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Q.9	Select the combination of letters that when sequentially placed in the blanks of the given series, will complete the series.
	S_T_XW_UT_X_S_TV_WSVX_
Ans	X 1. VUSWUUXTW
	X 2. VUSVUWXUTW
	X 3. UVSVUWXUTW
	🛹 4. UVSVWUXUTW
Q.10	Select the word-pair that best represents a similar relationship to the one expressed in the pair of words given below. (The words must be considered as meaningful English words and must not be related to each other based on the number of letters/number of consonants/vowels in the word.) Chicken : Strut
Ans	🛹 1. Lion : Prowl
	X 2. Sparrow : Dive
	X 3. Mouse : Leap
	🗙 4. Deer : Glide
Q.11	In a certain code language, 'CRAZE' is written as '87' and 'MAIZE' is written as '86'. How will 'DEPART' be written in that language?
Ans	× 1.110
	× 2.95
	X 3.90
	4. 104
Q.12	Which of the following numbers will replace the question marks (?) in the given series? 112, 113, 117, ?, 142, 167, ?, 252, 316
Ans	X 1. 133, 215
	✓ 2. 126, 203
	× 3. 132, 214
	★ 4. 122, 224
Q.13	Select the option that is related to the fifth term in the same way as the second term is related to the first term and the fourth term is related to the third term. 38 : 555 :: 25 : 360 :: 17 : ?
Ans	1.240
	× 2.215
	× 3.225
	X 4.210
Q.14	Select the option that is related to the third word in the same way as the second word is related to the first word. (The words must be considered as meaningful English words and must not be related to each other based on the number of letters/number of consonants/vowels in the word)
	Seismograph : Earthquake : : Anemometer : ?
Ans	X 1. Humidity
	🗙 2. Light
	X 3. Current
	🛹 4. Wind







Q.17	Select the option that indicates the correct arrangement of the given words in a logical and
	meaningful order.
	1. Deer 2. Honbort
	3. Mouse
	4. Jackal
	5. Cat
Ans	✓ 1. 3, 5, 4, 1, 2
	x 2.4,5,1,2,3
	× 2 5 1 2 4 2
	X 3. 5, 1, 3, 4, 2
	🗙 4. 2, 5, 1, 3, 4
Q.18	Sarah departs from her house and walks 20 m towards East. She then turns left and walks 35 m.
	mow she turns left again and walks 27 m and stops. How far is she from a pole that is exactly 35 m north of her house? (Assuming that all turns are 90 degree turns only.)
٨ne	
A15	
	X 2.10 m
	🗙 3.47 m
	4 7 m
Q.19	Select the option that is related to the third word in the same way as the second word is related to
	the first word. (The words must be considered as meaningful English words and must not be
	related to each other based on the number of letters/number of consonants/vowels in the word)
	Timid : Bold :: Aggressive : ?
Ans	★ 1. Brave
	X 2. violent
	✓ 3. Docile
	X 4. Indifferent
Q.20	If (7 @ S) means (7 is the father of S)
	2 (0) 3 means 2 is the father of 3,
	2 ° S' means 2 is the prother of S'
	'Z × S' means 'Z is the brother of S',
	'Z * S' means 'Z is the brother of S', 'Z * S' means 'Z is the father's sister of S', 'Z # S' means 'Z is the sister of S',
	 'Z' S' means 'Z is the brother of S', 'Z * S' means 'Z is the father's sister of S', 'Z # S' means 'Z is the sister of S', 'Z # S' means 'Z is the daughter of S', and 'Z = S' means 'Z is the methor of S'.
	 'Z' S' means 'Z is the brother of S', 'Z * S' means 'Z is the father's sister of S', 'Z # S' means 'Z is the sister of S', 'Z \$ S' means 'Z is the daughter of S', and 'Z = S' means 'Z is the mother of S', then how is P related to U in the following expression?
	 'Z * S' means 'Z is the brother of S', 'Z * S' means 'Z is the father's sister of S', 'Z * S' means 'Z is the sister of S', 'Z * S' means 'Z is the daughter of S', and 'Z = S' means 'Z is the mother of S', then how is P related to U in the following expression? P × Q \$ R @ S * T \$ U
Ans	<pre>'Z * S' means 'Z is the brother of S', 'Z * S' means 'Z is the father's sister of S', 'Z * S' means 'Z is the sister of S', 'Z * S' means 'Z is the daughter of S', and 'Z = S' means 'Z is the mother of S', then how is P related to U in the following expression? P × Q \$ R @ S * T \$ U X 1. Daughter</pre>
Ans	<pre>'2 * S' means '2 is the brother of S', 'Z * S' means '2 is the father's sister of S', '2 # S' means '2 is the daughter of S', and 'Z = S' means 'Z is the mother of S', then how is P related to U in the following expression? P × Q \$ R @ S * T \$ U</pre>
Ans	 'Z' S' means 'Z is the brother of S', 'Z * S' means 'Z is the father's sister of S', 'Z # S' means 'Z is the sister of S', 'Z # S' means 'Z is the daughter of S', and 'Z = S' means 'Z is the mother of S', and 'Z = S' means 'Z is the mother of S', and 'Z = S' means 'Z is the mother of S', and 'Z = S' means 'Z is the mother of S', and 'Z = S' means 'Z is the mother of S', and 'Z = S' means 'Z is the mother of S', and 'Z = S' means 'Z is the mother of S', and 'Z = S' means 'Z is the mother of S', and 'Z = S' means 'Z is the mother of S', and 'Z = S' means 'Z is the mother of S', and 'Z = S' means 'Z is the mother of S', and 'Z = S' means 'Z is the mother of S', and 'Z = S' means 'Z is the mother of S', and 'Z = S' means 'Z is the mother of S', and 'Z = S' means 'Z is the mother of S', and 'Z = S' means 'Z is the mother of S', and 'Z = S' means 'Z is the mother of S', and 'Z = S' means 'Z is the mother of S', and 'Z = S' means 'Z is the mother of S', and 'Z = S' means 'Z is the mother of S', and 'Z = S' means 'Z is the mother of S', and 'Z = S' means 'Z is the mother of S', and 'Z = S' means 'Z = S' mean
Ans	 'Z' S' means 'Z is the brother of S', 'Z * S' means 'Z is the father's sister of S', 'Z * S' means 'Z is the sister of S', 'Z * S' means 'Z is the daughter of S', and 'Z = S' means 'Z is the mother of S', then how is P related to U in the following expression? P × Q\$ R@ S* T \$ U X 1. Daughter 2. Husband's sister X 3. Brother's son
Ans	 2 * S' means '2 is the brother of S', 'Z * S' means '2 is the father's sister of S', 'Z * S' means '2 is the sister of S', 'Z * S' means '2 is the daughter of S', and 'Z = S' means '2 is the mother of S', then how is P related to U in the following expression? P × Q \$ R@S * T \$ U X 1. Daughter 2. Husband's sister X 3. Brother's son X 4. Brother
Ans	 2 * S' means '2 is the father's sister of S', 'Z * S' means '2 is the father's sister of S', 'Z * S' means '2 is the aughter of S', and 'Z = S' means '2 is the mother of S', then how is P related to U in the following expression? P × Q \$ R @ S * T \$ U X 1. Daughter 2. Husband's sister X 3. Brother's son X 4. Brother
Ans Q.21	2 * S' means '2 is the father's sister of S', 'Z * S' means 'Z is the father's sister of S', 'Z * S' means 'Z is the sister of S', and 'Z = S' means 'Z is the mother of S', then how is P related to U in the following expression? P × Q \$ R @ S * T \$ U X 1. Daughter 2. Husband's sister X 3. Brother's son X 4. Brother In a certain code language, 'SHELP' is coded as '110', and 'TABLE' is coded as '120'. How will
Ans Q.21	 2 * S' means '2 is the brother of S', 'Z * S' means '2 is the father's sister of S', 'Z * S' means '2 is the daughter of S', 'Z * S' means '2 is the mother of S', then how is P related to U in the following expression? P × Q \$ R @ S * T \$ U X 1. Daughter 2. Husband's sister X 3. Brother's son X 4. Brother In a certain code language, 'SHELF' is coded as '110', and 'TABLE' is coded as '120'. How will 'DESK' be coded in that language?
Ans Q.21 Ans	 2 * S' means 2 is the former of S', 'Z* S' means 2 is the father's sister of S', 'Z* S' means 2 is the sister of S', 'Z* S' means 2 is the daughter of S', and 'Z = S' means 2 is the mother of S', then how is P related to U in the following expression? P × Q\$ R @ S* T\$ U 1. Daughter 2. Husband's sister X 3. Brother's son 4. Brother In a certain code language, 'SHELF' is coded as '110', and 'TABLE' is coded as '120'. How will 'DESK' be coded in that language? 1. 85
Ans Q.21 Ans	2 * S means 2 is the bother of S', 2 * S' means 2 is the father's sister of S', 2 * S' means 2 is the sister of S', 2 * S' means 2 is the daughter of S', and 2 = S' means 2 is the daughter of S', and 2 = S' means 2 is the mother of S', then how is P related to U in the following expression? P × Q \$ R @ S * T \$ U 1. Daughter 2. Husband's sister 3. Brother's son 4. Brother In a certain code language, 'SHELF' is coded as '110', and 'TABLE' is coded as '120'. How will 'DESK' be coded in that language? 1.85 × 2.69
Ans Q.21 Ans	2 * S means 2 is the brother of S', 2 * S' means 2 is the father's sister of S', 2 \$ S' means 2 is the sister of S', 2 \$ S' means 2 is the daughter of S', and 2 \$ S' means 2 is the mother of S', then how is P related to U in the following expression? P × Q \$ R @ S * T \$ U 1. Daughter 2. Husband's sister 3. Brother's son 4. Brother In a certain code language, 'SHELF' is coded as '110', and 'TABLE' is coded as '120'. How will 'DESK' be coded in that language? 1. 85 2 . 69 × 3 10
Ans Q.21 Ans	2 * S means 2 is the brother of S', 2 * S' means 2 is the father's sister of S', 2 \$ S' means 2 is the daughter of S', and 2 \$ S' means 2 is the daughter of S', and 2 \$ S' means 2 is the mother of S', then how is P related to U in the following expression? P × Q \$ R @ S * T \$ U 1 Daughter 2. Husband's sister 3. Brother's son 4. Brother In a certain code language, 'SHELF' is coded as '110', and 'TABLE' is coded as '120'. How will 'DESK' be coded in that language? 1.85 2 .69 3. 10 x 4. 72
Ans Q.21 Ans	2 * S means 2 is the brother of S, 2 × S means 2 is the father's sister of S', 2 # S' means 2 is the sister of S', 2 = S' means 2 is the mother of S', and 2 = S' means 2 is the mother of S', then how is P related to U in the following expression? P × Q \$ R @ S * T \$ U × 1. Daughter 2. Husband's sister × 3. Brother's son × 4. Brother In a certain code language, 'SHELP is coded as '110', and 'TABLE is coded as '120'. How will 'DESK be coded in that language? * 1.85 × 2.69 × 3.10 × 4.73
Ans Q.21 Ans	2 * 5 means 2 is the brother of S', 2 × 5' means 2 is the father's sister of S', 2 ≠ 5' means 2 is the daughter of S', and 2 = 5' means 2 is the mother of S', and 2 = 5' means 2 is the mother of S', and 2 = 5' means 2 is the daughter of S', then how is P related to U in the following expression? P × Q \$ R@ S * T \$ U
Ans Q.21 Ans	2 · S means 2 is the bronner of S, Z × S' means Z is the father's sister of S', Z ≠ S' means Z is the monther of S', then how is P related to U in the following expression? P × Q \$ R @ S * T \$ U
Ans Q.21 Ans	2 * 3 means 2 is the bromer or 5', 2 × 5' means Z is the sister of 5', 2 # 5' means Z is the daughter of 5', then how is P related to U in the following expression? P × Q \$ R@ S * T \$ U × 1. Daughter • 2. Husband's sister × 3. Brother's son × 4. Brother In a certain code language, 'SHELF is coded as '110', and 'TABLE is coded as '120'. How will 'DESK be coded in that language? • 1.85 × 2.69 × 3.10 × 4.73
Ans Q.21 Ans	2 × 5' means Z is the father's sister of S', 2 × 5' means Z is the daughter of S', 2 × 5' means Z is the daughter of S', 2 × 5' means Z is the mother of S', 2 × 5' means Z is the mother of S', 2 × 5' means Z is the mother of S', 2 × 5' means Z is the mother of S', 2 × 5' means Z is the mother of S', 2 × 5' means Z is the mother of S', then how is P related to U in the following expression? P × Q R @ S' T \$ U ✓ 1. Daughter ✓ 2. Husband's sister ✓ 3. Brother's son ✓ 4. Brother In a certain code language, 'SHELP' is coded as '110', and 'TABLE is coded as '120'. How will 'DESK be coded in that language? ✓ 1.85 ✓ 2.69 ✓ 3.10 ✓ 4.73
Ans Q.21 Ans	2 * 3 means 2 is the prother of S, 2 × 5 means 2 is the father's sister of S', 2 ≠ 5' means 2 is the daughter of S, and 2 = 5' means 2 is the mother of S', then how is P related to U in the following expression? P × Q \$ R@ \$' T \$ U × 1. Daughter 2. Husband's sister × 3. Brother's son × 4. Brother In a certain code language, 'SHELP is coded as '110', and 'TABLE is coded as '120'. How will 'DESK' be coded in that language? * 1.85 × 2.69 × 3.10 × 4.73
Ans Q.21 Ans	2 - S means 2 is the former or S, 2 + S' means 2 is the father's sister of S', 2 + S' means 2 is the daughter of S', 2 + S' means 2 is the mother of S', then how is P related to U in the following expression? P × Q \$ R @ S * T \$ U
Ans Q.21 Ans	2 's 'means Z is the father's sister of S', 'Z*S' means Z is the dather's sister of S', 'Z*S' means Z is the mother of S', 'Z*S' means Z is the mother of S', 'Then how is P related to U in the following expression? P × QS R@S*TSU
Ans Q.21 Ans	2 's means Z is the father's sister of S', Z's S' means Z is the ther's sister of S', Z's S' means Z is the mother of S', then how is P related to U in the following expression? P × Q S R@ S'T S U ✓ 1. Daughter ✓ 2. Husband's sister ✓ 3. Brother's son ✓ 4. Brother In a certain code language, 'SHELF is coded as '110', and 'TABLE is coded as '120'. How will 'DESK' be coded in that language? ✓ 1.85 ✓ 2.69 ✓ 3.10 ✓ 4.73
Ans Q.21 Ans	2 's means Z is the father's sister of S', Z*S' means Z is the ther's sister of S', Z*S' means Z is the upther of S', and Z=S' means Z is the mother of S', then how is P related to U in the following expression? P × Q S R@ S' T S U X 1. Daughter 2. Husband's sister 3. Brother's son 4. Brother In a certain code language, 'SHELF' is coded as '110', and 'TABLE' is coded as '120'. How will 'DESK' be coded in that language? 1. 85 2. 69 3. 10 4. 73
Ans Q.21 Ans	2 - 's means 2 is the father's sister of S', 7 - 's means 2 is the sister of S', 7 - 's means 2 is the signifier of S', and 7 - S' means 2 is the mother of S', then how is Prelated to U in the following expression?
Ans Q.21 Ans	2 - S means 2 is the father's sister of S', 27 s means 2 is the sister of S', 27 s means 2 is the doughter of S', 28 s' means 2 is the mother of S', then how is P related to U in the following expression? P × Q \$ R@ S' T \$ U
Ans Q.21 Ans	2's means 2 is the father's sister of S', 2's S' means 2 is the father's sister of S', 2's S' means 2 is the nother's sister of S', 2's S' means 2 is the nother's sister of S', then how is Prelated to U in the following expression? A Brother's son 3 Brother's son 4 Brother's In a certain code language, 'SHELP' is coded as '110', and 'TABLE is coded as '120'. How will 'DESK be coded in that language? 1.85 2 2.69 3 3.10 4 4.73

Q.23	If A denotes '+', B denotes '×', C denotes '-', and D denotes '÷', then what will be the value of the following equation? 22 B 13 C 120 D 30 A 42 = ?
Ans	🛹 1. 324
	× 2.325
	× 3.352
	X 4.342
Q.24	Eight people are sitting in two parallel rows with four people each in such a way that there is equal distance between adjacent persons. In row I – E, F, Gand H are seated and all of them are facing south. In row II – U, V, W and X are seated and all of them are facing north. Gsits exactly opposite U, who sits second from the right end of their row. Fsits at the extreme right end of their row and is exactly opposite X. E sits between F and Gand is exactly opposite V. Who sits at the extreme left end of the row of people facing South?
Ans	✔ 1.H
	X 2.G
	X 3.F
	X 4. E
0.25	Sonia starts walking from her home and goes 7 m east. From there she turns right and walks a
Q.25	certain distance called P m. Then, she turns left and walks 5 m, now she turns left again and walks 8 m. After that she takes another left turn and walks 12 m. If Sonia's current position is 22 m south of her home, then what is the value of P?
Ans	× 1.34
	✓ 2.30
	X 3.22
	X 4.28
Q.26	In a code language, 'BROWN' is coded as CTRUM and 'ENTER' is coded as FPWCQ. How will 'NOISE' be coded in the same language?
Ans	V 1. OQLQD
	X 2. OPKQD
	X 3. OQLPD
	X 4. OQMPD
Q.27	How many triangles are there in the given figure?
Ans	× 1.8
	2.0
	X 3.5
	× 4.7
Q.28	Select the option that is related to the third term in the same way as the second term is related to
	the first term and the sixth term is related to the fifth term. 42 : 12 :: 77 : ? :: 91 : 19
Ans	× 1.14
	X 2.19
	× 3.15
	4.17
	•

Q.29	Each of the seven friends, Kirti, Siya, Amita, Preeti, Deepika, Jeet and Pari, has scored different marks in an exam. Pari has scored more than Kirti but less than Siya. Deepika has scored less than Preeti but more than Amita. Kirti has scored more than Preeti but less than Pari. Siya is not the highest scorer.
	Who has scored the highest marks?
Ans	🗙 1. Pari
	🗙 2. Amita
	× 3. Preeti
	4. Jeet
Q.30	Select the set in which the numbers are related in the same way as are the numbers of the following set. (NOTE : Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. Eg. 13 - Operations on 13 such as adding /subtracting /multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed.)
	(20, 8, 4)
	(12.3.6)
Δne	x 1 (44 2 24)
715	$\sim 2.(22.4.14)$
	S. (6, 1, 6)
	X 4. (22, 3, 9)
Q.31	Which letter cluster will replace the question mark (?) to complete the given series?
	NGC, PJH, RMM, TPR, ?
Ans	X 1. VTX
	2. VSW
	X 3. USW
	X 4. UTY
Q.32	Select the correct option that indicates the arrangement of the following words in a logical and meaningful order. 1 Cocoon 2 Egg 3 Butterfly 4 Caternillar
Ans	1.2,4,1,3
	× 2.2.1.3.4
	x 3.2.4.3.1
	x 4.2,3,1,4
Q.33	G is the brother of F. F is B's daughter. D is A's son and C's brother. B is the brother of C. How is B related to A?
Ans	X 1. Father's mother
	2. Son
	X 3. Father
	X 4. Mother
Q.34	Select the option that is related to the fourth term in the same way as the first term is related to the second term and the fifth term is related to the sixth term?
	16:1:?:3::54:2
Ans	X 1.135
	✓ 2. 128
	× 3.142
	X 4.108


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Q.35 If '+' means '+', '-' means '+', 'x' means '-', and '+' means 'x', then what will be the value of the
     following expression?
     [{(25 \times 16) - (3 \div 2)} + (3 - 2)] \div 5
      🗙 1. 10
Ans
       🗙 2. 18
       a 3. 15
       X 4.20
Q.36 Which of the following numbers will replace the question mark (?) in the given series?
     47, 41, 53, ?, 59, 29
     🗙 1. 39
Ans
       a 2. 35
       🗙 3. 55
       🗙 4. 57
Q.37 Select the option that represents the letters which, when sequentially placed from left to right in
     the blanks below, will complete the letter series.
     Z__O__MY_AZ_YOA
     🗙 1. YOMZAO
Ans
       X 2. AOZMYM
       🛷 3. MYAZOM
       X 4. ZAMOMY
Q.38 Select the option that is related to the third term in the same way as the second term is related to
     the first term and the sixth term is related to the fifth term.
     784 : 26 :: 961 : ? :: 529 : 21
      X 1.27
Ans
       v 2. 29
       🗙 3.31
       🗙 4. 33
Q.39 If A denotes '+', B denotes '×', C denotes '-', and D denotes '+', then what will come in place of '?'
     in the following equation?
     81 D9 B3 C27 = ?
Ans
      X 1.9
       🗙 2. 216
       3.0
       X 4.3
Q.40 Select the option figure which is embedded in the given figure as its part (rotation is NOT allowed).
Ans
```


Q.43	In this question, three statements are given, followed by two conclusions numbered I and II.
Q. 10	Assuming the statements to be true, even if they seem to be at variance with commonly known
	Statements: Some pens are sharpeners.
	Some sharpeners are pencils. All pencils are erasers
	Conclusions: I. Some erasers are sharpeners.
	II. Some pens are erasers.
Ans	X 1. Both conclusions I and II follow.
	X 2. Neither conclusion I nor II follows.
	X 3. Only conclusion II follows.
	✓ 4. Only conclusion I follows.
Q.44	Select the number from among the given options that can replace the guestion mark (?) in the
	following series.
Ans	× 1.108
	× 2.118
	3.171
	× 4.180
Q.45	Select the combination of letters that when sequentially placed in the blanks of the given series, will complete the series.
Ans	X 1. QJRKHQRIK
	× 2. QJKRHQIRK
	3. QIRKHQIRK
	X 4. QJRKQHIRK
0.46	Circ faisande aux sitting in a single. All of them are fasing the south a Comin is an immediate
Q.40	neighbour of Kiran. Gagan is an immediate neighbour of Pran and Vyom. Suman sits second to the
	right of Gagan. Kiran sits second to the right of Vyom.
	Who sits fourth to the left of Vyom?
Ans	X 1. Samir
	🖌 2. Kiran
	X 3. Pran
	🗙 4. Suman
Q.47	Select the option that represents the correct order of the given words as they would appear in an
	English dictionary.
	2. Infested
	3. Inferior 4. Infinity
	5. Infirmary
	6 Intisted
Ans	6. Inflated × 1, 3, 2, 5, 4, 6, 1
Ans	6. Inflated ★ 1. 3, 2, 5, 4, 6, 1 2. 3, 2, 4, 5, 6, 1
Ans	6. Inflated × 1.3, 2, 5, 4, 6, 1 ✓ 2.3, 2, 4, 5, 6, 1 × 3.2, 3, 4, 5, 6, 1
Ans	6. Inflated \times 1.3, 2, 5, 4, 6, 1 \checkmark 2.3, 2, 4, 5, 6, 1 \times 3.2, 3, 4, 5, 6, 1 \times 4, 2, 3, 4, 5, 1, 6

Q.2	Chhau is a recognised dance form, for which Shashidhar Acharya received the Padma Shri. To which part of the country does this dance form belong?
Ans	✓ 1. Eastern
	X 2. Southern
	X 3. Western
	X 4. Central
Q.3	Which of the following connects the continental shelf and the ocean basins?
Ans	1. Continental slope
	X 2. Mid oceanic ridges
	X 3. Seamount
	X 4. Deep sea plains
Q.4	Which of the following statements is INCORRECT with respect to Special Capital Linked Subsidy Scheme for Service Sector?
Ans	X 1. Capital subsidy of 25% will be provided for procurement of Plant & Machinery and service
	equipment's through institutional credit to the SC-ST MSEs.
	\sim 3. The Majetry of MSME is the implementing ministry for the scheme
	\sim 4. It was launched from Querchati
Q.5 Ans	In September 2022, who among the following was elected as President of Hockey India? X 1. Surender Kumar
	2. Dilip Tirkey
	X 3. Harmanpreet Singh
	🗙 4. Dhanraj Pillay
Q.6	In which state of India is the Bhadla Solar Power Park established?
Ans	🗙 1. Madhya Pradesh
	X 2. Odisha
	🛹 3. Rajasthan
	X 4. Gujarat
Q.7	Which of following was established in Madras in 1864?
Ans	🗙 1. Arya Mahila Samaj
	🖌 2. Veda Samaj
	🗙 3. Singh Sabha Samaj
	🗙 4. Brahmo Samaj
Q.8	Which of the following countries is the host of the Asian boxing Championship 2022?
Ans	V 1. Jordan
	🗙 2. Russia
	🗙 3. Kazakhstan
	🗙 4. Iran
Q.9	Acidified KMnO₄ can be used:
Ans	X 1. to get alcohol directly from carboxylic acids
	2. to get carboxylic acids directly from alcohol
	X 3. to get formic acid from formaldehyde
	X 4. to get glycerol from glucose
Q.10	The question consists of two statements, namely, Assertion (A) and Reason (R). Use them to
	choose the correct alternative.Read the following statements and select the correct alternative
	Reason (R): Interest payments neither creates any assets nor causes a reduction in liabilities of
And	the government.
Ans	A is false but R is true
	\sim 2. And lease built the true and R is the correct evaluation of A
	\wedge 3. Both A and P are true, but P is not the correct explanation of A

Q.11	Which are the two most common minerals found in rocks?
Ans	X 1. Bauxite and Calcite
	2. Feldspar and quartz
	X 3. Mica and calcite
	X 4. Amphibole and olivine
Q.12	The Board of Control established to control company affairs had how many members?
Ans	X 1. Five
	X 2. Three
	3. Six
	× 4. Four
Q.13	Which of the following statements is INCORRECT about vinegar?
Ans	X 1. Vinegar is a combination of acetic acid and water.
	X 2. It can be used as a food preservative.
	★ 3. It is produced by 2-step fermentation.
	4. It is a combination of acetic acid and formic acid.
Q 14	Who studied ecological succession in the Indiana Dunes of Northwest Indiana in the 1890s?
Ans	X 1. G Evelyn Hutchinson
	2. Henry Chandler Cowles
	× 3 Frederic Clements
	× 4. Charles Elton
Q.15	A financial institution can be a banking institution only when it
Ans	X 1. neither performs the function of 'accepting deposits' nor of 'advancing loans'
	2. performs both the functions of 'accepting deposits' and 'advancing loans'
	\times 3. performs the function of 'advancing loans' and not 'accepting deposits'
	X 4. performs the function of 'accepting deposits' and not 'advancing loans'
Q.16	Identify the INCORRECT statement about fermentation.
Ans	χ 1. It is the process of breaking down sugar into alcohol.
	2. Fermentation occurs only in fungal cells.
	X 3. Yeast is used in fermentation technology to prepare alcohol.
	X 4. The fermentation technique is used to make breads.
Q.17	Which option allows you to import recipient addresses from a spreadsheet when creating mailing
A	labels in MS Word?
AIIS	
	X 3. Merge and Print
	X 4. Import Data
Q.18	What is the percentage increase in the total literacy rate in 2011 over 2001?
Ans	X 1.8.99%
	× 2.8.67%
	★ 3.7.90%
	4.9.21%
Q.19	What architecture is the famous black pagoda temple situated in Konark?
Ans	X 1. Dravid architecture
	2. Kalinga architecture
	X 3. Champa architecture
	X 4. Gadaga architecture

Q.20	What was the motto of the Nationa	Games of India 2022?
Ans	χ 1. Celebrating diversity through	sports
	χ 2. Celebrating brotherhood thro	ugh sports
	$\mathbf{\chi}$ 3. Celebrating sports through u	nity
	4. Celebrating unity through sp	orts
	•	
0.21	How can using templates benefit u	sers when creating a PowerPoint presentation?
Ans	1. Templates provide a consis	tent design and save time in formatting.
	 2. Templates allow users to inst 	ert audio and video dips into slides
	X 3 Templates enable real-time	collaboration with multiple users
	× 4 Templates automatically ger	erate slide content and animations
Q.22	Force Survey (PLFS) 2020-21?	percent) in urban area as per the report of Periodic Labor
Ans	✔ 1.6.7	
	X 2.7.2	
	X 3.4.0	
	X 4. 10.8	
Q.23	The 'PRASHAD' scheme of the Gov	ernment of India is associated with which ministry of the
	government?	
Ans	\mathbf{X} 1. Education	
	X 2. Culture	
	🛹 3. Tourism	
	🗙 4. Tribal Affairs	
Q.24	Which of the following Articles of the appointed by the President of India	ne Indian Constitution mentioned that the Prime Minister is ?
Ans	1 .75	
	X 2.71	
	x 3.70	
	x 4 57	
Q.25	2 extracted from the herb 'meadow	v sweet'?
Ans	1. Salicylaldehyde	
	X 2. Formaldehyde	
	X 3. Acetaldehyde	
	🗙 4. Cinnamaldehyde	
Q.26	According to	of the Constitution of India, no person shall be compelled to
	pay any taxes for the promotion of	a particular religion.
Ans		
	X 3. Article 28	
	X 4. Article 26	
Q.27	Which of the following is t	he correct match of the column-A with column-B?
	Column-A (Lake)	Column-B (Continent)
	i. Lake Victoria	a. North America
	ii. Lake Superior	D. AUSTRALIA
	iv. Lake Evre	d. Asia
Ans	★ 1. i-c, ii-d. iii-a. iv-b	
. 10	★ 2 i-d ij-c iii-h iv-a	
	∧ 4. I-C, II-O, III-D, IV-A	

Q.28	Domingo Paes was a traveller, who visited the Vijayanagara empire in the 16th century.
Ans	1. Portuguese
	🗙 2. Spanish
	🗙 3. Italian
	X 4. Russian
Q.29	Which of the following groups of rivers is placed in the correct sequence from north to south of the Peninsular River?
Ans	🛷 1. Mahanadi-Godavari-Krishna-Kaveri
	🗙 2. Godavari-Krishna-Kaveri-Mahanadi
	🗙 3. Godavari-Krishna-Mahanadi-Kaveri
	X 4. Godavari-Mahanadi-Krishna-Kaveri
Q.30	Which of the following musical instruments was played by Ustad Bismillah Khan on the eve of India's independence in the year 1947?
Ans	X 1. Bugle
	🗙 2. Sarangi
	🛹 3. Shehnai
	🗙 4. Bansuri
Q.31	Which is the least populated state according to the census of 2011?
Ans	🛷 1. Sikkim
	X 2. Arunachal Pradesh
	X 3. Tripura
	X 4. Nagaland
Q.32	What work was published by John Dalton in 1808 that provided a physical picture of how
Ans	 ✓ 1. Lessons in Chemical Philosophy
	× 2. From Chemical Philosophyto Theoretical Chemistry
	A A New System of Chemical Philosophy
	× 4. Introduction to the Study of Chemical Philosophy
Q.33	India's drainage system is divided on the basis of the size of the watershed. Which of the following is NOT a part of the drainage basin of India?
Ans	1. Average river basin
	× 2 Medium river basin
	× 3 Major river basin
	× 4 Mnor river basin
Q.34	The idea of Fundamental Duties has been borrowed from the Constitution of:
Ans	X 1. The UK
	X 2. Ireland
	X 3. The US
	🖌 4. USSR
Q.35	Which is a circular basin covering an area of 5.427 million square miles surrounded by North America and Eurasia?
Ans	🗙 1. Pacific Ocean
	🗙 2. Indian Ocean
	X 3. Atlantic Ocean
	🛹 4. Arctic Ocean
Q.36	According to the Census of India 2011, identify the least literate state.
Ans	🗙 1. Madhya Pradesh
	🛹 2. Bihar
	•
	X 3. Uttar Pradesh

0.27	In which contury was the Kuchinudi style of Vakshagaana conseived by Siddhandra Vagi2
Q.37 Ans	✓ 1 14th
	A 15th A 1
	✓ 3. 17 th
	× ^{4.16th}
Q.38	In which of the following states of India is the legislative assembly election was held in late 2022?
Ans	1. Himachal Pradesh
	🗙 2. Rajasthan
	X 3. Nagaland
	🗙 4. Kamataka
Q.39	Sulochana Chavan is associated with folk music.
Ans	X 1. Bihu Geet
	X 2. Baul
	🛷 3. Lavani Geet
	X 4. Pandavani
Q.40	Who used to supervise the work of collection of revenue in the Mauryan Kingdom?
Ans	🗙 1. Rajuka
	🖌 2. Samaharta
	X 3. Prativedak
	X 4. Sannidhata
Q.41	Which of the following food additives are helpful to combine products containing immiscible food ingredients, such as oil and water, with one another?
Ans	★ 1. Food sweeteners
	X 2. Food preservatives
	✓ 3. Food emulsifiers
	X 4. Food stabilisers
Q.42	In order to claim the accumulation of income, trusts or charitable institutions must file Form 9A
	2023.
Ans	✓ 1.2 months
	X 2.1 month
	X 3.6 months
	X 4. 3 months
Q.43	Which of the following articles guarantees that no person shall be punished on the basis of laws
And	enacted after a crime has been committed?
Q.44	Burnpur in West Bengal is famous for which of the following industries?
AIIS	Solution and the second sec
	2. Ship building industry
	 A Iron and steel industry
	V 4. Iron and steel moustry
Q.45	Which of the following food groups is rich source of Vitamin B12?
Ans	X 1. Fruits and vegetables
	~ 2 Pulses and legumes
	 ✓ 3. Mik and meat products

Q.46 Which period best defines the period of the first Green Revolution in India? X 1. Mid 1980s to early 1990s Ans × 2. Mid 1950s to early 1960s X 3. Mid 1990s to early 2010s 4. Mid 1960s to early 1980s Q.47 The salaries and allowances of the Speaker and the Deputy Speaker of the Legislative Assembly and Chairman and Deputy Chairman of the State Legislative Council are fixed by the Ans 🛷 1. State legislature 🗙 2. State Cabinet X 3. Governor of the State X 4. Chief Minister Q.48 Which of the following statements is NOT correct about angiosperms? Ans \times 1. These plants have covered seeds. \mathbf{X} 2. These are also called flowering plants. 3. These are seedless plants. χ 4. Double fertilisation is a characteristic of angiosperms. Q.49 Which of the following is Mohr's salt, used in analytical chemistry as a preferred source of ferrous ions? Ans X^{1.} C₄H₂FeO₄ 6H₂O ×^{2.} K₄[Fe (CN)₆].6H₂O ✓ ^{3.} FeSO₄. (NH₄)₂SO₄.6H₂O ×^{4.} FeC₂O₄ · 6H₂O Q.50 In June 2022, who among the following took an oath as Delhi High Court Chief Justice? 🛷 1. Justice Satish Chandra Sharma Ans 🗙 2. Justice Dhirubhai Naranbhai Patel 🗙 3. Justice Sanjay Karol 🗙 4. Justice Vipin Sanghi Section : General Engineering Electrical Q.1 What is the magnetising current of a transformer? \mathbf{X} 1. The current flowing through the insulation between the primary and secondary windings. Ans 2. The current drawn by the primary winding when the secondary is on open circuit. X 3. The current drawn by the secondary winding when a load is connected. X 4. The current flowing through the ferromagnetic core. Q.2 Which of the following is NOT an application of shaded-pole induction motor? Ans 🗙 1. Table fan 🗙 2. Hair drier 3. A lift of a building X 4. Fans for refrigeration Q.3 What kind of metal does continuous bus bar wire typically consist of? Ans 📉 🗙 1. Plastic X 2. Neither copper nor aluminium 🗙 3. Iron 4. Copper or aluminium

Q.4 Find the ripple frequency of half wave rectifier if the input operating frequency is 50 Hz. Ans 🗙 1. 500 Hz 🗙 2. 100 Hz 🏑 3. 50 Hz 🗙 4. 25 Hz Q.5 What inductance would be needed to store 2kWh of energy in a coil carrying a 100A current? Ans 🎻 1. 1440 H 🗙 2. 100 H 🗙 3. 0.4 H 🗙 4.4 H Q.6 Current (I) expression of a diode is given by: (where symbols have usual meaning) Ans 1. $I = I_0(e^{\frac{qv}{\eta T}}-1)$ X 2. $I = I_0 (e^{\frac{qv}{\eta kT}} - 2)$ X 3. $I = I_0(e^{\frac{v}{\eta kT}})$ X 4. $I = I_0 (e^{\frac{qv}{\eta kT}} - 1)$ Q.7 The value of voltage Vab in the figure shown below is: 8Ω 10Ω 7A b 11A 7Ω X 1.0 V Ans 🥜 2. -40 V 🗙 3. -190 V 🗙 4. 40 V Q.8 In a PMMC instrument, if the controlling torque is too high, what effect will it have on the accuracy of the instrument? Ans X 1. The instrument will stop working. 2. The accuracy of the instrument will decrease. \mathbf{X} 3. The accuracy of the instrument will increase. X 4. The accuracy of the instrument will remain unaffected. Q.9 What will be the reactive power in the given power triangle? 60 Degree 600 W 🗙 1. 1039 VAR Leading Ans X 2. 1200 VAR Leading 3. 1039 VAR Lagging X 4. 1200 VAR Lagging

Q.10	Which of the following portions represents retentivity in the BH curve shown below?
	5
Ans	X 1.1
	× 2.3
	3 .2
	X 4.6
Q.11	Which of the following options shows the correct proportion of helium and neon gases in the
Q	mixture for helium neon laser?
Ans	1.90% of helium and 10% of neon
	X 2. 20% of helium and 20% of neon
	X 3. 10% of helium and 90% of neon
	X 4.80% of helium and 20% of neon
Q.12	Which of the following parts is NOT present in a typical brushless DC motor?
Ans	X 1. Fixed armature
	2. Commutator
	X 3. Permanent magnet
	X 4. Electronic controller
Q.13	FET is like a switched on condition when it operates in mode.
Ans	X 1. ohmic
	X 2. inversion
	✓ 3. saturation
	X 4. cut off
Q.14	Select the INCORRECT statement(s) regarding squirrel-cage induction generators used in wind
	power plants. A) They can be used in both constant-speed and variable-speed applications. B) They work within a narrow speed range, which is slightly above the synchronous speed. C) Squirrel-cage induction generators are more expensive than wound-rotor induction concertors.
Ans	× 1. Only A
	2. Only C
	X 3. OnlyB
	X 4. Aand B
Q.15	The permanent magnet synchronous motor has a configuration almost identical to the conventional synchronous machine with the absence of
Ans	X 1. air gap between stator and rotor
	2. field winding and slip ring
	X 3. stationary magnetic field
	imes 4. field winding and rotating magnetic field
Q.16	Which of the following lamps is suitable for highway lighting?
Ans	✓ 1. Sodium vapour light
	🗙 2. Neon lamp
	X 3. Fluorescent lamp
	X 4. Incandescent lamp

	Because of their high efficiency and high speed, synchronous motors are well suited for
Ans	✓ 1. blowers
	× 2. electric tractions
	X 3. ceiling fans
	X 4. mixer grinders
Q.24	A coil consists of 1000 turns having a cross-sectional area of 0.4 mm ² . The mean length per turn is 40 cm and the resistivity of the wire is 0.02uO-m. The resistance of the coil is
Ans	Χ 1.40Ω
	Χ 2.200Ω
	🖌 3. 20Ω
	Χ 4.20μΩ
Q.25	What will be the direction of deflecting torque in a moving iron instrument if the direction of current in the coil is reversed at the same magnitude?
Ans	X 1. Reverse direction
	X 2. Reduced to zero
	✓ 3. Same direction
	X 4. Reduced by half
Q.26	Which of the following statements is/are true regarding all day efficiency of a transformer? (i) All day efficiency is also called as commercial efficiency. (ii) All day efficiency primarily depends on the duration of load and amount of load. (iii) All day efficiency is achieved when the iron losses are less.
Ans	X 1. Only (ii) is true
	2. Both (ii) and (iii) are true
	X 3. Both (i) and (iii) are true
	X 4. Only (i) is true
Q.27	A wind turbine with a rotor diameter of 60 m is installed in an area with an average wind speed of 4 m/s. Find the wind power density in watts per square metre, assuming that the air density in the area is 1.5 kg/m ³ .
Q.27 Ans	A wind turbine with a rotor diameter of 60 m is installed in an area with an average wind speed of 4 m/s. Find the wind power density in watts per square metre, assuming that the air density in the area is 1.5 kg/m ³ .
Q.27 Ans	A wind turbine with a rotor diameter of 60 m is installed in an area with an average wind speed of 4 m/s. Find the wind power density in watts per square metre, assuming that the air density in the area is 1.5 kg/m ³ . X 1.542.6 KW/m ² X 2.736.45 KW/m ²
Q.27 Ans	A wind turbine with a rotor diameter of 60 m is installed in an area with an average wind speed of 4 m/s. Find the wind power density in watts per square metre, assuming that the air density in the area is 1.5 kg/m ³ . X 1.542.6 KW/m ² X 2. 736.45 KW/m ² 3.271.3 KW/m ²
Q.27 Ans	A wind turbine with a rotor diameter of 60 m is installed in an area with an average wind speed of 4 m/s. Find the wind power density in watts per square metre, assuming that the air density in the area is 1.5 kg/m ³ . × 1.542.6 KW/m ² × 2.736.45 KW/m ² × 3.271.3 KW/m ² × 4.135.67 KW/m ²
Q.27 Ans	A wind turbine with a rotor diameter of 60 m is installed in an area with an average wind speed of 4 m/s. Find the wind power density in watts per square metre, assuming that the air density in the area is 1.5 kg/m ³ . \checkmark 1.542.6 KW/m ² \checkmark 2.736.45 KW/m ² \checkmark 3.271.3 KW/m ² \checkmark 4. 135.67 KW/m ²
0.27 Ans 0.28	A wind turbine with a rotor diameter of 60 m is installed in an area with an average wind speed of 4 m/s. Find the wind power density in watts per square metre, assuming that the air density in the area is 1.5 kg/m ³ . × 1.542.6 KW/m ² × 2.736.45 KW/m ² × 3.271.3 KW/m ² × 4. 135.67 KW/m ² In electrical applications, the coil of an infrared lamp is made up of
Q.27 Ans Q.28 Ans	A wind turbine with a rotor diameter of 60 m is installed in an area with an average wind speed of 4 m/s. Find the wind power density in watts per square metre, assuming that the air density in the area is 1.5 kg/m ³ . × 1. 542.6 KW/m ² × 2. 736.45 KW/m ² × 3. 271.3 KW/m ² × 4. 135.67 KW/m ² In electrical applications, the coil of an infrared lamp is made up of
Q.27 Ans Q.28 Ans	A wind turbine with a rotor diameter of 60 m is installed in an area with an average wind speed of 4 m/s. Find the wind power density in watts per square metre, assuming that the air density in the area is 1.5 kg/m ³ . 1. 542.6 KW/m ² 2. 736.45 KW/m ² 3. 271.3 KW/m ² 4. 135.67 KW/m ² In electrical applications, the coil of an infrared lamp is made up of 1. copper 2. tungsten
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227 Ans 228 Ans	A wind turbine with a rotor diameter of 60 m is installed in an area with an average wind speed of 4 m/s. Find the wind power density in watts per square metre, assuming that the air density in the area is 1.5 kg/m ³ . 1.542.6 KW/m ² 2.736.45 KW/m ² 3.271.3 KW/m ² 4.135.67 KW/m ² In electrical applications, the coil of an infrared lamp is made up of 1. copper 2. tungsten 3. iron 4. nichrome In case of electrical energy, the joule is also expressed as the
227 Ans 228 Ans 229 Ans	A wind turbine with a rotor diameter of 60 m is installed in an area with an average wind speed of 4 m/s. Find the wind power density in watts per square metre, assuming that the air density in the area is 1.5 kg/m ³ .
2.27 Ans 2.28 Ans 2.29 Ans	A wind turbine with a rotor diameter of 60 m is installed in an area with an average wind speed of 4 m/s. Find the wind power density in watts per square metre, assuming that the air density in the area is 1.5 kg/m ³ . 1. 542.6 KW/m ² 3. 271.3 KW/m ² 4. 135.67 KW/m ² In electrical applications, the coil of an infrared lamp is made up of 1. copper 2. tungsten 3. iron 4. nichrome In case of electrical energy, the joule is also expressed as the 1. joule-second 2. meter-second
2,27 Ans 2,28 Ans 2,29 Ans	A wind turbine with a rotor diameter of 60 m is installed in an area with an average wind speed of 4 m/s. Find the wind power density in watts per square metre, assuming that the air density in the area is 1.5 kg/m ³ . 1.542.6 KW/m² 2.736.45 KW/m² 3.271.3 KW/m² 4. 135.67 KW/m² In electrical applications, the coil of an infrared lamp is made up of 1. copper 2. tungsten 3. iron 4. nichrome In case of electrical energy, the joule is also expressed as the 1. joule-second 2. meter-second 3. newton-second
),27 Ans),28 Ans),29 Ans	A wind turbine with a rotor diameter of 60 m is installed in an area with an average wind speed of 4 m/s. Find the wind power density in watts per square metre, assuming that the air density in the area is 1.5 kg/m ³ . 1.542.6 KW/m ² 2. 736.45 KW/m ² 3. 271.3 KW/m ² 4. 135.67 KW/m ² In electrical applications, the coil of an infrared lamp is made up of 1. copper 2. tungsten 3. iron 4. nichrome Incase of electrical energy, the joule is also expressed as the 1. joule-second 3. newton-second 3. newton-second 4. watt-second
227 Ans 228 Ans 229 Ans	A wind turbine with a rotor diameter of 60 m is installed in an area with an average wind speed of 4 m/s. Find the wind power density in watts per square metre, assuming that the air density in the area is 1.5 kg/m3. 1.542.6 KW/m² 2.736.45 KW/m² 3.271.3 KW/m² 4.135.67 KW/m² Y. 1. copper 2. tungsten 3. iron 4. nichrome In case of electrical energy, the joule is also expressed as the Y. 1. joule-second 2. meter-second 3. newton-second 4. watt-second What is core-stepping in core-type transformers?
227 Ans 228 Ans 229 Ans 230 Ans	A wind turbine with a rotor diameter of 60 m is installed in an area with an average wind speed of 4 m/s. Find the wind power density in watts per square metre, assuming that the air density in the area is 1.5 Kg/m3. 1.542.6 KW/m2 2.736.45 KW/m2 3.271.3 KW/m2 4.135.67 KW/m2 In electrical applications, the coil of an infrared lamp is made up of 1. copper 2. tungsten 3. iron 4. nichrome In case of electrical energy, the joule is also expressed as the 1. joule-second 2. meter-second 3. newton-second 4. watt-second Wat is core-stepping in core-type transformers? 1. Amethod to reduce the length of the mean tum
2,27 Ans 2,28 Ans 2,29 Ans 2,29 Ans	A wind turbine with a rotor diameter of 60 m is installed in an area with an average wind speed of 4 m/s. Find the wind power density in watts per square metre, assuming that the air density in the area is 1.5 kgrms. 2.736.45 KW/m2 3.271.3 KW/m2 4.135.67 KW/m2 Inelectrical applications, the coil of an infrared lamp is made up of 2. tungsten 3. iron 4. nichrome In case of electrical energy, the joule is also expressed as the 2. meter-second 3. newton-second 4. watt-second 4. watt-second
227 Ans 228 Ans 229 Ans 230 Ans	A wind turbine with a rotor diameter of 60 m is installed in an area with an average wind speed of 4 m/s. Find the wind power density in watts per square metre, assuming that the air density in the area is 1.5 kg/m ³ .

Q.31	Which of the following CANNOT be caused due to excessive voltage drop in an electric
Ans	 X 1. Electric heaters to heat poorly
	× 2. Electric lights to burn dimly
	3. Electric motors to run colder than normal
	× 4. Electriclights to flicker
Q.32	When two or more sinusoidal waves are precisely in step with one another, they are said to be:
Ans	1. in phase
	× 2. out of phase
	X 3.60 degrees lagging
	X 4. 60 degrees leading
Q.33	In the split-phase induction motor, the starting torque of the resistance start motor is about the full load torque.
Ans	X 1. 0.15 times
	2.1.5 times
	X 3. 15 times
	X 4. 150 times
0.04	
Q.34	Find the current flowing through the 7Ω resistor.
	$82 v T \qquad 3\Omega \lessapprox \qquad \lessapprox 7\Omega$
Ans	1.6A
	X 2.14 A
	X 3.20 A
	X 4.7A
Q.35	The shaded-pole induction motors are of
Ans	✓ 1. low cost
	X 2. very high cost
	X 3. high cost
	X 4. zero cost
Q.36	Which of the following is the application of soft magnetic materials?
Ans	X 1. Microphones
	X 2. Permanent magnets
	X 3. Speakers
	✓ 4. Electromagnets
Q.37	What is the reason for providing corrugated or radiators on the sides of transformer tanks?
Ans	imes 1. To increase the dielectric strength of the oil
	✓ 2. To provide sufficient cooling area
	imes 3. To reduce the size of the transformer tank
	X 4. To provide very small surface area to dissipate heat generated
Q.38	Which of the following is NOT the requirement of a DC servomotor?
Ans	X 1. High accuracy
	X 2. Linear torque-speed characteristics
	✓ 3. Less torque to weight ratio
	X 4. Better precision

4.39	Which of the following points clearly describe the need for a back-to-back converter connected to the rotor of a doubly fed induction generator [DFIG] used in wind power plants? (i) It feeds the rotor with currents of fixed frequency and thus, helps in achieving a fixed range of speed.
	(ii) It helps in power factor correction by adjusting the active power output of the DFIG.
٨٣٥	(iv) It helps in power factor correction by adjusting the reactive power output of the DHG
Ans	
	\sim 3 (ii) and (iii)
2.40	What is the purpose of laminating the core of a transformer?
Ans	X 1. To increase the eddy current loss
	X 2. To make the core heavier
	✓ 3. To minimise the eddy current loss
	X 4. To induce eddy current loss
2.41	The depletion layer capacitance is essentially the capacitance of a p-n junction.
Ans	X 1. forward-bias
	X 2. saturated
	✓ 3. reverse-bias
	★ 4. cut-off
2.42	In an AC circuit, the peak voltage is 388 V. Its effective voltage is:
Ans	¥ 1.300 V
	✓ 2.275 V
	★ 3.230 V
	★ 4.200 V
Q.4 3	A repulsion start induction run single phase motor runs as an IM only when
Ans	1. the commutator segments are short circuited
	× 2. stator winding is reversed
	X 3. brushes are shinted to neutral phase
	X 4. short circuit is disconnected
Q.44	Which of the following lamps are used in searchlights?
ans	V 1. Arc lamps
	X 2. Neomamps
	X 3. Fluorescent lamps
	X 4. Sodium vapour lamp
2.45	What is the maximum electric field when $V_{bi}=3V$, $V_R=4V$, and the width of the semiconductor is 7 cm?
Ans	✓ 1. –200 V/m
	× 2. −400 V/m
	🗙 3. 300 V/m
	★ 4 200 \//m

Q.46	A voltage source having some internal resistance delivers a 2A current when a 5 Ω load is connected to it. When the load is 10 Ω , then the current becomes 1.6A. Calculate the power transfer efficiency of the source for a 15 Ω load.
Ans	X 1.90%
	2 .50%
	X 3.10%
	★ 4.100%
Q.47	Which of the following motors is used for shears and presses?
Ans	1. DC compound motor
	X 2. Stepper motor
	X 3. DC shunt motor
	X 4. DC series motor
Q.48	Which of the following is the outermost layer of an underground cable?
Ans	X 1. Sheath
	X 2. Armour
	X 3. Insulation
	V 4. Serving
Q.49	An RLC series circuit has $R = 5 \Omega$ and L = 1 H. Which of the following values of capacitance will make this circuit critically damped?
Ans	🗙 1.0.08 F
	X 2.0.20 F
	🗙 3. 0.30 F
	✔ 4. 0.16 F
Q.50	An electrodynamometer is widely used as a
Ans	X 1. low impedance circuit
	✓ 2. transfer instrument
	χ 3. calibration instrument and transfer instrument
	X 4. calibration instrument
Q.51	The value of a series resistor is required to limit the current through an LED to 36mA with a forward voltage drop of 3V, when connected to a 12V supply.
Ans	Χ 1.250 m Ω
	Χ 2.25 Ω
	🖌 3. 250 Ω
	Χ 4.4000 Ω
Q.52	A 64k Ω resistor has a specified maximum power dissipation of 1000 watts. The maximum current that may be passed through the resistor is
Ans	\checkmark ^{1.} $\frac{1}{8}$ A
	× ^{2.} 64 A
	× ^{3.} 8A
	× ^{4.} 32A
Q.53	The most important consideration when making a detailed estimate is:
Ans	X 1. Only quantity of the materials
	2. quantity, transportation and availability of materials
	X 3. Only transportation of materials
	★ 4. Only availability of materials

	contained gives the value of
ns	X 1. utilisation factor
	X 2. diversity factor
	3. load factor
	X 4. average demand
2.55	A constant voltage source is applied between the two ends of a wire. If the length of the wire is doubled and the radius remains the same, then the rate of heat developed in the wire
Ans	✓ 1. will be halved
	× 2. will be zero
	X 3. will be 4 times
	X 4. will remain the same
Q.56	A non-inductive resistor of 50 Ω is connected in series with a coil of inductance 0.25 Henry and of negligible resistance across a 250 V, 50 Hz supply. The net impedance of the circuit is given by 93.07 Ω . Find the value of reactive power.
Ans	💉 1. 567.59 VAR
	× 2. 1022.14 VAR
	× 3. 1091.25 VAR
	× 4.727.5 VAR
Q.57	In electromagnetism, the pattern of the magnetic field in a solenoid is
Ans	✓ 1. of parallel straight lines
	X 2. of perpendicular lines
	X 3. circular
	X 4. of curved lines
Q.58	In a phasing out test, a voltmeter connected to the winding shows deflection when the supply is given this indicates that this is
Ans	x 1. tertiary winding only
	× 2. both primary and secondary winding
	3. secondary winding only
	× 4. primary winding only
Q.59	The capacitance of a parallel plate capacitor having two plates of area A = 200 cm ² and separated by distance d = 10 cm is given by if the permittivity of medium is 8.854 × 10 ⁻¹² F/m
Ans	✓ 1. 17.7 × 10-7 µF
	X 2.17.7 F
	X 3. 17.7 PF
	× 4.17.7 μF
Q.60	Power factor of an IM is low at
Ans	X 1. half load
	X 2. full load
	X 3. quarter load
	🛹 4. no load
Q.61	Which of the following information is NOT present on the nameplate of a transformer?
Ans	X 1. Insulation class
	X 2. Rated frequency
	3. Frame size
	× 4 k/A or M/A reting

Q.62	In the application of electrical circuits, the nichrome that is used to make the heating element in an electric cooker has
Ans	↓ 1.80% nickel and 20% chromium
	× 2.40% nickel and 60% chromium
	X 3. 20% nickel and 80% chromium
	X 4. 50% nickel and 50% chromium
Q.63	The standard voltage between any two phases in three-phase four-wire secondary distribution
Ans	x 1.11 kV
	2.400 V
	× 3.33 kV
	× 4.230 V
064	Three identical sails connected in data to a 445 V/2 phase sumply take a total payor of 50 kW
Q.04	and line currents of 70 A. Determine the total kVA taken by the coils.
Ans	🗙 1. 9.68 KVA
	🗙 2. 23.24 KVA
	🗙 3. 16.77 kVA
	🛹 4. 50.32 kVA
Q.65	Which of the following lamps is used for the determination of polarity of DC mains?
Ans	X 1. Mercury vapour lamp
	X 2. Carbon arc lamp
	X 4. Sodium vapour lamp
Q.66	Which of the following is NOT a type of Field Effect Transistor?
Ans	X 1. JFET
	2. Thyristor
	X 3. Enhancement MOSFET
	X 4. Depletion MOSFET
Q.67	What is the charging current per phase of a three-core underground cable connected to 22 kV, 50 Hz three phase supply? Given that the capacitance of each phase to neutral is 18 µF. (Given the
A mo	connection is star connected.)
Ans	
	× 2,84.45 A
	× 4 50 A
	V 4.00A
Q.68	Which sort of contract requires contractors to provide individual price quotes for all work to be performed?
Ans	X 1. Lump sum contract
	X 2. Percentage rate contract
	X 3. Schedule rate contract
	✓ 4. Item rate contract
Q.69	In case of magnetic circuits, the product of the number of turns on a coil and the current flowing
-	through the coil is called
Ans	
	X 2. EMF
	X 3. absolute permeability
	X 4. relative permeability
Q.70	In a metal filament bulb, the filament used as a heating coil is tungsten due to its
Ans	X 1. high melting point and low resistivity
	2. high melting point and high resistivity
	X 3. low melting point and low resistivity
	X 4. low melting point and high resistivity

Q.78	A overhead transmission line is supported by supports at equal levels. If the length of the conductor span is increased by two times, the sag will (Given, weight per unit length and tension in the conductor are constant.)
Ans	X 1. decrease by two times
	X 2. decrease by four times
	X 3. increase by two times
	4. increase by four times
Q.79	To measure the frequency of a waveform, which of the following data is necessary from the CRO?
Ans	X 1. Amplitude of the waveform
	✓ 2. Time period of the waveform
	X 3. Vertical scale setting
	X 4. Peak to peak value of the waveform
Q.80	A coil having a resistance of 8 Ω and an inductance of 0.01911 Henry is connected across a 230 V, 50 Hz AC supply. The reactive power is equal to
Ans	✓ 1. 3.174 KVAR
	X 2. 4.496 KVAR
	🗙 3. 3.703 KVAR
	X 4.4.232 KVAR
Q.81	What is the apparent power of a 3-phase, star-connected system with a line voltage of 200 V and a line current of 20 A? The phase difference between the voltage and the current is 36.87°.
Ans	× 1.8.928 kVA
	× 2. 5.928 kVA
	→ 3. 6.928 kVA
	× 4. 7.928 kVA
082	An electric kettle consumes 10km of electric newer when energiated at 200 V. A fuse wire of what
Q.02	rating must be used for it?
Ans	× 1.30A
	× 2.40A
	X 3. 10A
	✓ 4. 50A
Q .83	is the money put down in addition to the tender.
Ans	X 1. True money
	2. Earnest money
	X 3. Deposit money
	X 4. Exploit money
Q.84	In case of circuit laws, the currents flowing in various conductors in an electrical circuit are calculated by applying
Ans	X 1. the network reduction method
	X 2. Laplace's law
	🛹 3. Kirchhoff's law
	X 4. the direct method
Q.85	An AC circuit contains a resistance and inductance connected in series. The active power consumed by the circuit is equal to 4800 W and reactive power is 6400 VAR. Calculate the apparent power.
Ans	× 1.4233 VA
	× 2. 11200 VA
	✓ 3.8000 VA
	× 4. 1058.3 VA
Q.86	Which of the following measurement instruments consumes the least amount of energy?
Ans	1. PMVC type
	X 2. Induction type
	X 3. Dynamometer type
	X 4. Moving iron type

Q.87	A 3-phase star-connected alternator is rated at 1.3 MVA, 11 KV. The armature effective resistance and synchronous reactance are 1.3 Ω and 20 Ω , respectively. Calculate voltage drop due to synchronous reactance.
Ans	¥ 1.842.24 V
	× 2. 2363 V
	🛹 3. 1364.6 V
	★ 4.930.77 V
Q.88	Select the correct statement(s) with respect to the Francis turbine. A) It is used in medium heads and for moderate discharges. B) It is an axial-in radial-out type of turbine. C) It is an example of a mixed-flow turbine.
Ans	X 1. B and C
	X 2. Aand B
	3. A and C
	X 4. OnlyA
Q.89	As the leading power factor of the load of an alternator decreases, the magnitude of generated voltage required to give rated terminal voltage
Ans	X 1. decreases
	χ 2. first increases and then decreases
	X 3. remains unchanged
	✓ 4. increases
Q.90	A 230 V, 3-phase voltage is applied to a balance delta connected 3-phase load of phase impedance (15 + j 20) Ω . What is the power consumed per phase?
Ans	🗙 1. 1161.6 W
	🗙 2. 2198.3 W
	🗙 3. 3807.6 W
	✓ 4. 1269.6 W
Q.91	Which of the following types of cooling is more economical for very large transformers of rating 100 MVA?
Ans	X 1. Oil natural air natural
	X 2. Oil natural air forced
	 ✓ 3. Oil forced air forced ✓ 4. Oil forced water forced
Q.92	The main reason to amplify the input signals by using vertical amplifier is:
Ans	X 1. the input impedance is low
	X 2. they provide attenuation
	X 3. they provide low stability
	4. they are not strong to provide deflection that can be measured
Q.93	The type of armature winding used in large high-voltage alternators is:
Ans	X 1. two layer winding
	2. concentric winding
	X 3. lap winding
	X 4. wave winding
Q.94	Which of the following is NOT a desirable criteria for an underground cable?
Ans	X 1. Proper insulation thickness should be taken care of in order to provide greater degree of safety
	χ 2. Conductors should be used such that heating loss is minimum
	3 Mechanical protection is not required in any underground cable
	 ✓ 4. Conductors used in the cable should be stranded

Q.95	In the spilt-phase induction motor, maximum torque is about the full load torque at about 75% of the synchronous speed.
Ans	✓ 1. 2.5 times
	× 2. 250 times
	× 3.25 times
	X 4. 0.25 times
Q.96	What kind of error does it constitute if only one of the parties to a contract misunderstands its terms or scope?
Ans	X 1. Mutual mistake
	X 2. Multilateral mistake
	3. Unilateral mistake
	X 4. Bilateral mistake
Q.97	Which option among the following is correctly associated with the 'Auxiliary motor starting'?
Ans	$m{\chi}$ 1. A damper winding is used for the starting purpose of the starting of the synchronous motor.
	χ 2. ADC supply and DC compound motor is used for the starting purpose of the starting of the synchronous motor.
	X 3. Asquirrel cage winding is used for the starting purpose of the starting of the synchronous
	4. A small direct-coupled induction motor, called pony motor, is used for the starting purpose of
	the synchronous motor.
Q.98	If 15A current is flowing through a solenoid of inductance 4H, find the magnetic energy stored in the solenoid.
Ans	🗙 1. 540 J
	✓ 2.450 J
	🗙 3. 1000 J
	🗙 4. 100 J
Q.99	In case of electromagnetic induction, two coils are arranged in such a way that a change in one coil causes an EMF to be induced in the other coil. This is called
Ans	X 1. self-inductance
	X 2. series inductance
	X 3. parallel inductance
	✓ 4. mutual inductance
Q.100) What is the purpose of interleaving the windings in a transformer?
Ans	★ 1. To reduce the efficiency of the transformer
	X 2. To increase the leakage flux
	imes 3. To increase the inductance of the transformer
	✓ 4. To reduce the leakage flux