

## Dedicated Freight Corridor Corporation of India Ltd.

A Government of India (Ministry of Railways) Enterprise

## (भारत सरकार का उपक्रम)

5th Floor, Pragati Maidan Metro Station Building Complex, New Delhi -110001

Candidate Name:	
Candidate Roll Number:	www.click4pdf.com
Test Center Name:	
Subject:	Executive Electrical
Test Date:	17/04/2016
Shift:	Shift 2

Section: Technical

Poynting-vector Wattmeter works on

An

X 1 magnetic effect

√ 2. hall effect

X 3. induction effect

X 4. heating effect

Q. If we want to represent a relation between number of link currents and number

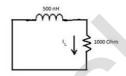
2 of branch currents in a directional graph, we should use:

An X 1. reduced incidence

X 2. incidence

X 4. cutset

**Q.** What will be the value of current IL through the resistor at t = 1 ns if IR(0) = 6 Ampere.



Question ID: 7368158192

Question ID: 7368158184

Status: Answered

Question ID: 7368158202 Status : Answered

Chosen Option: 4

Chosen Option: 3

Status: Not Attempted

Chosen Option: --

An ✓ 1. 812 mA

X 2. 4.66 mA

X 3. 456 mA

X 4. 6.098 A

Q. What will be the rms value of a half wave rectified symmetrical square wave which is having current of 4 A?

An

✓ 1. 2.82 A

× 2. 0.707 A

X 3. 6.45 A

X 4. 1.414 A

What is meant by zero initial condition for a system?

An X 1. Zero input reference signal

X 2. Zero stored energy

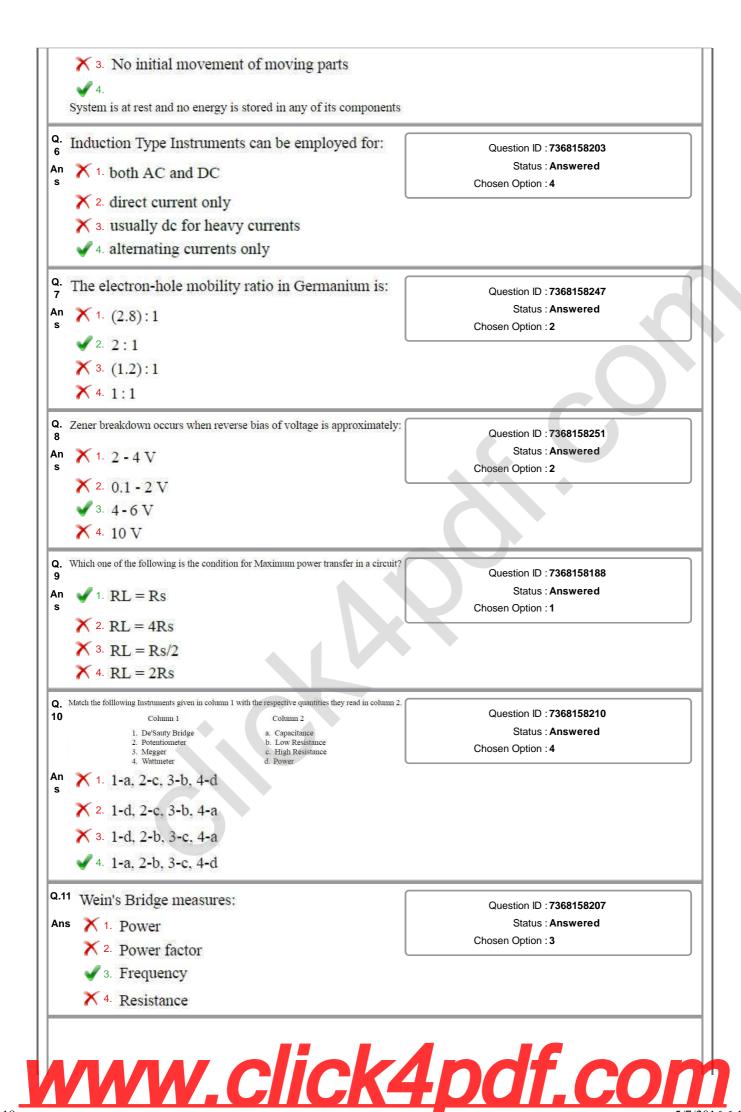
Question ID: 7368158197 Status: Answered

Chosen Option: 1

Question ID: 7368158211

Status: Answered

Chosen Option: 4



AC Bridges cannot be used for the direct measurement of: Question ID: 7368158209 Status: Answered An X 1 loss factor Chosen Option: 2 × 2. capacitance storage factor X 3. inductance 4. capacitance Q.1 Shunt generators are generally used for: Question ID: 7368158239 Status: Answered X 1. arc welding An Chosen Option: 2 2. charging batteries X 3. regenerative braking of dc locomotives X 4. elevators Q. स्थापना 3 ट्रांसफार्मर बैंक को आश्वासित ना करे इसलिए त्रिफेज लोड तुलनात्मक रूप Question ID: 7368158230 14 से लघु होता है, तो इनमें से कौन सा त्रिफेज ट्रांसफार्मर इस्तेमाल किया जाता है? Status: Answered An 🗸 1. V-V संबंधन Chosen Option: 1 X 2. डेल्टा-स्टार संबंधन X 3. T-T स्कॉट संबंधन X 4. Y-Y संबंधन Q. Deflection produced in Moving Iron Instruments is: Question ID: 7368158208 Status: Answered Chosen Option: 4 inversely proportional to rms value of operating current proportional to rms value of operating current inversely proportional to square of rms value of operating current proportional to square of rms value of operating current What will be the resultant capacitance of the given combination? Question ID: 7368158199 16 Status: Answered Chosen Option: 3 An X 1. 5 mF

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✓ 2. 0.48 mF
 ✓ 3. 10 mF
 ✓ 4. 0.67 mF

Q. If the slip in an induction motor is 0.25 and the synchronous speed is 600 rpm,

17 the motor speed (in rpm) would be:

An

**1**. 450

X 2. 125

X 3. 750

X 4. 900

Q. Which of the following statements regarding a shell type transformer is INCORRECT?

18 An

X 1. It provides shorter magnetic path

2. Natural cooling is quite good

**X** 3.

It gives better support against electromagnetic forces between current carrying transformer

**X** 4.

Magnetizing current is lesser as compared to core type

Q. The detrimental effects of armature reaction can be controlled by:

1. Increasing the length of air gap

2. Using commutating poles

3. Increasing the cross-section of pole pieces

Which of these is/are incorrect?

An s

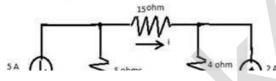
X 1. Only 1

√ 2. Only 3

X 3. 2 and 3

X 4. 1 and 2

Q. Find out the value of i.



Question ID: 7368158183

Question ID: 7368158240

Question ID: 7368158226

Question ID: 7368158235

Status: Answered

Status : Answered

Chosen Option: 1

Chosen Option: 2

Chosen Option: 4

Status: Answered

Status: Answered

Chosen Option: 4

An X 1. 7.985 A

X 2. 5.009 A

X 3. 2.889 A

**✓** 4. 1.375 A

Q.2 If there were no copper losses in the motor:

An >

X 1. rotor runs at normal speed

X 2 rotor does not run

X 3. rotor runs at infinite speed

4. rotor runs at synchronous speed

Question ID: 7368158244

Status: Answered

Chosen Option: 3

Q.2 Which of the following oscillates Question ID: 7368158214 1. Open loop system Status: Answered 2. Closed loop system Chosen Option: 2 Which of the following is/are correct? Ans X 1. Only 1 X 2. Both 1 and 2 X 3. Neither 1 nor 2 4. Only 2 For normal biasing, the emitter junction of BJT has: Question ID: 7368158255 Status: Answered An × 1. very high resistance Chosen Option: 2 X 2. high resistance √ 3. low resistance X 4. no resistance Q. क्रिस्टल में परमाणु कंपन की आवृत्ति को निम्नलिखित में से कौन निर्धारित करता है? Question ID: 7368158218 Status: Answered An Х¹ क्रिस्टल का ऊष्मा तत्व Chosen Option: 4 <sup>2</sup> क्रिस्टल का तापमान उसने पड़ोसी के साथ बनाए हुए आबंधों की कठोरता 🗡 4 क्रिस्टल में प्रति इकाई परमाण्ओं की संख्या Q. For elements having energy gap more than 5 eV, act as: Question ID: 7368158246 Status : Answered An X 1 Semiconductors Chosen Option: 2 √ 2. Insulators X 3. Superconductors X 4. Conductors A DC generator efficiency is maximum when: Question ID: 7368158234 Status: Answered An ★ 1. Constant loss – Variable loss=1 Chosen Option: 3 2. Variable loss – Constant loss=1 3. Variable loss – Constant loss=0 Y 4. Variable loss + Constant loss=1 Q. The magnitude of critical density in a superconductor depends on: Question ID: 7368158222 Status: Answered An X 1. temperature Chosen Option: 2 Both temperature and magnetic field strength

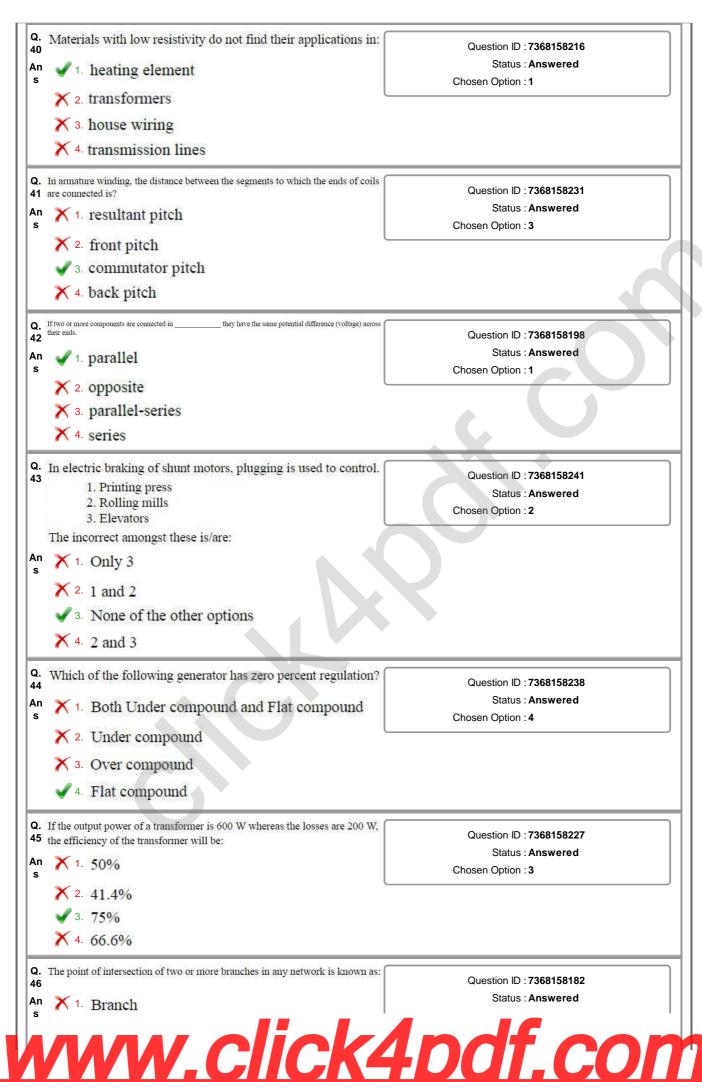
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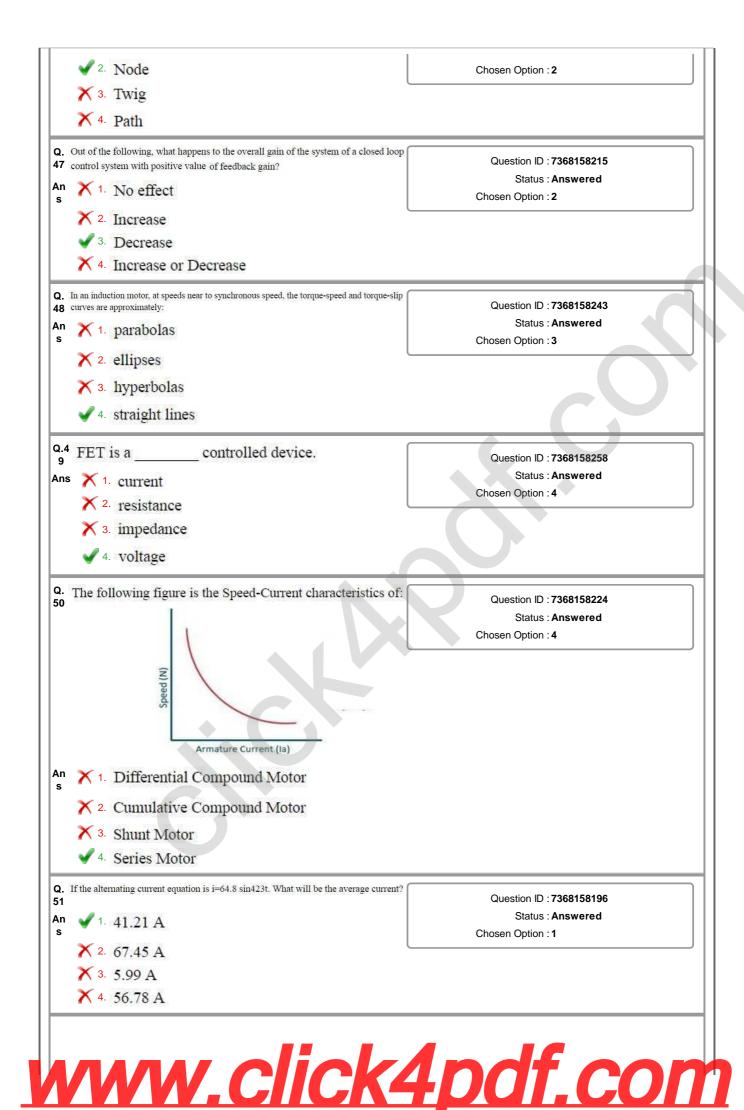
temperature for some time and then on magnetic field strength

X 4 magnetic field strength

According to Super position theorem, a Voltage source of 0 V can be replaced by a: Question ID: 7368158186 28 Status: Answered An X 1. 5 V Chosen Option: 4 X 2. Cannot be replaced X 3. Open circuit ✓ 4. Short circuit What can be done in order to prevent Creeping in Energy meters? Question ID: 7368158204 Status: Answered An Chosen Option: 1 Two diametrically opposite holes are drilled in the disc X 2. Creeping can't be prevented X 3. Friction is over compensated X 4. Disc is made to run where there is no current What do we call an externally introduced signal which affects the controlled output? Question ID: 7368158213 30 Status: Answered An X 1. Feedback Chosen Option: 1 ✓ 2. Stimulus X 3. Gain Control X 4. Signal Q.3 A Varactor diode finds its applications in: Question ID: 7368158253 Status : Answered 1. Low Noise Parametric Amplifier Chosen Option: 1 2. Frequency Convector 3. Harmonic Frequency Generator Which of these is/are CORRECT? An ✓ 1. 1. 2 and 3 X 2. Only 2 X 3. 1 and 2 X 4. 2 and 3 Which of the following increases Steady State Accuracy? Question ID: 7368158212 Status: Answered An Integrator Chosen Option: 4 2. Phase Lead Compensator X 3. Differentiator A. Phase Lag Compensator Which of the following is not an example of Intrinsic semiconductor? Question ID: 7368158217 Status: Answered An X 1. Germanium Chosen Option: 4 X 2. Selenium X 3. Silicon 4. Argentum www.click4pdf.com

Q. In a Common Base Configuration, BJT has input impedance Question ID: 7368158259 output impedance. Status: Answered X 1. high, high Chosen Option: 2 2. low, high X 3. low, low X 4. high, low Q. For the measurement of high resistances, following methods are used: Question ID: 7368158206 1. Loss of Charge Method Status: Answered 2. Direct Deflection Method Chosen Option: 1 3. Substitution Method Which of the following is/are correct? An ✓ 1. 1 and 2 X 2. 2 and 3 X 3. Only 1 X 4. 1 and 3 Which one of the following condition is true about parallel RLC circuit? Question ID: 7368158200 Status: Answered An  $\times$  1. IR = V/Xc, Ic = V/R, IL = V/XL Chosen Option: 3  $\times$  2. VR = IR, VL = I. XL, VC = I. Xc  $\checkmark$  3. IR = V/R, Ic = V/Xc, IL = V/XL  $\times$  4. IR = V/XL, Ic = V/R, IL = V/Xc Q.3 Carbon electrodes are used in: Question ID: 7368158221 1. GLS lamps Status: Answered 2. Dry cells Chosen Option: 1 3. Arc furnace Which of the following is/are correct? Ans X 1. 1, 2 and 3 √ 2. 2 and 3 X 3. 1 and 3 X 4. Only 1 Q. निम्नलिखित में से कौन से उपकरण एक विशिष्ट समय अंतराल की घटनाओं का Question ID: 7368158201 38 योजिकरण करता है? Status: Answered 🗡 1. सचक यंत्र Chosen Option: 4 X 2. सभी प्रकार के एनालॉग उपकरण X 3. अभिलेखन उपकरण 4. समकालनीय उपकरण Q. Superconductors now a day found their application in various fields. This is due to the fact that they Question ID: 7368158223 Status: Answered An X 1. manufacture bubble memories Chosen Option: 1 × 2. generate regions free from magnetic field 3. generate very strong magnetic field 4 generate electrostatic field :K4pdf.cor





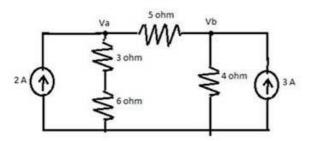
The real name of MOSFET is IG FET because the gate here is: Question ID: 7368158257 Status: Answered An X 1. biased Chosen Option: 2 √ 2. insulated X 3. open X 4. inductive Compound generators are used to supply power to: Question ID: 7368158237 Status: Answered An X 1. incandescent lamps Chosen Option: 4 X 2. railway circuits X 3. elevator motors railway circuits, incandescent lamps and elevator motors In a semiconductor, Drift current is due to: Question ID: 7368158250 Status: Answered An X 1. volume gradient Chosen Option: 4 X 2. diffusion of charge X 3. concentration gradient 4. applied electric field Q. Assertion A: Copper Losses are small in Squirrel cage induction motors. 55 Reason R: Overhang is less and space factor is better in Squirrel cage induction motors Question ID: 7368158245 Status: Answered X 1 R is correct but A is not correct Chosen Option: 3 2. A is correct but R is not correct **3**. A is correct and R is the suitable reason for it A is correct but R is not a suitable reason for it On In a BJT, collector region width is maximum when it: Question ID: 7368158254 1. collects maximum number of charge carrier Status : Answered Chosen Option: 3 An X 1. Only 1 is correct X 2. None is correct 4. Only 2 is correct How many crystal systems are known till date? Question ID: 7368158219 Status: Answered An 🗹 1. 7 Chosen Option: 1 X 2. 12 X 3. 6 X 4. 10 www.click4pdf.con

Q. The generated emf per parallel path in armature of a DC Generator is: Question ID: 7368158232 1. Directly proportional to flux Status: Answered 2. Inversely proportional to number of poles Chosen Option: 4 3. Directly proportional to rotational speed of armature Which of these is/are correct? X 1 2 and 3 X 2. Only 2 X 3. 1 and 2 ✓ 4. 1 and 3. Q. For a Lap wound generator, the number of parallel paths in armature is taken to be: Question ID: 7368158233 59 Status : Answered An X 1. 4 Chosen Option: 4 X 2. 2 X 3. number of poles/2 4. number of poles Iron losses in a transformer is a sum of: Question ID: 7368158228 Status: Answered An X 1. copper loss and hysteresis loss Chosen Option: 3 × 2. constant loss and copper loss 3. hysteresis loss and eddy current loss copper loss, eddy current loss and hysteresis loss Q. Find the Thevenin's voltage Vth across 2 ohm resistance. Question ID: 7368158187 Status: Answered Chosen Option: 4 An X 1. 8.908 V X 2. 3,455 V **X** 3. 4.778 V ✓ 4. 2.571 V A series or parallel RLC circuit is said to be over damped if: Question ID: 7368158194 Status: Answered An  $\times$  1.  $\alpha = \omega n$ Chosen Option: 2  $\checkmark$  2.  $\alpha > \omega n$  $\times$  3.  $\alpha < \omega n$ 

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 $\times$  4.  $2\alpha = \omega n$ 

Q. Find out the node voltages of the given circuit.



Question ID: 7368158181 Status: Answered Chosen Option: 4

- An  $\times$  1. Va = 0 V, Vb = 120 V
  - X 2. Va = 1.89 V, Vb = 16 V
  - $\times$  3. Va = 0 V, Vb = 0 V
  - √ 4. Va = 15 V, Vb = 13.3 V
- Q. A 12-pole induction motor has a frequency of 60 Hz. Its synchronous speed would be:

An

- ✓ 1. 600 rpm
- × 2. 480 rpm
- X 3. 660 rpm
- X 4. 500 rpm

Question ID: 7368158242

Status: Answered Chosen Option: 1

- Q. The current in a circuit follows the relation i = 200sinot. If frequency is 50 Hz, how long will it take for the current to rise to 100 A? 65
- An X 1 3.33 ms
  - × 2. 5.98 ms
  - X 3. 0.32 ms
  - 4. 1.66 ms

Question ID: 7368158195

Status: Not Attempted

Question ID: 7368158229

Status: Answered

Chosen Option: --

Chosen Option: 4

- Q. ट्रांसफार्मर्स को समांतर क्रम में \_\_\_\_\_ की आपूर्ति करने हेत् संयोजित किया
- **66** जाता है।

An 💢 1.

विद्यमान ट्रांसफार्मर में निर्धारित श्रेणी से कम भार



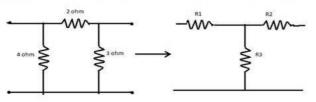
विदयमान ट्रांसफार्मर में निर्धारित श्रेणी से अधिक भार



विदयमान ट्रांसफार्मर में निर्धारित श्रेणी से बराबर भार

विदयमान ट्रांसफार्मर में निर्धारित श्रेणी से कम या बराबर भार

Q. In the given Delta-wye conversion, Find the value of R1, R2 & R3.



Question ID: 7368158190 Status: Answered

Chosen Option: 3

- X 1. 9/12, 9/6, 9/8
  - X 2. 6/9, 12/9, /8/9
  - 3. 8/9, 6/9, 12/9

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X 4. 9/6, 9/12, 9/8

Q. For ammeter shunts, which one of the following is not a possible requirement?

68

An 🗹 1.

It should have high thermal automotive force

**X** 2

It should carry current without excessive temperature rise

X 3. Its resistance should not vary with time

¥ 4. Its temperature coefficient must be low

Q. Distribution Transformers:

1. Have good voltage regulation

2. Are designed for small value of current

Which of these is/are CORRECT?

An X 1. Only 2

X 2. Both 1 and 2

X 4. Neither 1 nor 2

Q.7 A tunnel diode is fabricated from:

Ans X 1. Ge

X 2. Si

X 3. GaAs

4. Ge or GaAs

Q. In FET, the np region between source and gate is:

An X 1. forward biased

X 2. forward or reverse biased

3. reverse biased

X 4. unbiased

Q. What will be the number of tie set currents in the given circuit?

be the number of the set currents in the given circuit?

5 ohm 2 2 ohm 2 2 ohm 3 ohm 3 ohm 3 ohm

An 💢 1. 4

**2**. 3

X 3. 6

X 4. 1

Question ID: 7368158205

Status : Answered

Chosen Option: 1

Question ID: 7368158225

Status: Answered

Chosen Option: 2

Question ID : 7368158252

Status: Answered

Chosen Option: 3

Question ID: 7368158256

Status: Answered

Chosen Option: 2

Question ID: 7368158185

Status : Answered

Chosen Option : 1

Q. According to Tellegen's theorem, which one of the following is correct? Question ID: 7368158189 Status: Answered An ✓ 1.  $\Sigma$  power delivered = $\Sigma$  power absorbed Chosen Option: 1  $\times$  2.  $\Sigma$  power delivered = $K/\Sigma$  power absorbed  $\times$  3.  $\Sigma$  power delivered =1/ $\Sigma$  power absorbed × 4. Σ power delivered =2xΣ power absorbed Assertion A: Si can be operated at high temperature Question ID: 7368158249 Reason R: Energy gap of Ge is more than Si Status: Answered Chosen Option: 2 ✓ 1. A is correct but R is not correct A is correct but R is not a suitable reason for it **X** 3. A is correct and R is the suitable reason for it A R is correct but A is not correct Q. The energy which any electron possesses at 0 K is: Question ID: 7368158248 Status: Answered An ✓ 1. Fermi level Chosen Option: 2 X 2. Valence energy X 3. Exergy X 4. Conduction energy Q. DC bias is adjusted greater than its cut-off value so that the output current Question ID: 7368158260 76 flow for less than half of the input voltage cycle, in: Status: Answered 1. Class AB amplifier Chosen Option: 4 × 2. Class A amplifier X 3. Class B amplifier 4. Class C amplifier Q. Assertion A: Separately excited generators are used in Ward Leonard Question ID: 7368158236 System of speed control but self-excited are not. Status: Answered Reason R: Self excitation is unsuitable at lower voltages. Chosen Option: 3 A is correct but R is not a suitable reason for it X 2. R is correct but A is not correct **3**. A is correct and R is the suitable reason for it A is correct but R is not correct Q. In a RLC circuit Inductance is 20 mH and capacitance is 200 micro Farad. Find the resonance frequency of the circuit. Question ID: 7368158193 78 Status: Not Attempted An X 1. 1000 rad/sec Chosen Option: --2. 250 rad/sec √ 3. 500 rad/sec X 4. 50 rad/sec w.click4pdf.cor

Q. For the given circuit find the value of v at t=12 ms, If current is given as i=10te^(-100t) A. (Where L=25 mH). Question ID: 7368158191 79 Status: Not Attempted Chosen Option: --An X 1. 34.09 mV X 2. -0.987 mV √ 3. -15.06 mV X 4. 87.99 mV Q.8 कार्बन प्रतिरोध का संयोजन क्या है? Question ID: 7368158220 Status: Answered Ans 🔀 1. चूर्णित कोयला Chosen Option: 3 🗶 2. लकड़ी का पिसा ह्आ कोयला √ 3. ठीक से अलग किया हुआ कार्बन ब्लैक X 4 कागजी राख Section: General Knowledge Q. Sri Lanka is separated from India by a narrow channel of sea formed by the Palk Strait and: Question ID: 7368158261 Status: Answered 4 1. Gulf of Mannar Chosen Option: 4 X 2. Gulf of Gibralter X 3. Gulf of Kuch X 4. Gulf of Sinhala Q. Who won the title of Australian open tennis tournament in women's singles category in 2016? Question ID: 7368158269 Status: Answered An 💢 1. Sania Mirza Chosen Option: 2 2. Angelique Kerber X 3. Venus Williams X 4. Maria Sharapova Q निम्नलिखित में से कौन सी ऊर्जा मापन की एक इकाई नहीं है? Question ID: 7368158268 Status: Answered An 🔀 1. जूल (Joules) Chosen Option: 3 X 2. केलोरी (Calories) √ 3. फैदम (Fathoms) 🗡 4 अर्ग (Ergs) Q.4 The Indian constitution came into force on: Question ID: 7368158266 An X 1. 26<sup>th</sup> Jan 1951 Status: Answered Chosen Option: 3 X 2. 26th Jan 1955 ✓ 3. 26<sup>th</sup> Jan 1950 X 4. 26<sup>th</sup> Jan 1949 Param Yuva II, designed by C-DAC in PUNE is a type of: Question ID: 7368158267 Status: Answered X 1. Space shuttle Chosen Option: 4 2. Rullet train CICK4D

X 3. Missile 4. Super computer Q. 1928 में गठित किये गए HSRA समूह का पूरा नाम क्या है, जिसके एक सदस्य Question ID: 7368158262 Status: Answered √ 1 हिंद्स्तान सोशितस्ट रिपब्लिकन आर्मी Chosen Option: 1 🗶 २. हिंदुस्तान सोशतिस्ट रेनेसां आर्मी 🗙 3. हिंदुस्तान सोशितस्ट रिवॉल्युशनरी आर्मी 🔀 4 हिंद्स्तान सोशलिस्ट रेबेल आर्मी Q. 2016 का 'के. वीरमणि सामाजिक न्याय पुरस्कार' किसे दिया गया है? Question ID: 7368158270 Status: Answered 🗡 1 अखिलेश यादव Chosen Option: 4 X 2. के. चंद्र शेखर राव 🗙 ३. चंद्रबाब् नायड् √ 4. नीतिश कुमार Q विदेशी विनिमय से संबंधित शब्द FERA का पूरा नाम है: Question ID: 7368158264 Status: Answered 🗡 1 फ़ॉरेन एक्सचेंज रीइंबर्समेंट एक्ट Chosen Option: 4 🔀 2. फ़ॉरेन एक्सचेंज रिम्यूनरेशन एक्ट 🗙 ३ फ़ॉरेन एक्सचेंज रेस्ट्रिक्शन एक्ट √ 4. फ़ॉरेन एक्सचेंज रेग्युलेशन एक्ट Which Indian state has a separate constitution? Question ID: 7368158265 Status: Answered An ✓ ¹. Jammu & Kashmir Chosen Option: 1 2. Madhya Pradesh X 3. Tamil Nadu X 4. Manipur Q. First official census in India was conducted in the year Question ID: 7368158263 Status: Answered An X 1. 1927 Chosen Option: 2 X 2. 1910 X 3. 1887 4. 1871

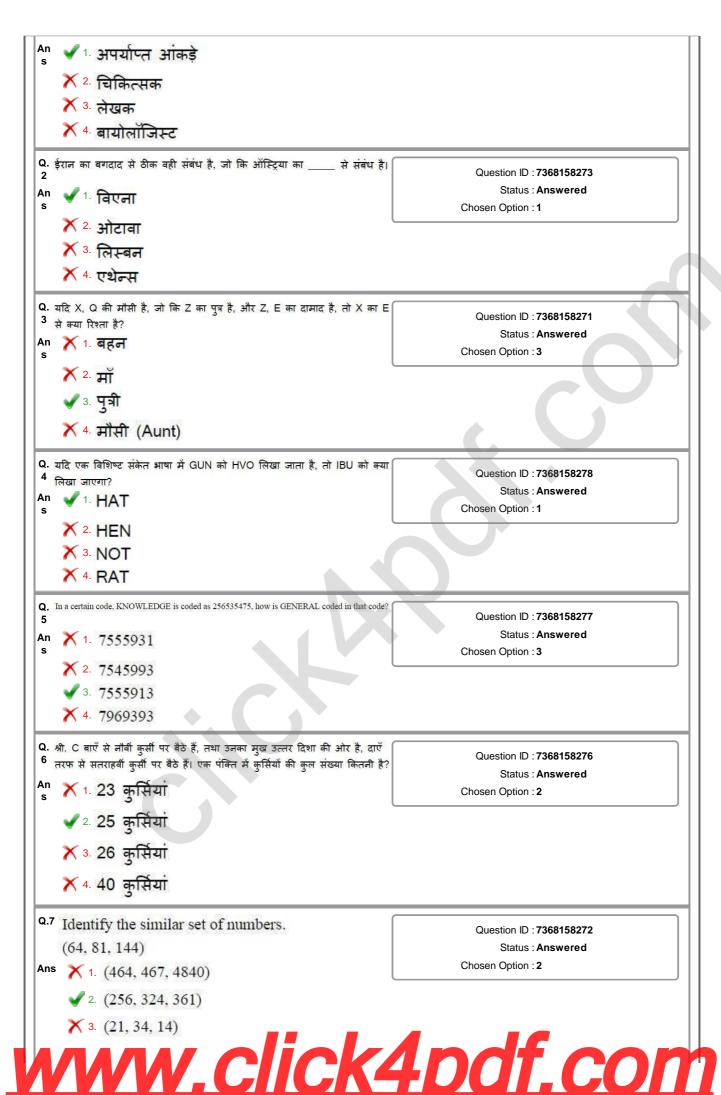
Section: Reasoning

Q. R, S, M तथा G नामक चार भाई अपनी वार्षिक पारिवारिक संपत्ति कि लड़ाई के 1 लिए एक गोल मेज में एक दूसरे के आमने-सामने बैठे हैं। इनके व्यवसाय हैं - लेखक, बॉयोलॉजिस्ट, केमिस्ट और चिकित्सक, लेकिन ठीक इसी क्रम में हो ऐसा जरुरी नहीं है। G ने बैठक कि कार्यसूची निर्धारित करते हुए आरंभ किया, और उसके पश्चात चिकित्सक ने एक लंबा व्याख्यान दिया कि क्या सही है और क्या गलत है। चिकित्सक के सामने बैठा है, और केमिस्ट के बगल में R बैठा है। M पूरी बैठक में खामोश रहता है, और केमिस्ट बिलकुल अंत में बोलता है।

Question ID : 7368158274
Status : Answered
Chosen Option : 4

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R का पेशा बताएं:



**X** 4. (789, 491, 68) Q. Select from the given choices the letter sequence that completes the following sequence in an order. Question ID: 7368158275 Status: Answered An X 1 aaabb Chosen Option: 2 √ 2. abbbb X 3. bbaa X 4. abab Q. A और B ने एक स्थायी जगह से आरंभ किया। A उत्तर की दिशा में 3 कि.मी. Question ID: 7368158279 9 चलने के पश्चात दाएं तरफ मुझ्कर 4 कि.मी. चलता है। B पश्चिम दिशा में 5 Status: Answered कि.मी. चलने के पश्चात दाएं तरफ मुझ्कर 3 कि.मी. चलता है। अब A और B एक Chosen Option: 4 दूसरे से कितने दूर हैं? X 1.4 कि.मी. X 2. 5 (क. मी. X 3. 8 कि. मी. √ 4. 9 कि.मी. Q. Determine the pattern and fill in the missing number. Question ID: 7368158280 3, 8, 18, 38, , 158 Status: Answered Chosen Option: 1 An 🗸 1. 78 X 2. 65 X 3. 60 X 4. 67