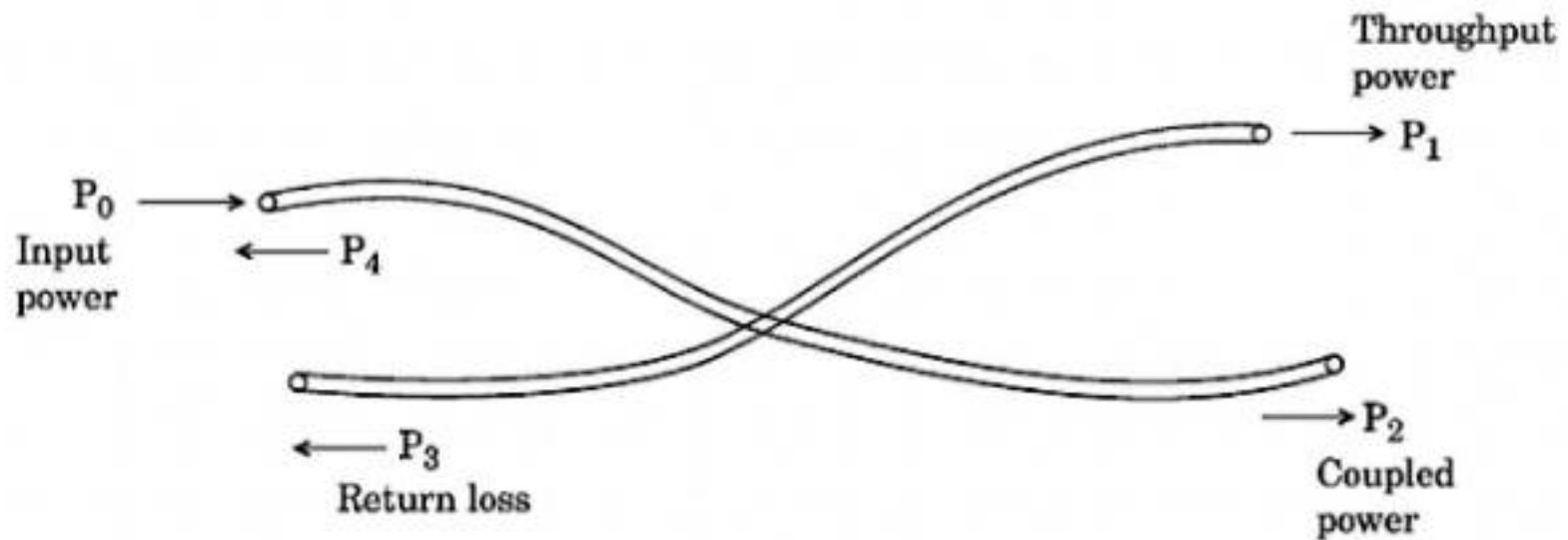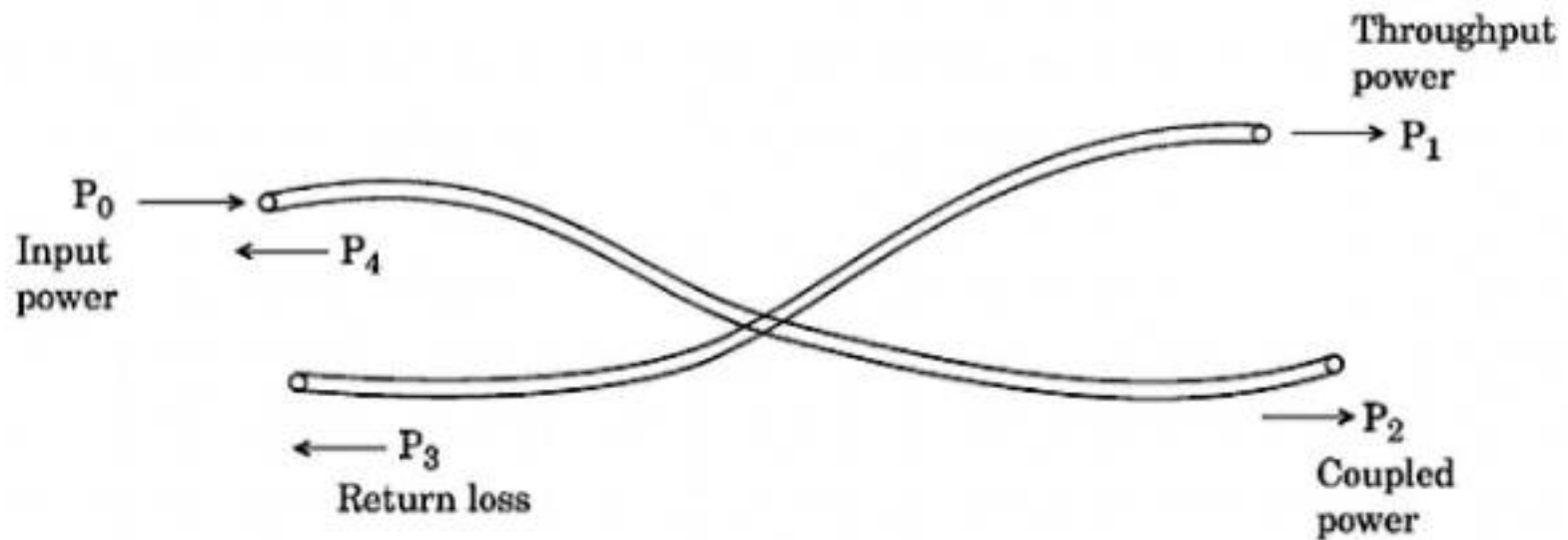
**Code :**

91394345949. (ii) and (iii)

91394345950. (i) and (iv)

91394345951. (ii) and (iv)

91394345952. (i) and (iii)

Read the following statements regarding the strain gauge transducer system.

(i) It has negligible loading effect on the primary transducer.

(ii) It has advantage of formation of push-pull systems for temperature compensation.

(iii) It has maximum loading effect on the primary transducer.

(iv) It has very large size and hence increases the size of primary elastic transducer.

Which of the above statements are correct ?

Choose the correct answer from the code given below :

**Code :**

Options :

91394345953.     (i) and (ii)

91394345954.     (i) and (iii)

91394345955.     (ii) and (iii)

91394345956.     (ii) and (iv)

Question Number : 89 Question Id : 91394311697 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 2 Wrong Marks : 0

Read the following statements regarding the strain gauge transducer system.

(i) It has negligible loading effect on the primary transducer.

(ii) It has advantage of formation of push-pull systems for temperature compensation.

(iii) It has maximum loading effect on the primary transducer.

(iv) It has very large size and hence increases the size of primary elastic transducer.

Which of the above statements are correct ?

Choose the correct answer from the code given below :

**Code :**

Options :

91394345953.     (i) and (ii)

91394345954.     (i) and (iii)

91394345955.     (ii) and (iii)

91394345956.     (ii) and (iv)

Question Number : 90 Question Id : 91394311698 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 2 Wrong Marks : 0

Consider the following statements with respect to the characteristic polynomial defined as $q(s) = s^4 + s^3 + s^2 + s + k$.

(i)     The system is stable for $k > 0$

(ii)    The system is unstable for $k > 0$

(iii)   The system is unstable for $k \leq 0$

(iv)    The system is stable for $k \leq 0$

Which of the above statements are correct ?

Choose the correct answer from the code given below :

**Code :**

Options :

91394345957.    (i) and (iii)

91394345958.    (i) and (iv)

91394345959.    (ii) and (iii)

91394345960.    (ii) and (iv)

Question Number : 90  Question Id : 91394311698  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes
Single Line Question Option : No  Option Orientation : Vertical
Correct Marks : 2  Wrong Marks : 0

Consider the following statements with respect to the characteristic polynomial defined as $q(s) = s^4 + s^3 + s^2 + s + k$.

(i)     The system is stable for $k > 0$

(ii)    The system is unstable for $k > 0$

(iii)   The system is unstable for $k \leq 0$

(iv)    The system is stable for $k \leq 0$

Which of the above statements are correct ?

Choose the correct answer from the code given below :

**Code :**

Options :

91394345957.    (i) and (iii)

91394345958.    (i) and (iv)

91394345959.    (ii) and (iii)

91394345960.    (ii) and (iv)

Question Number : 91  Question Id : 91394311699  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes
Single Line Question Option : No  Option Orientation : Vertical
Correct Marks : 2  Wrong Marks : 0

Match the two lists and choose the correct answer from the code given below :

| List I | | List II | |
|--------|--|---------|--|
| (a) | Deal and Grove model | (i) | Proximity printing |
| (b) | MOS capacitor | (ii) | Geometrical consideration |
| (c) | Optical lithography | (iii) | $\dfrac{\varepsilon_i}{d}$ |
| (d) | X-ray lithography | (iv) | Silicon oxidation |

**Code :**

Options :

91394345961.    (a)–(iv), (b)–(iii), (c)–(i), (d)–(ii)

91394345962.    (a)–(i), (b)–(ii), (c)–(iii), (d)–(iv)

91394345963.    (a)–(ii), (b)–(iii), (c)–(iv), (d)–(i)

91394345964.    (a)–(i), (b)–(iv), (c)–(ii), (d)–(iii)

Question Number : 91  Question Id : 91394311699  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes
Single Line Question Option : No  Option Orientation : Vertical
Correct Marks : 2  Wrong Marks : 0

Match the two lists and choose the correct answer from the code given below :

| List I | | List II | |
|--------|--|---------|--|
| (a) | Deal and Grove model | (i) | Proximity printing |
| (b) | MOS capacitor | (ii) | Geometrical consideration |
| (c) | Optical lithography | (iii) | $\dfrac{\varepsilon_i}{d}$ |
| (d) | X-ray lithography | (iv) | Silicon oxidation |

**Code :**

Options :

91394345961.  (a)–(iv), (b)–(iii), (c)–(i), (d)–(ii)

91394345962.  (a)–(i), (b)–(ii), (c)–(iii), (d)–(iv)

91394345963.  (a)–(ii), (b)–(iii), (c)–(iv), (d)–(i)

91394345964.  (a)–(i), (b)–(iv), (c)–(ii), (d)–(iii)

Match the two lists and choose the correct answer from the code given
below :

| List I | | List II | |
|---|---|---|---|
| (a) | Input resistance with output short-circuited | (i) | $h_f$ |
| (b) | Reverse open circuit voltage amplification | (ii) | $h_r$ |
| (c) | Output short-circuited current transfer ratio | (iii) | $h_o$ |
| (d) | Output conductance with input open-circuited | (iv) | $h_i$ |

**Code :**

Options :

91394345965.  (a)–(i), (b)–(ii), (c)–(iii), (d)–(iv)

91394345966.  (a)–(iv), (b)–(ii), (c)–(i), (d)–(iii)

91394345967.  (a)–(iii), (b)–(iv), (c)–(ii), (d)–(i)

91394345968.  (a)–(ii), (b)–(iii), (c)–(iv), (d)–(i)

Match the two lists and choose the correct answer from the code given below :

| | List I | | List II |
|---|---|---|---|
| (a) | Input resistance with output short-circuited | (i) | $h_f$ |
| (b) | Reverse open circuit voltage amplification | (ii) | $h_r$ |
| (c) | Output short-circuited current transfer ratio | (iii) | $h_o$ |
| (d) | Output conductance with input open-circuited | (iv) | $h_i$ |

**Code :**

Options :

91394345965. (a)–(i), (b)–(ii), (c)–(iii), (d)–(iv)

91394345966. (a)–(iv), (b)–(ii), (c)–(i), (d)–(iii)

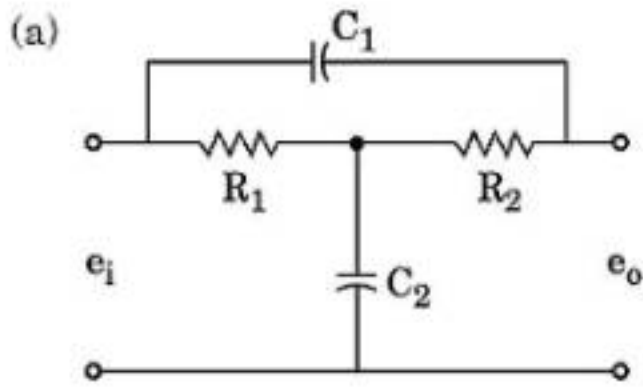91394345967. (a)–(iii), (b)–(iv), (c)–(ii), (d)–(i)

91394345968. (a)–(ii), (b)–(iii), (c)–(iv), (d)–(i)

Match the two lists and choose the correct answer from the code given below :

**List I**

(a)



(b)



(c)



(d)



**List II**

(i)   A lead-lag network

(ii)  A lag network

(iii) A bridge-T filter network

(iv)  A lead network

**Code :**

Options :

91394345969.   (a)–(iii), (b)–(iv), (c)–(i), (d)–(ii)

91394345970.   (a)–(iii), (b)–(iv), (c)–(ii), (d)–(i)

91394345971.   (a)–(iv), (b)–(iii), (c)–(ii), (d)–(i)

91394345972.

Question Number : 93  Question Id : 91394311701  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes
Single Line Question Option : No  Option Orientation : Vertical
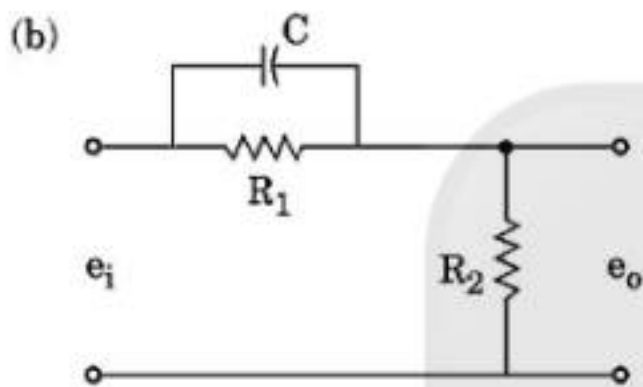Correct Marks : 2  Wrong Marks : 0

Match the two lists and choose the correct answer from the code given below :
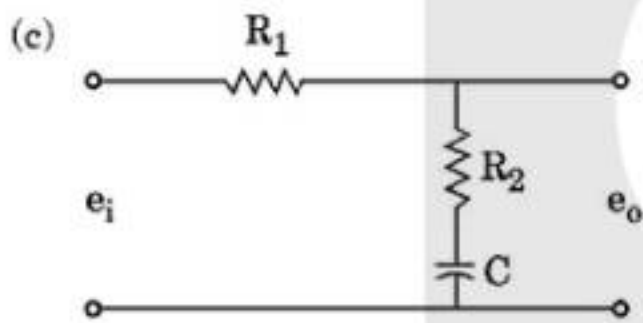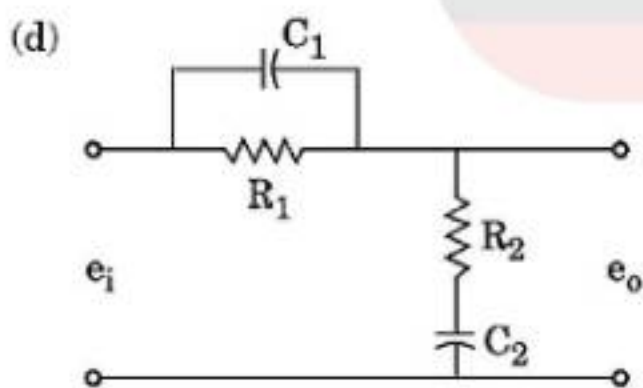
**List I**

(a)



(b)



(c)



(d)



**List II**

(i) A lead-lag network

(ii) A lag network

(iii) A bridge-T filter network

(iv) A lead network

**Code :**

Options :

(a)–(iii), (b)–(iv), (c)–(i), (d)–(ii)

91394345969.

91394345970.　(a)–(iii), (b)–(iv), (c)–(ii), (d)–(i)
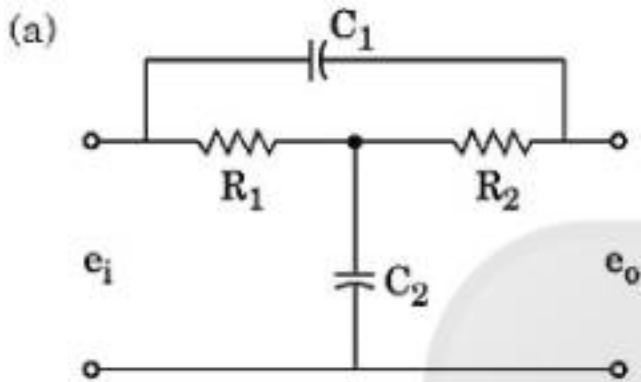
91394345971.　(a)–(iv), (b)–(iii), (c)–(ii), (d)–(i)

91394345972.　(a)–(ii), (b)–(iii), (c)–(i), (d)–(iv)

Question Number : 94 Question Id : 91394311702 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
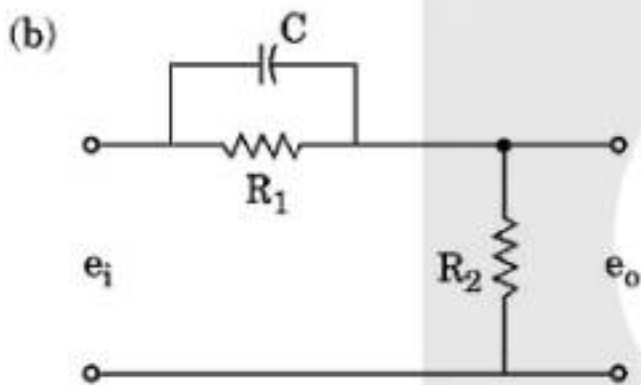Correct Marks : 2 Wrong Marks : 0

Match the two lists and choose the correct answer from the code given below :

| List I (Quantity) | List II (Transducer system) |
|---|---|
| (a) Temperature | (i) Cantilever |
| (b) Force | (ii) Manometer |
| (c) Liquid level | (iii) Dynamometer |
| (d) Torque | (iv) Bimetallic element |

Code :

Options :

91394345973.　(a)–(iv), (b)–(ii), (c)–(iii), (d)–(i)

91394345974.　(a)–(iv), (b)–(ii), (c)–(i), (d)–(iii)

91394345975.　(a)–(iv), (b)–(i), (c)–(ii), (d)–(iii)

91394345976.　(a)–(iii), (b)–(iv), (c)–(i), (d)–(ii)

Question Number : 94 Question Id : 91394311702 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 2 Wrong Marks : 0

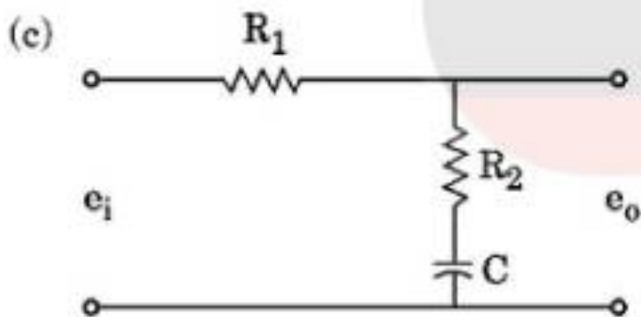Match the two lists and choose the correct answer from the code given below :

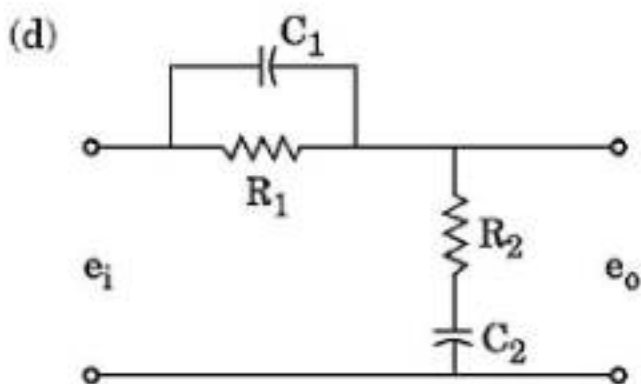| List I (Quantity) | List II (Transducer system) |
|---|---|
| (a) Temperature | (i) Cantilever |
| (b) Force | (ii) Manometer |
| (c) Liquid level | (iii) Dynamometer |
| (d) Torque | (iv) Bimetallic element |

Code :

Options :

91394345973.　(a)–(iv), (b)–(ii), (c)–(iii), (d)–(i)

91394345974. (a)–(iv), (b)–(ii), (c)–(i), (d)–(iii)

91394345975. (a)–(iv), (b)–(i), (c)–(ii), (d)–(iii)

91394345976. (a)–(iii), (b)–(iv), (c)–(i), (d)–(ii)

Question Number : 95  Question Id : 91394311703  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes
Single Line Question Option : No  Option Orientation : Vertical
Correct Marks : 2  Wrong Marks : 0

Match the two lists and choose the correct answer from the code given below :

| List I | List II |
|---|---|
| (a) Current gain in common base | (i) 1 (ONE) |
| (b) Input impedance in common base | (ii) Less than unity |
| (c) Voltage gain in common collector | (iii) Very high ($\simeq 2$ M$\Omega$) |
| (d) Output impedance in common base | (iv) Lowest |

Code :

Options :

91394345977. (a)–(i), (b)–(ii), (c)–(iii), (d)–(iv)

91394345978. (a)–(iii), (b)–(i), (c)–(iv), (d)–(ii)

91394345979. (a)–(iv), (b)–(iii), (c)–(ii), (d)–(i)

91394345980. (a)–(ii), (b)–(iv), (c)–(i), (d)–(iii)

Question Number : 95  Question Id : 91394311703  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes
Single Line Question Option : No  Option Orientation : Vertical
Correct Marks : 2  Wrong Marks : 0

Match the two lists and choose the correct answer from the code given below :

| List I | List II |
|---|---|
| (a) Current gain in common base | (i) 1 (ONE) |
| (b) Input impedance in common base | (ii) Less than unity |
| (c) Voltage gain in common collector | (iii) Very high ($\simeq 2$ M$\Omega$) |
| (d) Output impedance in common base | (iv) Lowest |

Code :

Options :

91394345977.    (a)–(i), (b)–(ii), (c)–(iii), (d)–(iv)

91394345978.    (a)–(iii), (b)–(i), (c)–(iv), (d)–(ii)

91394345979.    (a)–(iv), (b)–(iii), (c)–(ii), (d)–(i)

91394345980.    (a)–(ii), (b)–(iv), (c)–(i), (d)–(iii)

Match the two lists and choose the correct answer from the code given below :

| List I | List II |
|---|---|
| (a) Concentration of holes in n-type semiconductor | (i) $\dfrac{n_i^2}{N_A}$ |
| (b) Concentration of electrons in p-type semiconductor | (ii) $\dfrac{kT}{q} \ln \dfrac{N_D N_A}{n_i^2}$ |
| (c) Fermi level in n-type material | (iii) $\dfrac{n_i^2}{N_D}$ |
| (d) Contact potential | (iv) $E_C - kT \ln \dfrac{N_C}{N_D}$ |

**Code :**

Options :

91394345981.    (a)–(i), (b)–(ii), (c)–(iii), (d)–(iv)

91394345982.    (a)–(iii), (b)–(i), (c)–(iv), (d)–(ii)

91394345983.    (a)–(ii), (b)–(iv), (c)–(i), (d)–(iii)

91394345984.    (a)–(iv), (b)–(iii), (c)–(ii), (d)–(i)

Match the two lists and choose the correct answer from the code given below :

| List I | List II |
|---|---|

(a) Concentration of holes in n-type semiconductor

(i) $\dfrac{n_i^2}{N_A}$

(b) Concentration of electrons in p-type semiconductor

(ii) $\dfrac{kT}{q} ln \dfrac{N_D N_A}{n_i^2}$

(c) Fermi level in n-type material

(iii) $\dfrac{n_i^2}{N_D}$

(d) Contact potential

(iv) $E_C - kT \, ln \dfrac{N_C}{N_D}$

**Code :**

Options :

91394345981.  (a)–(i), (b)–(ii), (c)–(iii), (d)–(iv)

91394345982.  (a)–(iii), (b)–(i), (c)–(iv), (d)–(ii)

91394345983.  (a)–(ii), (b)–(iv), (c)–(i), (d)–(iii)

91394345984.  (a)–(iv), (b)–(iii), (c)–(ii), (d)–(i)

Match the two lists and choose the correct answer from the code given below :

| List I | List II |
|---|---|
| (a)  | (i) Positive edge-triggered flip-flop |
| (b)  | (ii) T-flip-flop |
| (c)  | (iii) Clocked flip-flop with clear an preset |
| (d)  | (iv) Negative level triggered flip-flop |

**Code :**

Options :

91394345985. (a)–(iv), (b)–(ii), (c)–(iii), (d)–(i)

91394345986. (a)–(iv), (b)–(i), (c)–(iii), (d)–(ii)

91394345987.
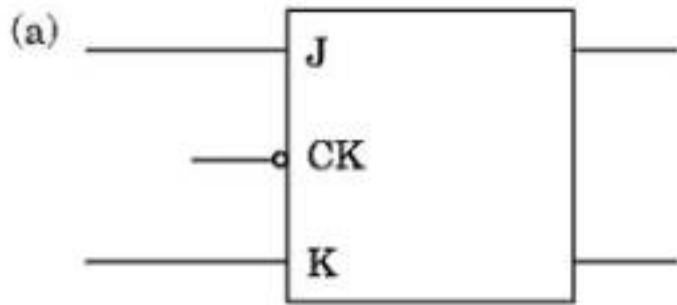(a)–(iv), (b)–(iii), (c)–(ii), (d)–(i)

91394345988.
(a)–(iv), (b)–(ii), (c)–(i), (d)–(iii)

Question Number : 97  Question Id : 91394311705  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes
Single Line Question Option : No  Option Orientation : Vertical
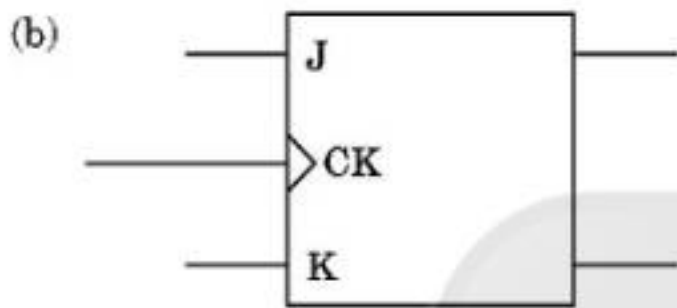Correct Marks : 2  Wrong Marks : 0

Match the two lists and choose the correct answer from the code given below :

List I

(a)



(b)



(c)



(d)
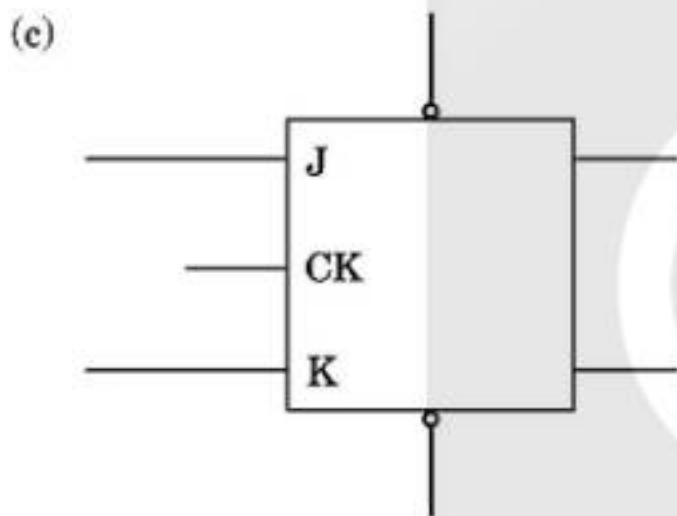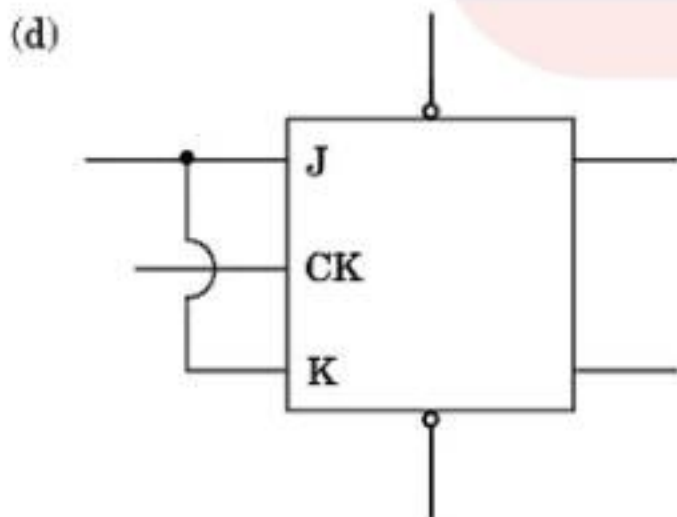


List II

(i) Positive edge-triggered flip-flop

(ii) T-flip-flop
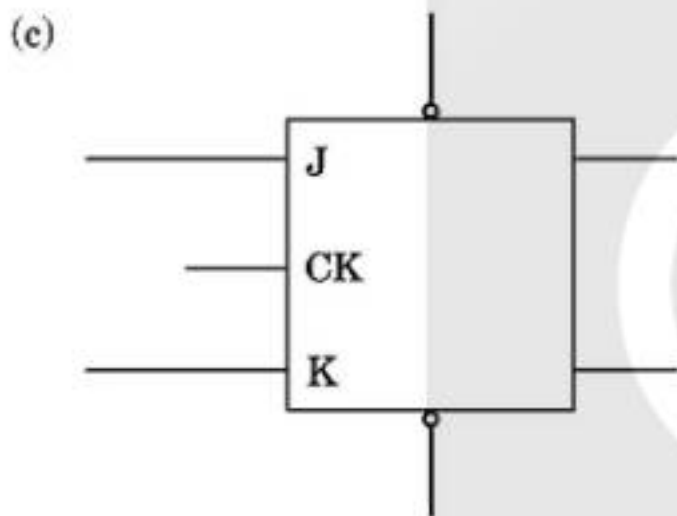
(iii) Clocked flip-flop with clear an preset
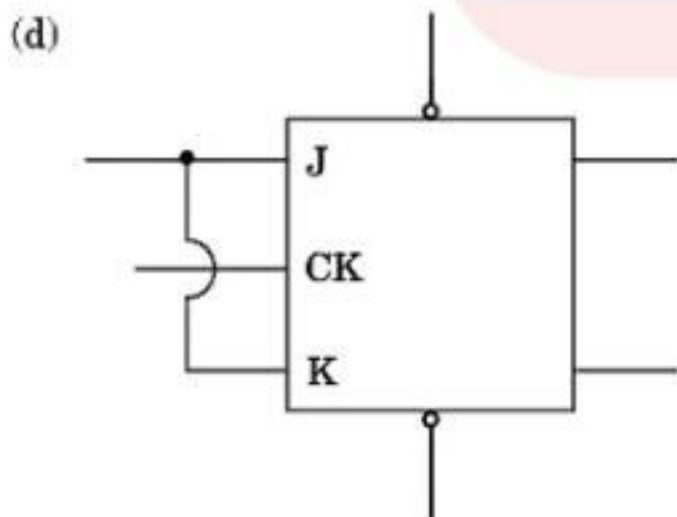
(iv) Negative level triggered flip-flop

**Code :**

Options :

91394345985.  (a)–(iv), (b)–(ii), (c)–(iii), (d)–(i)

91394345986.  (a)–(iv), (b)–(i), (c)–(iii), (d)–(ii)

91394345987.    (a)–(iv), (b)–(iii), (c)–(ii), (d)–(i)

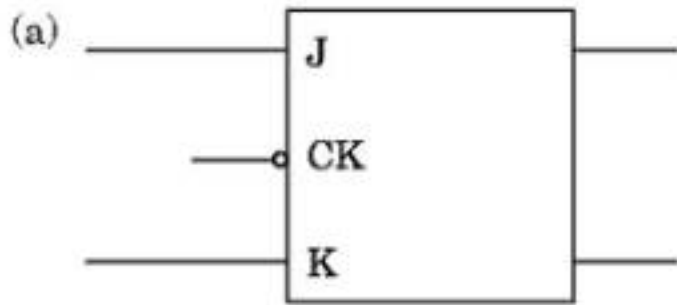91394345988.    (a)–(iv), (b)–(ii), (c)–(i), (d)–(iii)

Question Number : 98  Question Id : 91394311706  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes
Single Line Question Option : No  Option Orientation : Vertical
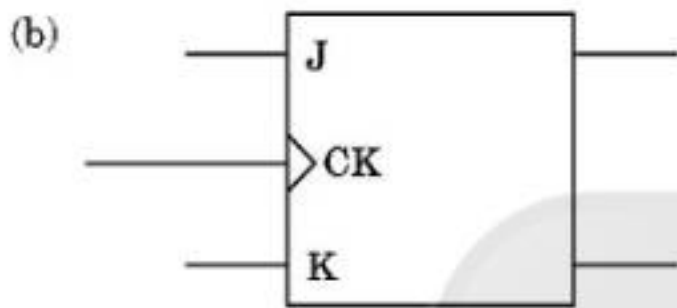Correct Marks : 2  Wrong Marks : 0

Match the two lists and choose the correct answer from the code given below :

| List I | List II |
|---|---|
| (a) Flash – ADC | (i) Higher resolution and good noise immunity |
| (b) SAC – ADC | (ii) Low noise immunity and medium speed |
| (c) RAMP – ADC | (iii) Low speed and good noise immunity |
| (d) Dual Slope – ADC | (iv) Faster speed and low noise immunity |

**Code :**

Options :

91394345989.    (a)–(i), (b)–(iv), (c)–(iii), (d)–(ii)

91394345990.    (a)–(i), (b)–(ii), (c)–(iv), (d)–(iii)

91394345991.    (a)–(iv), (b)–(iii), (c)–(i), (d)–(ii)

91394345992.    (a)–(iv), (b)–(ii), (c)–(i), (d)–(iii)

91394345992. (a)–(iv), (b)–(ii), (c)–(i), (d)–(iii)

Match the two lists and choose the correct answer from the code given below :

| List I | List II |
|---|---|
| (a) LDA addr | (i) Arithmetic group |
| (b) ACI data | (ii) Data transfer group |
| (c) ORI data | (iii) Logical group |
| (d) JZ addr | (iv) Branch control group |

**Code :**

Options :

91394345993. (a)–(ii), (b)–(i), (c)–(iii), (d)–(iv)

91394345994. (a)–(i), (b)–(ii), (c)–(iii), (d)–(iv)

91394345995. (a)–(iii), (b)–(ii), (c)–(i), (d)–(iv)

91394345996. (a)–(iv), (b)–(iii), (c)–(ii), (d)–(i)

Match the two lists and choose the correct answer from the code given below :

| | List I | | | List II |
|---|---|---|---|---|
| | $S_0$ | $S_1$ | | |
| (a) | 0 | 0 | (i) | Opcode fetch |
| (b) | 0 | 1 | (ii) | Write |
| (c) | 1 | 0 | (iii) | Read |
| (d) | 1 | 1 | (iv) | Halt |

**Code :**

Options :

91394345997.  (a)–(i), (b)–(ii), (c)–(iii), (d)–(iv)

91394345998.  (a)–(iv), (b)–(iii), (c)–(ii), (d)–(i)

91394345999.  (a)–(iv), (b)–(iii), (c)–(i), (d)–(ii)

91394346000.  (a)–(ii), (b)–(i), (c)–(iii), (d)–(iv)

Question Number : 101 Question Id : 91394311709 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 2 Wrong Marks : 0

Match the two lists and choose the correct answer from the code given below :

| List I | | List II | |
|---|---|---|---|
| (a) | $a \times b - c \times d$ | (i) | $3*x*x + 2*x + 5$ |
| (b) | $(m + n)(a + b)$ | (ii) | $a*b - c*d$ |
| (c) | $3x^2 + 2x + 5$ | (iii) | $(a + b * c)/(d + e)$ |
| (d) | $\dfrac{(a + b \times c)}{d + e}$ | (iv) | $(m + n) * (a + b)$ |

Code :

Options :

91394346001. (a)–(ii), (b)–(iv), (c)–(i), (d)–(iii)

91394346002. (a)–(iv), (b)–(ii), (c)–(iii), (d)–(i)

91394346003. (a)–(i), (b)–(ii), (c)–(iii), (d)–(iv)

91394346004. (a)–(iii), (b)–(iv), (c)–(ii), (d)–(i)

Question Number : 101 Question Id : 91394311709 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 2 Wrong Marks : 0

Match the two lists and choose the correct answer from the code given below :

| List I | | List II | |
|---|---|---|---|
| (a) | $a \times b - c \times d$ | (i) | $3*x*x + 2*x + 5$ |
| (b) | $(m + n)(a + b)$ | (ii) | $a*b - c*d$ |
| (c) | $3x^2 + 2x + 5$ | (iii) | $(a + b * c)/(d + e)$ |
| (d) | $\dfrac{(a + b \times c)}{d + e}$ | (iv) | $(m + n) * (a + b)$ |

Code :

Options :

91394346001. (a)–(ii), (b)–(iv), (c)–(i), (d)–(iii)

91394346002. (a)–(iv), (b)–(ii), (c)–(iii), (d)–(i)

91394346003. (a)–(i), (b)–(ii), (c)–(iii), (d)–(iv)

91394346004. (a)–(iii), (b)–(iv), (c)–(ii), (d)–(i)

Question Number : 102  Question Id : 91394311710  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes
Single Line Question Option : No  Option Orientation : Vertical
Correct Marks : 2  Wrong Marks : 0

Match the two lists and choose the correct answer from the code given below :

| List I | List II |
|--------|---------|
| (a) x ! = y | (i)  x is less than y |
| (b) x < y | (ii)  x is greater than y |
| (c) x > y | (iii) x is less than or equal to y |
| (d) x <= y | (iv) x is not equal to y |

Code :

Options :

91394346005. (a)–(iv), (b)–(i), (c)–(ii), (d)–(iii)

91394346006. (a)–(iii), (b)–(iv), (c)–(ii), (d)–(i)

91394346007. (a)–(i), (b)–(ii), (c)–(iii), (d)–(iv)

91394346008. (a)–(iii), (b)–(ii), (c)–(iv), (d)–(i)

Question Number : 102  Question Id : 91394311710  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes
Single Line Question Option : No  Option Orientation : Vertical
Correct Marks : 2  Wrong Marks : 0

Match the two lists and choose the correct answer from the code given below :

| List I | List II |
|--------|---------|
| (a) x ! = y | (i)  x is less than y |
| (b) x < y | (ii)  x is greater than y |
| (c) x > y | (iii) x is less than or equal to y |
| (d) x <= y | (iv) x is not equal to y |

Code :

Options :

91394346005. (a)–(iv), (b)–(i), (c)–(ii), (d)–(iii)

91394346006.  (a)–(iii), (b)–(iv), (c)–(ii), (d)–(i)

91394346007.  (a)–(i), (b)–(ii), (c)–(iii), (d)–(iv)

91394346008.  (a)–(iii), (b)–(ii), (c)–(iv), (d)–(i)

Question Number : 103  Question Id : 91394311711  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes
Single Line Question Option : No  Option Orientation : Vertical
Correct Marks : 2  Wrong Marks : 0

Match the two lists and choose the correct answer from the code given below :

| List I | List II |
|--------|---------|
| (a) TE mode | (i) No magnetic field in the direction of propagation |
| (b) TM mode | (ii) No electric, no magnetic field in the direction of propagation |
| (c) TEM mode | (iii) Both electric and magnetic field present in the direction of propagation |
| (d) Hybrid mode | (iv) No electric field in the direction of propagation |

Code :

Options :

91394346009.  (a)–(iv), (b)–(iii), (c)–(i), (d)–(ii)

91394346010.  (a)–(iv), (b)–(ii), (c)–(i), (d)–(iii)

91394346011.  (a)–(iv), (b)–(i), (c)–(ii), (d)–(iii)

91394346012.  (a)–(i), (b)–(iv), (c)–(ii), (d)–(iii)

Question Number : 103  Question Id : 91394311711  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes
Single Line Question Option : No  Option Orientation : Vertical
Correct Marks : 2  Wrong Marks : 0

Match the two lists and choose the correct answer from the code given below :

| List I | List II |
|--------|---------|
| (a) TE mode | (i) No magnetic field in the direction of propagation |
| (b) TM mode | (ii) No electric, no magnetic field in the direction of propagation |
| (c) TEM mode | (iii) Both electric and magnetic field present in the direction of propagation |
| (d) Hybrid mode | (iv) No electric field in the direction of propagation |

Code :

Options :

91394346009.  (a)–(iv), (b)–(iii), (c)–(i), (d)–(ii)

91394346010.    (a)–(iv), (b)–(ii), (c)–(i), (d)–(iii)

91394346011.    (a)–(iv), (b)–(i), (c)–(ii), (d)–(iii)

91394346012.    (a)–(i), (b)–(iv), (c)–(ii), (d)–(iii)


Question Number : 104  Question Id : 91394311712  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes
Single Line Question Option : No  Option Orientation : Vertical
Correct Marks : 2  Wrong Marks : 0

Match the two lists and choose the correct answer from the code given below :

| List I | List II |
|---|---|
| (a) Travelling wave tube | (i) kW – MW output power |
| (b) Magnetron | (ii) Low frequency operation |
| (c) Triodes | (iii) Low power output |
| (d) Gunn diode | (iv) Slow wave circuits |

**Code :**

Options :

91394346013.    (a)–(iv), (b)–(ii), (c)–(i), (d)–(iii)

91394346014.    (a)–(iv), (b)–(iii), (c)–(ii), (d)–(i)

91394346015.    (a)–(iv), (b)–(i), (c)–(ii), (d)–(iii)

91394346016.    (a)–(i), (b)–(iv), (c)–(iii), (d)–(ii)


Question Number : 104  Question Id : 91394311712  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes
Single Line Question Option : No  Option Orientation : Vertical
Correct Marks : 2  Wrong Marks : 0

Match the two lists and choose the correct answer from the code given below :

| List I | List II |
|---|---|
| (a) Travelling wave tube | (i) kW – MW output power |
| (b) Magnetron | (ii) Low frequency operation |
| (c) Triodes | (iii) Low power output |
| (d) Gunn diode | (iv) Slow wave circuits |

**Code :**

Options :

91394346013.    (a)–(iv), (b)–(ii), (c)–(i), (d)–(iii)

91394346014.    (a)–(iv), (b)–(iii), (c)–(ii), (d)–(i)

91394346015.    (a)–(iv), (b)–(i), (c)–(ii), (d)–(iii)

91394346016.    (a)–(i), (b)–(iv), (c)–(iii), (d)–(ii)

Match the two lists and choose the correct answer from the code given below :

| List I | List II |
|---|---|
| (a) Foster Seeley discriminator | (i)  Optical fibre |
| (b) Envelope detector | (ii)  Microwave |
| (c) APD detector | (iii) AM wave |
| (d) PIN detector | (iv) FM signal |

**Code :**

Options :

91394346017.    (a)–(iii), (b)–(iv), (c)–(ii), (d)–(i)

91394346018.    (a)–(ii), (b)–(iii), (c)–(i), (d)–(iv)

91394346019.    (a)–(iv), (b)–(iii), (c)–(i), (d)–(ii)

91394346020.    (a)–(ii), (b)–(iv), (c)–(i), (d)–(iii)

Match the two lists and choose the correct answer from the code given below :

| List I | List II |
|---|---|
| (a) Foster Seeley discriminator | (i)  Optical fibre |
| (b) Envelope detector | (ii)  Microwave |
| (c) APD detector | (iii) AM wave |
| (d) PIN detector | (iv) FM signal |

**Code :**

Options :

91394346017.    (a)–(iii), (b)–(iv), (c)–(ii), (d)–(i)

91394346018.    (a)–(ii), (b)–(iii), (c)–(i), (d)–(iv)

91394346019.    (a)–(iv), (b)–(iii), (c)–(i), (d)–(ii)

(a)–(ii), (b)–(iv), (c)–(i), (d)–(iii)

91394346020.

Match the two lists and choose the correct answer from the code given below :

| List I | List II |
|---|---|
| (a) AM-modulator | (i) Phase discrimination |
| (b) VSB | (ii) Balanced modulator |
| (c) SSB | (iii) Chopper type |
| (d) DSB | (iv) Phase cancellation method |

**Code :**

Options :

91394346021. (a)–(iv), (b)–(i), (c)–(iii), (d)–(ii)

91394346022. (a)–(iv), (b)–(iii), (c)–(i), (d)–(ii)

91394346023. (a)–(i), (b)–(iii), (c)–(ii), (d)–(iv)

91394346024. (a)–(iii), (b)–(i), (c)–(iv), (d)–(ii)

Match the two lists and choose the correct answer from the code given below :

| List I | List II |
|---|---|
| (a) $V_{rms}$ of half wave rectifier output | (i) $\dfrac{2V_m}{\pi}$ |
| (b) $V_{rms}$ of bridge rectifier output | (ii) $\dfrac{V_m}{\pi}$ |
| (c) $V_{dc}$ (half wave rectifier output) | (iii) $V$ |
| (d) $V_{dc}$ (full wave output of full wave rectifier) | (iv) $\dfrac{V}{\sqrt{2}}$ |

**Code :**

Options :

91394346025.   (a)–(ii), (b)–(iii), (c)–(iv), (d)–(i)

91394346026.   (a)–(iv), (b)–(iii), (c)–(i), (d)–(ii)

91394346027.   (a)–(iii), (b)–(iv), (c)–(i), (d)–(ii)

91394346028.   (a)–(iv), (b)–(iii), (c)–(ii), (d)–(i)

91394346026.    (a)–(iv), (b)–(iii), (c)–(i), (d)–(ii)

91394346027.    (a)–(iii), (b)–(iv), (c)–(i), (d)–(ii)

91394346028.    (a)–(iv), (b)–(iii), (c)–(ii), (d)–(i)

Match the two lists and choose the correct answer from the code given below :

| List I | | List II | |
|---|---|---|---|
| (a) | V-number | (i) | $V^2/2$ |
| (b) | Birefringence | (ii) | $x_1 \sqrt{2\Delta}$ |
| (c) | No. of modes | (iii) | $k_0 (n_y - n_x)$ |
| (d) | N.A. | (iv) | $\dfrac{2\pi a}{\pi} \sqrt{n_1^2 - n_2^2}$ |

**Code :**

Options :

91394346029.    (a)–(iii), (b)–(iv), (c)–(ii), (d)–(i)

91394346030.    (a)–(iv), (b)–(iii), (c)–(i), (d)–(ii)

91394346031.    (a)–(i), (b)–(ii), (c)–(iv), (d)–(iii)

91394346032.    (a)–(ii), (b)–(i), (c)–(iv), (d)–(iii)

Match the two lists and choose the correct answer from the code given below :

| | List I | | List II |
|---|---|---|---|
| (a) | V-number | (i) | $V^2/2$ |
| (b) | Birefringence | (ii) | $x_1 \sqrt{2\Delta}$ |
| (c) | No. of modes | (iii) | $k_0 (n_y - n_x)$ |
| (d) | N.A. | (iv) | $\dfrac{2\pi a}{\pi} \sqrt{n_1^2 - n_2^2}$ |

**Code :**

Options :

91394346029.   (a)–(iii), (b)–(iv), (c)–(ii), (d)–(i)

91394346030.   (a)–(iv), (b)–(iii), (c)–(i), (d)–(ii)

91394346031.   (a)–(i), (b)–(ii), (c)–(iv), (d)–(iii)

91394346032.   (a)–(ii), (b)–(i), (c)–(iv), (d)–(iii)

Match the two lists and choose the correct answer from the code given below :

| List I | List II |
|---|---|
| (a) $\sin 2t$ | (i) |
| (b) $e^{-2t}$ | (ii) |
| (c) $e^{-2t}\sin 2t$ | (iii) |
| (d) $1-e^{-2t}$ | (iv) |

(i) $j\omega$ axis, $\times$ at $-2$ and $\times$ at $0$ on $\sigma$ axis.

(ii) $\times$ at $j2$ and $\times$ at $-j2$ on the $j\omega$ axis, $0$ origin.

(iii) $j\omega$ axis, $\times$ at $-2$ on $\sigma$ axis.

(iv) $\times$ at $-2 + j2$ and $\times$ at $-2 - j2$, with $\times$ at $-2$ on $\sigma$ axis.

**Code :**

Options :

91394346033.  (a)–(ii), (b)–(iii), (c)–(iv), (d)–(i)

91394346034.  (a)–(iii), (b)–(iv), (c)–(i), (d)–(ii)

91394346035.  (a)–(iii), (b)–(iv), (c)–(ii), (d)–(i)

91394346036.  (a)–(ii), (b)–(i), (c)–(iv), (d)–(iii)

Match the two lists and choose the correct answer from the code given below :

| List I | List II |
|---|---|

(a) $\sin 2t$

(i)



(b) $e^{-2t}$

(ii)



(c) $e^{-2t} \sin 2t$

(iii)



(d) $1 - e^{-2t}$

(iv)



## Code :

Options :

91394346033. (a)–(ii), (b)–(iii), (c)–(iv), (d)–(i)

91394346034. (a)–(iii), (b)–(iv), (c)–(i), (d)–(ii)

91394346035. (a)–(iii), (b)–(iv), (c)–(ii), (d)–(i)

91394346036.     (a)–(ii), (b)–(i), (c)–(iv), (d)–(iii)

Match the two lists and choose the correct answer from the code given below :

| List I (Function) | List II (Laplace transform) |
|---|---|
| (a)  $tx(t)$ | (i)  $\displaystyle\int_{s}^{\infty} x(s)\,ds$ |
| (b)  $\dfrac{x(t)}{t}$ | (ii)  $\underset{s \to \infty}{\text{Limit}}\; s\,x(s)$ |
| (c)  $x(0^-)$ | (iii)  $\underset{s \to 0}{\text{Limit}}\; s\,x(s)$ |
| (d)  $x(\infty)$ | (iv)  $\dfrac{-\,dx(s)}{ds}$ |

**Code :**

Options :

91394346037.     (a)–(i), (b)–(ii), (c)–(iii), (d)–(iv)

91394346038.     (a)–(iv), (b)–(i), (c)–(ii), (d)–(iii)

91394346039.     (a)–(iv), (b)–(i), (c)–(iii), (d)–(ii)

91394346040.     (a)–(i), (b)–(iv), (c)–(ii), (d)–(iii)

Match the two lists and choose the correct answer from the code given below :

| List I (Function) | List II (Laplace transform) |
|---|---|

(a) $tx(t)$  (i) $\displaystyle\int_{s}^{\infty} x(s)\,ds$

(b) $\dfrac{x(t)}{t}$  (ii) $\underset{s \to \infty}{\text{Limit}}\ s\,x(s)$

(c) $x(0^-)$  (iii) $\underset{s \to 0}{\text{Limit}}\ s\,x(s)$

(d) $x(\infty)$  (iv) $\dfrac{-\,dx(s)}{ds}$

**Code :**

Options :

91394346037.  (a)–(i), (b)–(ii), (c)–(iii), (d)–(iv)

91394346038.  (a)–(iv), (b)–(i), (c)–(ii), (d)–(iii)

91394346039.  (a)–(iv), (b)–(i), (c)–(iii), (d)–(ii)

91394346040.  (a)–(i), (b)–(iv), (c)–(ii), (d)–(iii)

Sub-Section Number:  4
Sub-Section Id:  913943593
Question Shuffling Allowed :  Yes

In bipolar I.C. technology, the n-p-n transistors have the following regions :

(i) Emitter

(ii) Base

(iii) Collector

(iv) Substrate

Arrange them in ascending order of their resistance offered.

Options :

91394346041.  (i), (ii), (iii), (iv)

91394346042. (ii), (iii), (iv), (i)

91394346043. (iii), (iv), (i), (ii)

91394346044. (iv), (i), (ii), (iii)

**Question Number : 111 Question Id : 91394311719 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 2 Wrong Marks : 0**

In bipolar I.C. technology, the n-p-n transistors have the following regions :

(i)    Emitter

(ii)   Base

(iii)  Collector

(iv)  Substrate

Arrange them in ascending order of their resistance offered.

Options :

91394346041. (i), (ii), (iii), (iv)

91394346042. (ii), (iii), (iv), (i)

91394346043. (iii), (iv), (i), (ii)

91394346044. (iv), (i), (ii), (iii)

**Question Number : 112 Question Id : 91394311720 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 2 Wrong Marks : 0**

Consider the following two-mesh network :



(i) The power dissipated in 1 $\Omega$ resistor is $P_1$

(ii) The power dissipated in 2 $\Omega$ resistor is $P_2$

(iii) The power dissipated in 3 $\Omega$ resistor is $P_3$

(iv) The power supplied by the source is P

Arrange above in increasing order of power.

Options :

91394346045.    (i), (ii), (iii), (iv)

91394346046.    (i), (iii), (ii), (iv)

91394346047.    (iii), (i), (ii), (iv)

91394346048.    (ii), (iii), (i), (iv)

Question Number : 112  Question Id : 91394311720  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes
Single Line Question Option : No  Option Orientation : Vertical
Correct Marks : 2  Wrong Marks : 0

Consider the following two-mesh network :



(i)     The power dissipated in $1\ \Omega$ resistor is $P_1$

(ii)    The power dissipated in $2\ \Omega$ resistor is $P_2$

(iii)   The power dissipated in $3\ \Omega$ resistor is $P_3$

(iv)    The power supplied by the source is $P$

Arrange above in increasing order of power.

Options :

91394346045.     (i), (ii), (iii), (iv)

91394346046.     (i), (iii), (ii), (iv)

91394346047.     (iii), (i), (ii), (iv)

91394346048.     (ii), (iii), (i), (iv)

A 120 V, 20 Hz source supplies a series circuit consisting of a $5\ \Omega$ capacitive reactance, a $1.6\ \Omega$ resistor, and a coil with resistance and inductive reactance of $3\ \Omega$ and $1.2\ \Omega$ respectively.

(i)     The input impedance is $Z$

(ii)    The circuit current is $I$

(iii)   The voltage across the coil is $V_L$

(iv)    The resonant frequency $f_r$

Arrange the above in increasing order of their numerical values.

Options :

91394346049.     (i), (ii), (iv), (iii)

91394346050. (iv), (iii), (ii), (i)

91394346051. (iv), (ii), (iii), (i)

91394346052. (i), (ii), (iii), (iv)

A 120 V, 20 Hz source supplies a series circuit consisting of a 5 $\Omega$ capacitive reactance, a 1·6 $\Omega$ resistor, and a coil with resistance and inductive reactance of 3 $\Omega$ and 1·2 $\Omega$ respectively.

(i)    The input impedance is Z

(ii)   The circuit current is I

(iii)  The voltage across the coil is $V_L$

(iv)   The resonant frequency $f_r$

Arrange the above in increasing order of their numerical values.

Options :

91394346049. (i), (ii), (iv), (iii)

91394346050. (iv), (iii), (ii), (i)

91394346051. (iv), (ii), (iii), (i)

91394346052. (i), (ii), (iii), (iv)

The following materials are given :

(i)    Carbon

(ii)   Silicon carbide

(iii)  Silicon nitride

(iv)   Gallium nitride

Arrange them in ascending order of their dielectric consistent.

Options :

91394346053. (i), (iii), (ii), (iv)

91394346054.   (ii), (iii), (iv), (i)

91394346055.   (iii), (iv), (i), (ii)

91394346056.   (iv), (i), (ii), (iii)

Question Number : 114  Question Id : 91394311722  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes
Single Line Question Option : No  Option Orientation : Vertical
Correct Marks : 2  Wrong Marks : 0

The following materials are given :

(i)   Carbon

(ii)  Silicon carbide

(iii) Silicon nitride

(iv)  Gallium nitride

**Arrange them in ascending order of their dielectric consistent.**

Options :

91394346053.   (i), (iii), (ii), (iv)

91394346054.   (ii), (iii), (iv), (i)

91394346055.   (iii), (iv), (i), (ii)

91394346056.   (iv), (i), (ii), (iii)

Question Number : 115  Question Id : 91394311723  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes
Single Line Question Option : No  Option Orientation : Vertical
Correct Marks : 2  Wrong Marks : 0

Arrange the following materials in ascending order of their diffusivity in Silicon.

(i)   Li

(ii)  Na

(iii) K

(iv)  Ag

Options :

91394346057.   (i), (ii), (iii), (iv)

91394346058.   (iii), (ii), (iv), (i)

91394346059.    (iv), (iii), (i), (ii)

91394346060.    (ii), (i), (iv), (iii)

Question Number : 115  Question Id : 91394311723  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes
Single Line Question Option : No  Option Orientation : Vertical
Correct Marks : 2  Wrong Marks : 0

Arrange the following materials in ascending order of their diffusivity in Silicon.

(i)   Li

(ii)  Na

(iii) K

(iv)  Ag

Options :

91394346057.    (i), (ii), (iii), (iv)

91394346058.    (iii), (ii), (iv), (i)

91394346059.    (iv), (iii), (i), (ii)

91394346060.    (ii), (i), (iv), (iii)

Question Number : 116  Question Id : 91394311724  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes
Single Line Question Option : No  Option Orientation : Vertical
Correct Marks : 2  Wrong Marks : 0

Following are the intercepts for SIM instruction :

(i)   Serial Output Data (SOD)

(ii)  Mark Set Enable (MSE)

(iii) SOD Enable (SDE)

(iv)  Reset RST 7·5 (R7·5)

Arrange them in ascending order.

Options :

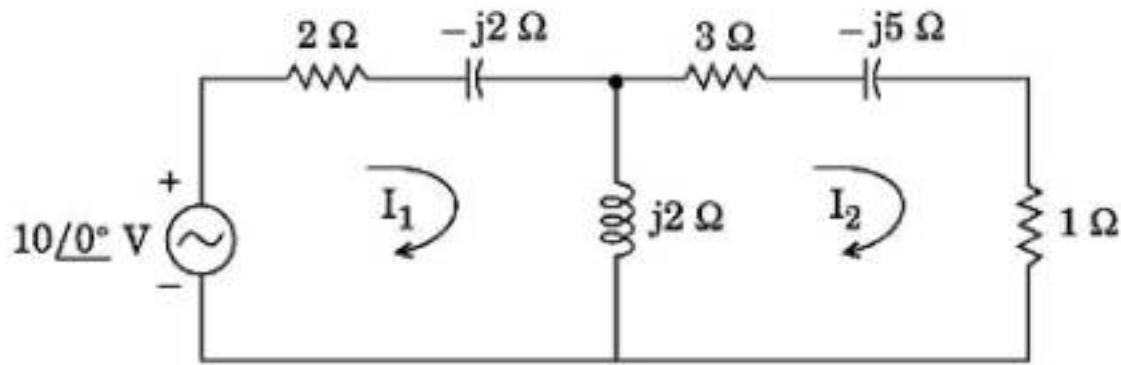91394346061.    (ii), (iv), (iii), (i)

91394346062.    (iv), (ii), (iii), (i)

91394346063.    (i), (ii), (iii), (iv)

91394346064.    (ii), (iii), (iv), (i)

Question Number : 116 Question Id : 91394311724 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 2 Wrong Marks : 0

Following are the intercepts for SIM instruction :

(i)   Serial Output Data (SOD)

(ii)  Mark Set Enable (MSE)

(iii) SOD Enable (SDE)

(iv) Reset RST 7·5 (R7·5)

Arrange them in ascending order.

Options :

91394346061.    (ii), (iv), (iii), (i)

91394346062.    (iv), (ii), (iii), (i)

91394346063.    (i), (ii), (iii), (iv)

91394346064.    (ii), (iii), (iv), (i)

Question Number : 117 Question Id : 91394311725 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 2 Wrong Marks : 0

Which of the following operations on pointers would never work out ?

(i)   Pointer variables can be compared provided both variables point to objects of the same
data type

(ii)  Addition of two pointers

(iii) Division of a pointer with a constant

(iv) Multiplication of a pointer with a constant

Options :

91394346065.    (i), (ii) and (iii)

91394346066.    (i), (ii) and (iv)

91394346067.    (ii), (iii) and (iv)

91394346068.    (i), (iii) and (iv)

Question Number : 117  Question Id : 91394311725  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes
Single Line Question Option : No  Option Orientation : Vertical
Correct Marks : 2  Wrong Marks : 0

Which of the following operations on pointers would never work out ?

(i) Pointer variables can be compared provided both variables point to objects of the same data type

(ii) Addition of two pointers

(iii) Division of a pointer with a constant

(iv) Multiplication of a pointer with a constant

Options :

91394346065.  (i), (ii) and (iii)

91394346066.  (i), (ii) and (iv)

91394346067.  (ii), (iii) and (iv)

91394346068.  (i), (iii) and (iv)

Question Number : 118  Question Id : 91394311726  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes
Single Line Question Option : No  Option Orientation : Vertical
Correct Marks : 2  Wrong Marks : 0

Which of the following are correct ?

(i) All elements of an array are ints

(ii) All elements of an array are floats

(iii) Some elements of an array can be ints and other floats

(iv) All elements of an array are chars

Options :

91394346069.  (i), (ii) and (iii)

91394346070.  (i), (ii) and (iv)

91394346071.  (ii), (iii) and (iv)

91394346072.  (i), (iii) and (iv)

Which of the following are correct ?

(i)   All elements of an array are ints

(ii)  All elements of an array are floats

(iii) Some elements of an array can be ints and other floats

(iv)  All elements of an array are chars

Options :

91394346069.  (i), (ii) and (iii)

91394346070.  (i), (ii) and (iv)

91394346071.  (ii), (iii) and (iv)

91394346072.  (i), (iii) and (iv)

Question Number : 119  Question Id : 91394311727  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes
Single Line Question Option : No  Option Orientation : Vertical
Correct Marks : 2  Wrong Marks : 0

Following are the light transmission mediums :

(i)    Glass

(ii)   GaAs

(iii)  Diamond

(iv)   Water

Arrange their refractive index in descending order. The correct sequence is given by

Options :

91394346073.  (iv), (ii), (i), (iii)

91394346074.  (ii), (i), (iii), (iv)

91394346075.  (i), (ii), (iv), (iii)

91394346076.  (ii), (iii), (i), (iv)

Question Number : 119  Question Id : 91394311727  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes
Single Line Question Option : No  Option Orientation : Vertical
Correct Marks : 2  Wrong Marks : 0

Following are the light transmission mediums :

(i)   Glass

(ii)  GaAs

(iii) Diamond

(iv)  Water

Arrange their refractive index in descending order. The correct sequence is given by

Options :

91394346073.   (iv), (ii), (i), (iii)

91394346074.   (ii), (i), (iii), (iv)

91394346075.   (i), (ii), (iv), (iii)

91394346076.   (ii), (iii), (i), (iv)

Question Number : 120  Question Id : 91394311728  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes
Single Line Question Option : No  Option Orientation : Vertical
Correct Marks : 2  Wrong Marks : 0

Arrange in increasing order of their transmission distance without using repeater.

(i)   Metal wired transmission

(ii)  Wireless transmission

(iii) Frequency modulated wave transmission

(iv)  Ground waves transmission

Options :

91394346077.   (ii), (i), (iv), (iii)

91394346078.   (ii), (iii), (i), (iv)

91394346079.   (i), (ii), (iii), (iv)

91394346080.   (ii), (i), (iii), (iv)

Question Number : 120  Question Id : 91394311728  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes
Single Line Question Option : No  Option Orientation : Vertical
Correct Marks : 2  Wrong Marks : 0

Arrange in increasing order of their transmission distance without using repeater.

(i) Metal wired transmission

(ii) Wireless transmission

(iii) Frequency modulated wave transmission

(iv) Ground waves transmission

Options :

91394346077.　(ii), (i), (iv), (iii)

91394346078.　(ii), (iii), (i), (iv)

91394346079.　(i), (ii), (iii), (iv)

91394346080.　(ii), (i), (iii), (iv)

Question Number : 121  Question Id : 91394311729  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical
Correct Marks : 2  Wrong Marks : 0

Arrange in increasing order of Null-to-Null RF bandwidth (Hz) of the following binary bandpass signals.

(i) QPSK

(ii) MSK

(iii) Sunde's FSK

(iv) ASK

Options :

91394346081.　(iii), (iv), (ii), (i)

91394346082.　(iv), (i), (ii), (iii)

91394346083.　(i), (ii), (iv), (iii)

91394346084.　(iv), (ii), (i), (iii)

Question Number : 121  Question Id : 91394311729  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical
Correct Marks : 2  Wrong Marks : 0

Arrange in increasing order of Null-to-Null RF bandwidth (Hz) of the following binary bandpass signals.

(i)     QPSK

(ii)    MSK

(iii)   Sunde's FSK

(iv)    ASK

Options :

91394346081.    (iii), (iv), (ii), (i)

91394346082.    (iv), (i), (ii), (iii)

91394346083.    (i), (ii), (iv), (iii)

91394346084.    (iv), (ii), (i), (iii)

Question Number : 122  Question Id : 91394311730  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes Single Line Question Option : No  Option Orientation : Vertical
Correct Marks : 2  Wrong Marks : 0

Arrange in increasing order of the transistors used in the below mentioned circuits.

(i)     TTL NAND (Totem Pole Circuit)

(ii)    DTL NAND Gate

(iii)   ECL NOR Gate

(iv)    CMOS inverter

Options :

91394346085.    (i), (ii), (iii), (iv)

91394346086.    (ii), (iv), (iii), (i)

91394346087.    (iii), (iv), (i), (ii)

91394346088.    (iv), (ii), (iii), (i)

Question Number : 122  Question Id : 91394311730  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes Single Line Question Option : No  Option Orientation : Vertical
Correct Marks : 2  Wrong Marks : 0

Arrange in increasing order of the transistors used in the below mentioned circuits.

(i)   TTL NAND (Totem Pole Circuit)

(ii)  DTL NAND Gate

(iii) ECL NOR Gate

(iv)  CMOS inverter

Options :

91394346085.   (i), (ii), (iii), (iv)

91394346086.   (ii), (iv), (iii), (i)

91394346087.   (iii), (iv), (i), (ii)

91394346088.   (iv), (ii), (iii), (i)

Consider the unit step response of the system defined as $G(s) = \dfrac{g}{(s+10)}$

and read the following.

(i)    $K_g$ is the gain of the system

(ii)   $R_t$ is the transient response of the system

(iii)  $E_{ss}$ is the steady-state error of the system

Arrange the above in increasing order of their numerical values for the given system.

Options :

91394346089.   (i), (ii), (iii)

91394346090.   (i), (iii), (ii)

91394346091.   (iii), (ii), (i)

91394346092.   (ii), (iii), (i)

Consider the unit step response of the system defined as $G(s) = \dfrac{g}{(s+10)}$

and read the following.

(i) $K_g$ is the gain of the system

(ii) $R_t$ is the transient response of the system

(iii) $E_{ss}$ is the steady-state error of the system

Arrange the above in increasing order of their numerical values for the given system.

Options :

91394346089. (i), (ii), (iii)

91394346090. (i), (iii), (ii)

91394346091. (iii), (ii), (i)

91394346092. (ii), (iii), (i)

Following are the modulation schemes :

(i) AM

(ii) FM

(iii) DWDM

(iv) CWDM

Arrange their adjacent channel band gap in ascending order. The correct sequence is :

Options :

91394346093. (i), (ii), (iv), (iii)

91394346094. (i), (ii), (iii), (iv)

91394346095. (iv), (i), (ii), (iii)

91394346096. (ii), (i), (iv), (iii)

Correct Marks : 2  Wrong Marks : 0

Following are the modulation schemes :

(i)     AM

(ii)    FM

(iii)   DWDM

(iv)    CWDM

Arrange their adjacent channel band gap in ascending order. The correct sequence is :

Options :

91394346093.    (i), (ii), (iv), (iii)

91394346094.    (i), (ii), (iii), (iv)

91394346095.    (iv), (i), (ii), (iii)

91394346096.    (ii), (i), (iv), (iii)

Question Number : 125  Question Id : 91394311733  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes
Single Line Question Option : No  Option Orientation : Vertical
Correct Marks : 2  Wrong Marks : 0

Consider the following materials :

(i)     Quartz

(ii)    Ammonium dihydrogen phosphate

(iii)   Lithium sulphate

Arrange the above materials in decreasing order of their dielectric constants.

Options :

91394346097.    (i), (ii), (iii)

91394346098.    (ii), (iii), (i)

91394346099.    (iii), (ii), (i)

91394346100.    (i), (iii), (ii)

Question Number : 125  Question Id : 91394311733  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes
Single Line Question Option : No  Option Orientation : Vertical
Correct Marks : 2  Wrong Marks : 0

Consider the following materials :

(i)   Quartz

(ii)  Ammonium dihydrogen phosphate

(iii) Lithium sulphate

Arrange the above materials in decreasing order of their dielectric constants.

Options :

91394346097.  (i), (ii), (iii)

91394346098.  (ii), (iii), (i)

91394346099.  (iii), (ii), (i)

91394346100.  (i), (iii), (ii)

The following items consist of two statements, one labelled as **"Assertion (A)"** and the other labelled as the **"Reason (R)"**. You are to examine the two statements carefully and decide if the **Assertion (A)** and the **Reason (R)** are individually true and if so whether the reason is a correct explanation of the assertion. Select your answer to these items using the codes given below and mark your answer accordingly.

*Assertion (A)* : Nyquist rate of sampling is the theoretical minimum sampling rate at which signal can be sampled and still be reconstructed from its samples.

*Reason (R)* : When the Nyquist rate sampling is used, only an ideal low pass filter can be used to extract signal x(t) from sampled signal $x_s(t)$.

**Code :**

Options :

91394346101.  Both (A) and (R) are true and (R) is the correct explanation of (A).

91394346102.  Both (A) and (R) are true, but (R) is not the correct explanation of (A).

91394346103.  (A) is true, but (R) is false.

(A) is false, but (R) is true.
91394346104.

Question Number : 126  Question Id : 91394311734  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes
Single Line Question Option : No  Option Orientation : Vertical
Correct Marks : 2  Wrong Marks : 0

The following items consist of two statements, one labelled as **"Assertion (A)"** and the other labelled as the **"Reason (R)"**. You are to examine the two statements carefully and decide if the **Assertion (A)** and the **Reason (R)** are individually true and if so whether the reason is a correct explanation of the assertion. Select your answer to these items using the codes given below and mark your answer accordingly.

*Assertion (A)* : Nyquist rate of sampling is the theoretical minimum sampling rate at which signal can be sampled and still be reconstructed from its samples.

*Reason (R)* : When the Nyquist rate sampling is used, only an ideal low pass filter can be used to extract signal x(t) from sampled signal $x_s$(t).

**Code :**

Options :

91394346101.   Both (A) and (R) are true and (R) is the correct explanation of (A).

91394346102.   Both (A) and (R) are true, but (R) is not the correct explanation of (A).

91394346103.   (A) is true, but (R) is false.

91394346104.   (A) is false, but (R) is true.

Question Number : 127  Question Id : 91394311735  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes
Single Line Question Option : No  Option Orientation : Vertical
Correct Marks : 2  Wrong Marks : 0

The following items consist of two statements, one labelled as **"Assertion (A)"** and the other labelled as the **"Reason (R)"**. You are to examine the two statements carefully and decide if the **Assertion (A)** and the **Reason (R)** are individually true and if so whether the reason is a correct explanation of the assertion. Select your answer to these items using the codes given below and mark your answer accordingly.

*Assertion (A)* : A sphygmomanometer is always used in conjunction with a means to determine at what pressure, blood flow is just starting, and at what pressure it is unimpeded.

*Reason (R)* : Manual sphygmomanometers are used in conjunction with a stethoscope.

**Code :**

Options :

91394346105.   Both (A) and (R) are true and (R) is the correct explanation of (A).

91394346106.    Both (A) and (R) are true, but (R) is not the correct explanation of (A).

91394346107.    (A) is true, but (R) is false.

91394346108.    (A) is false, but (R) is true.

Question Number : 127  Question Id : 91394311735  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes
Single Line Question Option : No  Option Orientation : Vertical
Correct Marks : 2  Wrong Marks : 0

The following items consist of two statements, one labelled as **"Assertion (A)"** and the other
labelled as the **"Reason (R)"**. You are to examine the two statements carefully and decide if
the **Assertion (A)** and the **Reason (R)** are individually true and if so whether the reason
is a correct explanation of the assertion. Select your answer to these items using the codes
given below and mark your answer accordingly.

*Assertion (A)* : A sphygmomanometer is always used in conjunction with a means to
determine at what pressure, blood flow is just starting, and at what pressure it is
unimpeded.

*Reason (R)* : Manual sphygmomanometers are used in conjunction with a stethoscope.

**Code :**

Options :

91394346105.    Both (A) and (R) are true and (R) is the correct explanation of (A).

91394346106.    Both (A) and (R) are true, but (R) is not the correct explanation of (A).

91394346107.    (A) is true, but (R) is false.

91394346108.    (A) is false, but (R) is true.

Question Number : 128  Question Id : 91394311736  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes
Single Line Question Option : No  Option Orientation : Vertical
Correct Marks : 2  Wrong Marks : 0

The following items consist of two statements, one labelled as **"Assertion (A)"** and the other
labelled as the **"Reason (R)"**. You are to examine the two statements carefully and decide if
the **Assertion (A)** and the **Reason (R)** are individually true and if so whether the reason
is a correct explanation of the assertion. Select your answer to these items using the codes
given below and mark your answer accordingly.

*Assertion (A)* : The total capacitance of a MOS system is a series combination of insulator
capacitance and semiconductor depletion layer capacitance.

*Reason (R)* : MOS structure is an integral part of MOSFET.

**Code :**

Options :

91394346109.     Both (A) and (R) are true and (R) is the correct explanation of (A).

91394346110.     Both (A) and (R) are true, but (R) is not the correct explanation of (A).

91394346111.     (A) is true, but (R) is false.

91394346112.     (A) is false, but (R) is true.

Question Number : 128  Question Id : 91394311736  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes
Single Line Question Option : No  Option Orientation : Vertical
Correct Marks : 2  Wrong Marks : 0

The following items consist of two statements, one labelled as **"Assertion (A)"** and the other
labelled as the **"Reason (R)"**. You are to examine the two statements carefully and decide if
the **Assertion (A)** and the **Reason (R)** are individually true and if so whether the reason
is a correct explanation of the assertion. Select your answer to these items using the codes
given below and mark your answer accordingly.

*Assertion (A) :* The total capacitance of a MOS system is a series combination of insulator
capacitance and semiconductor depletion layer capacitance.

*Reason (R) :* MOS structure is an integral part of MOSFET.

**Code :**

Options :

91394346109.     Both (A) and (R) are true and (R) is the correct explanation of (A).

91394346110.     Both (A) and (R) are true, but (R) is not the correct explanation of (A).

91394346111.     (A) is true, but (R) is false.

91394346112.     (A) is false, but (R) is true.

Question Number : 129  Question Id : 91394311737  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes
Single Line Question Option : No  Option Orientation : Vertical
Correct Marks : 2  Wrong Marks : 0

The following items consist of two statements, one labelled as **"Assertion (A)"** and the other labelled as the **"Reason (R)"**. You are to examine the two statements carefully and decide if the **Assertion (A)** and the **Reason (R)** are individually true and if so whether the reason is a correct explanation of the assertion. Select your answer to these items using the codes given below and mark your answer accordingly.

*Assertion (A) :*   Silicon devices can be used up to 150°C.

*Reason (R) :*   The energy band gap of Silicon is 1·1 eV.

## Code :

Options :

91394346113.  Both (A) and (R) are true and (R) is the correct explanation of (A).

91394346114.  Both (A) and (R) are true, but (R) is not the correct explanation of (A).

91394346115.  (A) is true, but (R) is false.

91394346116.  (A) is false, but (R) is true.

Question Number : 129  Question Id : 91394311737  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes
Single Line Question Option : No  Option Orientation : Vertical
Correct Marks : 2  Wrong Marks : 0

91394346116.  (A) is false, but (R) is true.

The following items consist of two statements, one labelled as
**"Assertion (A)"** and the other labelled as the **"Reason (R)"**. You are
to examine the two statements carefully and decide if the **Assertion
(A)** and the **Reason (R)** are individually true and if so whether the
reason is a correct explanation of the assertion. Select your answer to
these items using the codes given below and mark your answer
accordingly.

*Assertion (A) :*  The inductor behaves as a short circuit at $s = 0$ and as an
open circuit at $s = \infty$.

*Reason (R) :*  The driving point impedance of an inductor has a zero at
$s = 0$ and a pole at $s = \infty$.

**Code :**

Options :

91394346117.  Both (A) and (R) are true and (R) is the correct explanation of (A).

91394346118.  Both (A) and (R) are true, but (R) is not the correct explanation of (A).

91394346119.  (A) is true, but (R) is false.

91394346120.  (A) is false, but (R) is true.

The following items consist of two statements, one labelled as
**"Assertion (A)"** and the other labelled as the **"Reason (R)"**. You are
to examine the two statements carefully and decide if the **Assertion
(A)** and the **Reason (R)** are individually true and if so whether the
reason is a correct explanation of the assertion. Select your answer to
these items using the codes given below and mark your answer
accordingly.

*Assertion (A) :*  The inductor behaves as a short circuit at $s = 0$ and as an
open circuit at $s = \infty$.

*Reason (R) :*  The driving point impedance of an inductor has a zero at
$s = 0$ and a pole at $s = \infty$.

**Code :**

91394346117. Both (A) and (R) are true and (R) is the correct explanation of (A).

91394346118. Both (A) and (R) are true, but (R) is not the correct explanation of (A).

91394346119. (A) is true, but (R) is false.

91394346120. (A) is false, but (R) is true.

Question Number : 131 Question Id : 91394311739 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

The following items consist of two statements, one labelled as **"Assertion (A)"** and the other labelled as the **"Reason (R)"**. You are to examine the two statements carefully and decide if the **Assertion (A)** and the **Reason (R)** are individually true and if so whether the reason is a correct explanation of the assertion. Select your answer to these items using the codes given below and mark your answer accordingly.

*Assertion (A) :* It is not possible to increase the overall voltage amplification by cascading common collector stages.

*Reason (R) :* The voltage gain of a common collector configuration is less than unity.

**Code :**

Options :

91394346121. Both (A) and (R) are true and (R) is the correct explanation of (A).

91394346122. Both (A) and (R) are true, but (R) is not the correct explanation of (A).

91394346123. (A) is true, but (R) is false.

91394346124. (A) is false, but (R) is true.

Question Number : 131 Question Id : 91394311739 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

The following items consist of two statements, one labelled as **"Assertion (A)"** and the other labelled as the **"Reason (R)"**. You are to examine the two statements carefully and decide if the **Assertion (A)** and the **Reason (R)** are individually true and if so whether the reason is a correct explanation of the assertion. Select your answer to these items using the codes given below and mark your answer accordingly.

*Assertion (A) :* It is not possible to increase the overall voltage amplification by cascading common collector stages.

*Reason (R) :* The voltage gain of a common collector configuration is less than unity.

**Code :**

Options :

91394346121.    Both (A) and (R) are true and (R) is the correct explanation of (A).

91394346122.    Both (A) and (R) are true, but (R) is not the correct explanation of (A).

91394346123.    (A) is true, but (R) is false.

91394346124.    (A) is false, but (R) is true.

Question Number : 132  Question Id : 91394311740  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes
Single Line Question Option : No  Option Orientation : Vertical
Correct Marks : 2  Wrong Marks : 0

The following items consist of two statements, one labelled as **"Assertion (A)"** and the other labelled as the **"Reason (R)"**. You are to examine the two statements carefully and decide if the **Assertion (A)** and the **Reason (R)** are individually true and if so whether the reason is a correct explanation of the assertion. Select your answer to these items using the codes given below and mark your answer accordingly.

*Assertion (A) :* The drain induced barrier lowering and channel length modulation are some of the short channel effects in MOSFET.

*Reason (R) :* The cut-off frequency of a MOSFET is independent of gate to source and gate to drain capacitance.

**Code :**

Options :

91394346125.    Both (A) and (R) are true and (R) is the correct explanation of (A).

91394346126.    Both (A) and (R) are true, but (R) is not the correct explanation of (A).

91394346127.    (A) is true, but (R) is false.

91394346128.    (A) is false, but (R) is true.

Question Number : 132 Question Id : 91394311740 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 2 Wrong Marks : 0

The following items consist of two statements, one labelled as **"Assertion (A)"** and the other
labelled as the **"Reason (R)"**. You are to examine the two statements carefully and decide if
the **Assertion (A)** and the **Reason (R)** are individually true and if so whether the reason
is a correct explanation of the assertion. Select your answer to these items using the codes
given below and mark your answer accordingly.

*Assertion (A) :* The drain induced barrier lowering and channel length modulation are some
of the short channel effects in MOSFET.

*Reason (R) :* The cut-off frequency of a MOSFET is independent of gate to source and gate
to drain capacitance.

**Code :**

Options :

91394346125.    Both (A) and (R) are true and (R) is the correct explanation of (A).

91394346126.    Both (A) and (R) are true, but (R) is not the correct explanation of (A).

91394346127.    (A) is true, but (R) is false.

91394346128.    (A) is false, but (R) is true.


Question Number : 133 Question Id : 91394311741 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 2 Wrong Marks : 0

The following items consist of two statements, one labelled as **"Assertion (A)"** and the other
labelled as the **"Reason (R)"**. You are to examine the two statements carefully and decide if
the **Assertion (A)** and the **Reason (R)** are individually true and if so whether the reason
is a correct explanation of the assertion. Select your answer to these items using the codes
given below and mark your answer accordingly.

*Assertion (A) :* The output of a bipolar transistor inverter does not respond instantaneously
to the input signal and exhibits finite time lag.

*Reason (R) :* The load gate(s) and junction capacitance of bipolar transistor inverter offer a
certain amount of capacitance to the driving inverter.

**Code :**

Options :

91394346129.    Both (A) and (R) are true and (R) is the correct explanation of (A).

91394346130.    Both (A) and (R) are true, but (R) is not the correct explanation of (A).

91394346131.    (A) is true, but (R) is false.

91394346132.    (A) is false, but (R) is true.

The following items consist of two statements, one labelled as **"Assertion (A)"** and the other labelled as the **"Reason (R)"**. You are to examine the two statements carefully and decide if the **Assertion (A)** and the **Reason (R)** are individually true and if so whether the reason is a correct explanation of the assertion. Select your answer to these items using the codes given below and mark your answer accordingly.

*Assertion (A)* : The output of a bipolar transistor inverter does not respond instantaneously to the input signal and exhibits finite time lag.

*Reason (R)* : The load gate(s) and junction capacitance of bipolar transistor inverter offer a certain amount of capacitance to the driving inverter.

**Code :**

Options :

91394346129.    Both (A) and (R) are true and (R) is the correct explanation of (A).

91394346130.    Both (A) and (R) are true, but (R) is not the correct explanation of (A).

91394346131.    (A) is true, but (R) is false.

91394346132.    (A) is false, but (R) is true.

The following items consist of two statements, one labelled as **"Assertion (A)"** and the other labelled as the **"Reason (R)"**. You are to examine the two statements carefully and decide if the **Assertion (A)** and the **Reason (R)** are individually true and if so whether the reason is a correct explanation of the assertion. Select your answer to these items using the codes given below and mark your answer accordingly.

*Assertion (A)* : Thyristor is a switching device. It is required to turn it ON and OFF according to the requirement.

*Reason (R)* : During reverse conduction, gate current is to be supplied through the gate in SCRs.

**Code :**

Options :

91394346133.    Both (A) and (R) are true and (R) is the correct explanation of (A).

91394346134.  Both (A) and (R) are true, but (R) is not the correct explanation of (A).

91394346135.  (A) is true, but (R) is false.

91394346136.  (A) is false, but (R) is true.

Question Number : 134 Question Id : 91394311742 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 2 Wrong Marks : 0

The following items consist of two statements, one labelled as **"Assertion (A)"** and the other labelled as the **"Reason (R)"**. You are to examine the two statements carefully and decide if the **Assertion (A)** and the **Reason (R)** are individually true and if so whether the reason is a correct explanation of the assertion. Select your answer to these items using the codes given below and mark your answer accordingly.

*Assertion (A)* : Thyristor is a switching device. It is required to turn it ON and OFF according to the requirement.

*Reason (R)* : During reverse conduction, gate current is to be supplied through the gate in SCRs.

**Code :**

Options :

91394346133.  Both (A) and (R) are true and (R) is the correct explanation of (A).

91394346134.  Both (A) and (R) are true, but (R) is not the correct explanation of (A).

91394346135.  (A) is true, but (R) is false.

91394346136.  (A) is false, but (R) is true.

Question Number : 135 Question Id : 91394311743 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 2 Wrong Marks : 0

The following items consist of two statements, one labelled as **"Assertion (A)"** and the other labelled as the **"Reason (R)"**. You are to examine the two statements carefully and decide if the **Assertion (A)** and the **Reason (R)** are individually true and if so whether the reason is a correct explanation of the assertion. Select your answer to these items using the codes given below and mark your answer accordingly.

*Assertion (A)* : There are many applications in which digital outputs are required to be generated in accordance to the sequence in which input signals are received.

*Reason (R)* : These belong to such applications which only depend on the present input state.

**Code :**

Options :

Question Number : 135  Question Id : 91394311743  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes
Single Line Question Option : No  Option Orientation : Vertical
Correct Marks : 2  Wrong Marks : 0

The following items consist of two statements, one labelled as **"Assertion (A)"** and the other
labelled as the **"Reason (R)"**. You are to examine the two statements carefully and decide if
the **Assertion (A)** and the **Reason (R)** are individually true and if so whether the reason
is a correct explanation of the assertion. Select your answer to these items using the codes
given below and mark your answer accordingly.

*Assertion (A) :* There are many applications in which digital outputs are required to be
generated in accordance to the sequence in which input signals are received.

*Reason (R) :* These belong to such applications which only depend on the present input
state.

**Code :**

Options :

91394346137.  Both (A) and (R) are true and (R) is the correct explanation of (A).

91394346138.  Both (A) and (R) are true, but (R) is not the correct explanation of (A).

91394346139.  (A) is true, but (R) is false.

91394346140.  (A) is false, but (R) is true.

Question Number : 136  Question Id : 91394311744  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes
Single Line Question Option : No  Option Orientation : Vertical
Correct Marks : 2  Wrong Marks : 0

The following items consist of two statements, one labelled as **"Assertion (A)"** and the other labelled as the **"Reason (R)"**. You are to examine the two statements carefully and decide if the **Assertion (A)** and the **Reason (R)** are individually true and if so whether the reason is a correct explanation of the assertion. Select your answer to these items using the codes given below and mark your answer accordingly.

*Assertion (A) :* In microprocessor, the control buses and address buses are multiplexed. They can be demultiplexed by using ALE signals.

*Reason (R) :* The 8085 microprocessor signals can be classified in various groups, namely address bus, data bus, control bus and status signals, externally initiated signals and acknowledgement, power and frequency, serial I/O signals.

**Code :**

Options :

91394346141. Both (A) and (R) are true and (R) is the correct explanation of (A).

91394346142. Both (A) and (R) are true, but (R) is not the correct explanation of (A).

91394346143. (A) is true, but (R) is false.

91394346144. (A) is false, but (R) is true.

Question Number : 136  Question Id : 91394311744  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes
Single Line Question Option : No  Option Orientation : Vertical
Correct Marks : 2  Wrong Marks : 0

The following items consist of two statements, one labelled as **"Assertion (A)"** and the other labelled as the **"Reason (R)"**. You are to examine the two statements carefully and decide if the **Assertion (A)** and the **Reason (R)** are individually true and if so whether the reason is a correct explanation of the assertion. Select your answer to these items using the codes given below and mark your answer accordingly.

*Assertion (A) :* In microprocessor, the control buses and address buses are multiplexed. They can be demultiplexed by using ALE signals.

*Reason (R) :* The 8085 microprocessor signals can be classified in various groups, namely address bus, data bus, control bus and status signals, externally initiated signals and acknowledgement, power and frequency, serial I/O signals.

**Code :**

Options :

91394346141. Both (A) and (R) are true and (R) is the correct explanation of (A).

91394346142. Both (A) and (R) are true, but (R) is not the correct explanation of (A).

91394346143. (A) is true, but (R) is false.

(A) is false, but (R) is true.

91394346144.

The following items consist of two statements, one labelled as **"Assertion (A)"** and the other labelled as the **"Reason (R)"**. You are to examine the two statements carefully and decide if the **Assertion (A)** and the **Reason (R)** are individually true and if so whether the reason is a correct explanation of the assertion. Select your answer to these items using the codes given below and mark your answer accordingly.

*Assertion (A) :* A multiplexer (MUX) is a device which selects one of the many inputs to a single output.

*Reason (R) :* A digital multiplexer is a sequential circuit that selects binary information from one of the many input lines and directs it to a single output line.

**Code :**

Options :

91394346145.     Both (A) and (R) are true and (R) is the correct explanation of (A).

91394346146.     Both (A) and (R) are true, but (R) is not the correct explanation of (A).

91394346147.     (A) is true, but (R) is false.

91394346148.     (A) is false, but (R) is true.

91394346146.

Both (A) and (R) are true, but (R) is not the correct explanation of (A).

91394346147.

(A) is true, but (R) is false.

91394346148.

(A) is false, but (R) is true.

Question Number : 138  Question Id : 91394311746  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes
Single Line Question Option : No  Option Orientation : Vertical
Correct Marks : 2  Wrong Marks : 0

The following items consist of two statements, one labelled as **"Assertion (A)"** and the other
labelled as the **"Reason (R)"**. You are to examine the two statements carefully and decide if
the **Assertion (A)** and the **Reason (R)** are individually true and if so whether the reason
is a correct explanation of the assertion. Select your answer to these items using the codes
given below and mark your answer accordingly.

*Assertion (A)* : A short linear conductor is often called a short dipole.

*Reason (R)* : In a short dipole, the length is much lesser than the wavelength and the
diameter of the dipole is also much lesser than the length.

**Code :**

Options :

91394346149.

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

91394346150.

Both (A) and (R) are true, but (R) is not the correct explanation of (A).

91394346151.

(A) is true, but (R) is false.

91394346152.

(A) is false, but (R) is true.

91394346149.   Both (A) and (R) are true and (R) is the correct explanation of (A).

91394346150.   Both (A) and (R) are true, but (R) is not the correct explanation of (A).

91394346151.   (A) is true, but (R) is false.

91394346152.   (A) is false, but (R) is true.

The following items consist of two statements, one labelled as
"**Assertion (A)**" and the other labelled as the "**Reason (R)**". You
are to examine the two statements carefully and decide if the
**Assertion (A)** and the **Reason (R)** are individually true and if so
whether the reason is a correct explanation of the assertion. Select
your answer to these items using the codes given below and mark
your answer accordingly.

| | |
|---|---|
| *Assertion (A)* : | In magnetron, each cavity with its input gap acts as an open circuit transmission line of length half wavelength long. |
| *Reason (R)* : | In magnetrons, usual mode employed is the '$\pi$' mode, where the phase change between the adjacent cavities is $\pi$ radians. |

**Code :**

Options :

91394346153.   Both (A) and (R) are true and (R) is the correct explanation of (A).

91394346154.   Both (A) and (R) are true, but (R) is not the correct explanation of (A).

91394346155.   (A) is true, but (R) is false.

91394346156.   (A) is false, but (R) is true.

The following items consist of two statements, one labelled as "**Assertion (A)**" and the other labelled as the "**Reason (R)**". You are to examine the two statements carefully and decide if the **Assertion (A)** and the **Reason (R)** are individually true and if so whether the reason is a correct explanation of the assertion. Select your answer to these items using the codes given below and mark your answer accordingly.

*Assertion (A)* :   In magnetron, each cavity with its input gap acts as an open circuit transmission line of length half wavelength long.

*Reason (R)* :   In magnetrons, usual mode employed is the 'π' mode, where the phase change between the adjacent cavities is π radians.

**Code :**

Options :

91394346153.   Both (A) and (R) are true and (R) is the correct explanation of (A).

91394346154.   Both (A) and (R) are true, but (R) is not the correct explanation of (A).

91394346155.   (A) is true, but (R) is false.

91394346156.   (A) is false, but (R) is true.

Question Number : 140  Question Id : 91394311748  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes
Single Line Question Option : No  Option Orientation : Vertical
Correct Marks : 2  Wrong Marks : 0

The following items consist of two statements, one labelled as "**Assertion (A)**" and the other labelled as the "**Reason (R)**". You are to examine the two statements carefully and decide if the **Assertion (A)** and the **Reason (R)** are individually true and if so whether the reason is a correct explanation of the assertion. Select your answer to these items using the codes given below and mark your answer accordingly.

*Assertion (A)* : A necessary and sufficient condition for a feedback system to be stable is that all the poles of the system transfer function have negative real parts.

*Reason (R)* : To obtain a bounded response, the poles of the closed loop system must be in the left half portion of the splan.

**Code :**

Options :

91394346157.   Both (A) and (R) are true and (R) is the correct explanation of (A).

91394346158.   Both (A) and (R) are true, but (R) is not the correct explanation of (A).

91394346159.  (A) is true, but (R) is false.

91394346160.  (A) is false, but (R) is true.

Question Number : 140 Question Id : 91394311748 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 2 Wrong Marks : 0

The following items consist of two statements, one labelled as **"Assertion (A)"** and the other labelled as the **"Reason (R)"**. You are to examine the two statements carefully and decide if the **Assertion (A)** and the **Reason (R)** are individually true and if so whether the reason is a correct explanation of the assertion. Select your answer to these items using the codes given below and mark your answer accordingly.

*Assertion (A)* : A necessary and sufficient condition for a feedback system to be stable is that all the poles of the system transfer function have negative real parts.

*Reason (R)* : To obtain a bounded response, the poles of the closed loop system must be in the left half portion of the splan.

**Code :**

Options :

91394346157.  Both (A) and (R) are true and (R) is the correct explanation of (A).

91394346158.  Both (A) and (R) are true, but (R) is not the correct explanation of (A).

91394346159.  (A) is true, but (R) is false.

91394346160.  (A) is false, but (R) is true.

Question Number : 141 Question Id : 91394311749 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 2 Wrong Marks : 0

The following items consist of two statements, one labelled as **"Assertion (A)"** and the other labelled as the **"Reason (R)"**. You are to examine the two statements carefully and decide if the **Assertion (A)** and the **Reason (R)** are individually true and if so whether the reason is a correct explanation of the assertion. Select your answer to these items using the codes given below and mark your answer accordingly.

*Assertion (A)* : At the output of a two-port network, the total noise is due to the contribution of several, more than two noise sources.

*Reason (R)* : The message signal at the input of the port is accompanied by noise sources, and while passing through the two-port network, additional noise is added to the signal.

**Code :**

Options :

91394346161. Both (A) and (R) are true and (R) is the correct explanation of (A).

91394346162. Both (A) and (R) are true, but (R) is not the correct explanation of (A).

91394346163. (A) is true, but (R) is false.

91394346164. (A) is false, but (R) is true.

The following items consist of two statements, one labelled as **"Assertion (A)"** and the other labelled as the **"Reason (R)"**. You are to examine the two statements carefully and decide if the **Assertion (A)** and the **Reason (R)** are individually true and if so whether the reason is a correct explanation of the assertion. Select your answer to these items using the codes given below and mark your answer accordingly.

*Assertion (A)* : At the output of a two-port network, the total noise is due to the contribution of several, more than two noise sources.

*Reason (R)* : The message signal at the input of the port is accompanied by noise sources, and while passing through the two-port network, additional noise is added to the signal.

**Code :**

Options :

91394346161. Both (A) and (R) are true and (R) is the correct explanation of (A).

91394346162. Both (A) and (R) are true, but (R) is not the correct explanation of (A).

91394346163. (A) is true, but (R) is false.

91394346164. (A) is false, but (R) is true.

The following items consist of two statements, one labelled as **"Assertion (A)"** and the other labelled as the **"Reason (R)"**. You are to examine the two statements carefully and decide if the **Assertion (A)** and the **Reason (R)** are individually true and if so whether the reason is a correct explanation of the assertion. Select your answer to these items using the codes given below and mark your answer accordingly.

*Assertion (A) :* The problem of interference is solved by translating the message signals to different radio frequencies.

*Reason (R) :* The signals from various sources transmitted through open space cause interference and no useful message is passed to the receiver.

**Code :**

Options :

91394346165.    Both (A) and (R) are true and (R) is the correct explanation of (A).

91394346166.    Both (A) and (R) are true, but (R) is not the correct explanation of (A).

91394346167.    (A) is true, but (R) is false.

91394346168.    (A) is false, but (R) is true.

Question Number : 142  Question Id : 91394311750  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes
Single Line Question Option : No  Option Orientation : Vertical
Correct Marks : 2  Wrong Marks : 0

The following items consist of two statements, one labelled as **"Assertion (A)"** and the other labelled as the **"Reason (R)"**. You are to examine the two statements carefully and decide if the **Assertion (A)** and the **Reason (R)** are individually true and if so whether the reason is a correct explanation of the assertion. Select your answer to these items using the codes given below and mark your answer accordingly.

*Assertion (A) :* The problem of interference is solved by translating the message signals to different radio frequencies.

*Reason (R) :* The signals from various sources transmitted through open space cause interference and no useful message is passed to the receiver.

**Code :**

Options :

91394346165.    Both (A) and (R) are true and (R) is the correct explanation of (A).

91394346166.    Both (A) and (R) are true, but (R) is not the correct explanation of (A).

91394346167.    (A) is true, but (R) is false.

91394346168.    (A) is false, but (R) is true.

Question Number : 143  Question Id : 91394311751  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes
Single Line Question Option : No  Option Orientation : Vertical
Correct Marks : 2  Wrong Marks : 0

The following items consist of two statements, one labelled as **"Assertion (A)"** and the other labelled as the **"Reason (R)"**. You are to examine the two statements carefully and decide if the **Assertion (A)** and the **Reason (R)** are individually true and if so whether the reason is a correct explanation of the assertion. Select your answer to these items using the codes given below and mark your answer accordingly.

*Assertion (A)* : Polarization preserving fibers have a special core design that maintains the state of polarization.

*Reason (R)* : In polarization preserving fibers, there is a stress applying part, which creates slow and fast axes in the core.

**Code :**

Options :

91394346169.    Both (A) and (R) are true and (R) is the correct explanation of (A).

91394346170.    Both (A) and (R) are true, but (R) is not the correct explanation of (A).

91394346171.    (A) is true, but (R) is false.

91394346172.    (A) is false, but (R) is true.

91394346171.    (A) is true, but (R) is false.

91394346172.    (A) is false, but (R) is true.

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**Question Number : 144  Question Id : 91394311752  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes Single Line Question Option : No  Option Orientation : Vertical**
**Correct Marks : 2  Wrong Marks : 0**

The following items consist of two statements, one labelled as **"Assertion (A)"** and the other labelled as the **"Reason (R)"**. You are to examine the two statements carefully and decide if the **Assertion (A)** and the **Reason (R)** are individually true and if so whether the reason is a correct explanation of the assertion. Select your answer to these items using the codes given below and mark your answer accordingly.

*Assertion (A)* : A cyclo converter is a converter used for the conversion from AC to AC at different frequency levels.

*Reason (R)* : At lower frequency, the total harmonic distortion is higher in cycloconverters than usual dc link inverters.

**Code :**

Options :

91394346173.    Both (A) and (R) are true and (R) is the correct explanation of (A).

91394346174.    Both (A) and (R) are true, but (R) is not the correct explanation of (A).

91394346175.    (A) is true, but (R) is false.

91394346176.    (A) is false, but (R) is true.

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91394346173.    Both (A) and (R) are true and (R) is the correct explanation of (A).

91394346174.    Both (A) and (R) are true, but (R) is not the correct explanation of (A).

91394346175.    (A) is true, but (R) is false.

91394346176.    (A) is false, but (R) is true.

Question Number : 145  Question Id : 91394311753  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes
Single Line Question Option : No  Option Orientation : Vertical
Correct Marks : 2  Wrong Marks : 0

The following items consist of two statements, one labelled as **"Assertion (A)"** and the other labelled as the **"Reason (R)"**. You are to examine the two statements carefully and decide if the **Assertion (A)** and the **Reason (R)** are individually true and if so whether the reason is a correct explanation of the assertion. Select your answer to these items using the codes given below and mark your answer accordingly.

*Assertion (A) :* The storage oscilloscope enables the capture and storage of a transient signal that occurs only once.

*Reason (R) :* The trace of the signal cannot be reproduced later for sufficiently long time so as to be visually analyzed or for photographic recording.

**Code :**

Options :

91394346177.    Both (A) and (R) are true and (R) is the correct explanation of (A).

91394346178.    Both (A) and (R) are true, but (R) is not the correct explanation of (A).

91394346179.    (A) is true, but (R) is false.

91394346180.    (A) is false, but (R) is true.

Question Number : 145  Question Id : 91394311753  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes
Single Line Question Option : No  Option Orientation : Vertical
Correct Marks : 2  Wrong Marks : 0

The following items consist of two statements, one labelled as **"Assertion (A)"** and the other labelled as the **"Reason (R)"**. You are to examine the two statements carefully and decide if the **Assertion (A)** and the **Reason (R)** are individually true and if so whether the reason is a correct explanation of the assertion. Select your answer to these items using the codes given below and mark your answer accordingly.

*Assertion (A)* : The storage oscilloscope enables the capture and storage of a transient signal that occurs only once.

*Reason (R)* : The trace of the signal cannot be reproduced later for sufficiently long time so as to be visually analyzed or for photographic recording.

**Code :**

Options :

91394346177.  Both (A) and (R) are true and (R) is the correct explanation of (A).

91394346178.  Both (A) and (R) are true, but (R) is not the correct explanation of (A).

91394346179.  (A) is true, but (R) is false.

91394346180.  (A) is false, but (R) is true.

| Sub-Section Number: | 6 |
| Sub-Section Id: | 913943595 |
| Question Shuffling Allowed : | Yes |

Question Id : 91394311754 Question Type : COMPREHENSION Sub Question Shuffling Allowed : Yes Group Comprehension Questions : No
Question Numbers : (146 to 150)
Question Label : Comprehension

Read the passage and answer the following five questions.

A digital filter uses a digital processor to perform numerical calculations on sampled values of the signal. The processor may be a general purpose such as a PC or specialised DSP chip. The analog input signal must first be sampled and digitised using an ADC. The resulting binary numbers, representing successive sampled values of the signal, are transferred to the processor, which carries out numerical calculations on them. These calculations typically involve multiplying the input values by constants and adding the products together. The results of these calculations, which now represent sampled values of the filtered signal, are converted back to the signal using a DAC.

Sub questions

Question Number : 146 Question Id : 91394311755 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 2 Wrong Marks : 0

The order of a digital filter is defined as

Options :

91394346181.    The number of previous outputs used to calculate the current output of the filter

91394346182.    The number of previous inputs used to calculate the current output of the filter

91394346183.    The number of previous inputs and outputs used to calculate the current output of the filter

91394346184.    The number of coefficients in the current output of the filter

Question Number : 147  Question Id : 91394311756  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes
Single Line Question Option : No  Option Orientation : Vertical
Correct Marks : 2  Wrong Marks : 0

An $n^{th}$ order recursive filter generally requires

Options :

91394346185.    n-previous inputs and $(n - 1)$ previous outputs.

91394346186.    $(n - 1)$ previous inputs and n-previous outputs.

91394346187.    $(n - 1)$ previous inputs and $(n - 1)$ previous outputs.

91394346188.    n previous inputs and n previous outputs

Question Number : 148  Question Id : 91394311757  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes
Single Line Question Option : No  Option Orientation : Vertical
Correct Marks : 2  Wrong Marks : 0

Read the following statements regarding digital filters :

(i)    Its operation is determined by a program stored in the processor's memory.

(ii)   It cannot handle low frequency signal accurately.

(iii)  It can only be changed by redesigning the circuitry.

(iv)   It is extremely stable with respect to both time and temperature.

Which of the above statements are correct ?

Choose the correct answer from the code given below :

Code :

Options :

91394346189.    (i) and (ii)

91394346190.    (ii) and (iii)

91394346191. (iii) and (iv)

91394346192. (i) and (iv)

A digital filter is characterized by the equation

$y[n] + y[n-1] = x[n] + x[n-2]$. The filter is

Options :

91394346193. Linear and Time variant

91394346194. Causal and Stable

91394346195. Non-causal and Time invariant

91394346196. Linear, Causal and Unstable

The impulse response of a filter is defined as $h[n] = \begin{cases} -2; & n = 2, 4 \\ 2; & n = 1, 3 \\ 0; & \text{otherwise} \end{cases}$

This filter is a

Options :

91394346197. Non-recursive IIR filter

91394346198. Recursive IIR filter

91394346199. Non-recursive FIR filter

91394346200. Recursive FIR filter

Question Label : Comprehension

Read the passage and answer the following five questions.

A digital filter uses a digital processor to perform numerical calculations on sampled values of the signal. The processor may be a general purpose such as a PC or specialised DSP chip. The analog input signal must first be sampled and digitised using an ADC. The resulting binary numbers, representing successive sampled values of the signal, are transferred to the processor, which carries out numerical calculations on them. These calculations typically involve multiplying the input values by constants and adding the products together. The results of these calculations, which now represent sampled values of the filtered signal, are converted back to the signal using a DAC.

Sub questions

Question Number : 146 Question Id : 91394311755 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 2 Wrong Marks : 0

The order of a digital filter is defined as

Options :

91394346181.
The number of previous outputs used to calculate the current output of the filter

91394346182.
The number of previous inputs used to calculate the current output of the filter

91394346183.
The number of previous inputs and outputs used to calculate the current output of the filter

91394346184.
The number of coefficients in the current output of the filter

Question Number : 147 Question Id : 91394311756 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 2 Wrong Marks : 0

An $n^{th}$ order recursive filter generally requires

Options :

91394346185.
n-previous inputs and $(n-1)$ previous outputs.

91394346186.
$(n-1)$ previous inputs and n-previous outputs.

91394346187.
$(n-1)$ previous inputs and $(n-1)$ previous outputs.

91394346188.
n previous inputs and n previous outputs

Question Number : 148 Question Id : 91394311757 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 2 Wrong Marks : 0

Read the following statements regarding digital filters :

(i) Its operation is determined by a program stored in the processor's memory.

(ii) It cannot handle low frequency signal accurately.

(iii) It can only be changed by redesigning the circuitry.

(iv) It is extremely stable with respect to both time and temperature.

**Which of the above statements are correct ?**

Choose the correct answer from the code given below :

**Code :**

Options :

91394346189. (i) and (ii)

91394346190. (ii) and (iii)

91394346191. (iii) and (iv)

91394346192. (i) and (iv)

Question Number : 149 Question Id : 91394311758 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 2 Wrong Marks : 0

A digital filter is characterized by the equation

$y[n] + y[n-1] = x[n] + x[n-2]$. The filter is

Options :

91394346193. Linear and Time variant

91394346194. Causal and Stable

91394346195. Non-causal and Time invariant

91394346196. Linear, Causal and Unstable

Question Number : 150 Question Id : 91394311759 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 2 Wrong Marks : 0

The impulse response of a filter is defined as $h[n] = \begin{cases} -2; & n = 2, 4 \\ 2; & n = 1, 3 \\ 0; & \text{otherwise} \end{cases}$

This filter is a

91394346197. Non-recursive IIR filter

91394346198. Recursive IIR filter

91394346199. Non-recursive FIR filter

91394346200. Recursive FIR filter