

Transmission & Distribution

Question No.	Question	Correct Op.No.	Option 1	Option 2	Option 3	Option 4
1	An over current relay having a current setting of 125 % is connected to a supply circuit through a current transformer of ratio 400/ 5. The pickup value will be ams	4	6.3	6.35	6.2	6.25
2	Liquids dielectrics are mainly used as	4	Impregnants in high voltage cables	In capacitors	For filling up transformers	All of these
3	The square root of the ratio of the line impedance and shunt admittance is called.	1	Surge impedance loading of line	Conduction of the life	Regulation of line	None of above
4	Which theory explains the mechanism for breakdown under different conditions?	4	Townsend theory	Streamer theory	Clump theory	Only (a) and (b)
5	Why are conduit pipes employed?	1	To protect unsheathed cables	Armoured cables	PVC sheathed cables	All of these
6	Why are sheaths used in cables?	3	Provide proper insulation	Provide mechanical strength	Prevent ingress of moisture	None of these
7	Transmission of power by ac cables is impossible beyond	1	35 – 45 km	500 km	300 km	10 – 15 km
8	When is the Ferranti effect on the long transmission lines experienced?	1	The line is lightly loaded.	The line is heavily loaded.	The line is fully loaded.	The power factor is unity.
9	When does the Ferranti effect happen on the transmission line?	3	When the line is short and loaded.	When the line is long and loaded.	When the line is long and unloaded.	None of these.
10	Transmission efficiency of a transmission line increases with the _____.	2	decrease in power factor and voltage.	increase in power factor and voltage.	increase in power factor but decrease in voltage.	increase in voltage and decrease in power factor.
11	At no load condition a shunt inductive reactor is connected at the receiving end of the line to limit the receiving end voltage to be equal to the sending end voltage. What is the ohmic value of the reactor?	2	Infinity	2000 Ω	105.26 Ω	1052.6 Ω
12	In a transmission line the distributed constants are:	4	Resistance and Capacitance	Capacitance and Inductance	Resistance, Inductance, and Capacitance only	Resistance, Inductance, Capacitance and Shunt Capacitance
13	The output voltage of constant voltage transformer contains excessive harmonics which can be filtered out by using	3	RC filter	RL filter	LC filter	None of these
14	In Scott connection, the voltage across the teaser leads the mains by	3	30 degree	60 degree	90 degree	120 degree
15	Dipsticks are used for the	4	Pressure measurement	Flow measurement	Displacement measurement	Level measurement
16	Capacitive devices are used for the level measurement of	3	Only liquid	Solid in powdered form	Both (a) and (b)	None of these
17	The measurement range of digital voltmeter is	1	1V to 1MV	1V to 1kV	1kV to 1MV	100 kV to 100MV
18	The full range of audibility in audio frequency oscillator is	2	0 to 20 Hz	20 Hz to 2 kHz	20 Hz to 20 kHz	20 Hz to 20 MHz
19	In function generator, the output waveform of integrator is	3	Sinusoidal	Square	Triangular	Saw-tooth
20	Which state in India does not follow IE (Indian Electricity rules)?	2	Sikkim	Jammu Kashmir	Nagaland	Mizoram
21	Which rule deals with the supply to X- rays and high frequency installations?	3	Rule 30	Rule 39	Rule 73	Rule 51
22	The power MOSFET device is a	2	Current controlled unipolar device	Voltage controlled unipolar device	Current controlled bipolar device	Voltage controlled bipolar device

Transmission & Distribution

Question No.	Question	Correct Op.No.	Option 1	Option 2	Option 3	Option 4
23	The conduction losses in IGBT is	2	More than that of MOSFET	Lower than that of MOSFET	Equal to that of MOSFET	Equal to that of BJT
24	Pantograph collector is used in railways where the train runs at 100 to 130 kmph. Which among the following is true about pantograph collector?	4	It is unidirectional	The erection of the overhead network is complicated	Its height cannot be varied	None of these
25	A low frequency supply is given to the single phase AC system for track electrification because	4	It improves commutation	Increases efficiency	Improves power factor	All of these
26	In routine tests, the cable is tested by applying an ac voltage of	2	2 times the rated value	2.5 times the rated value	3 times the rated value	3.5 times the rated value
27	While performing temperature rise tests, at any part of the bushing the steady temperature rise above the ambient air temperature should not exceed	4	20 °C	25 °C	35 °C	45 °C
28	The tests which is not performed under power frequency tests is	4	Partial discharge tests	Momentary withstand test	Visible discharge tests	Full wave withstand tests
29	Series capacitance voltmeters were used with cascade transformers for measuring rms values up to	4	100 kV	500 kV	800 kV	1000 kV
30	A network containing 100 buses in which 10 are the voltage control buses, 5 are fixed shunt capacitor buses, 20 are reactive power support buses, 6 are the generator buses. Find the size of the jacobian matrix ?	1	163 x 163	164 x 164	165 x 165	162 x 162
31	The accuracy of the ac field strength depends on	4	Harmonic content	Atmospheric conditions	Position of meter	All of these
32	A generating voltmeter is a	1	Variable capacitor electrostatic voltage generator	Constant capacitor electrostatic voltage generator	Variable inductor electrostatic voltage generator	Constant inductor electrostatic voltage generator
33	A transmission line has a reactance of 1 Pu is operating at $V_s = V_r = 1$ Pu. The generator is connected at source end which is delivering 0.5 Pu of active Power. Find the load angle?	2	35°	30°	45°	60°
34	In Van de Graaff generators, the shape of high voltage electrode is nearly spherical to avoid	4	High surface field gradients	Corona	Local discharges	All of these
35	The voltage doubler circuit is suitable for the voltage up to	2	2V	4V	6V	8V
36	For insulators and bushings of power transformers, circuit breakers and instrument transformers, the suitable materials is	3	Epoxy resin	Polyesters resins	Porcelain	Silicon rubber
37	SF6 Circuit breakers are manufactured up to the voltage of	4	33 kV	66kV	480 kV	800 kV
38	The temperature limit for class F insulation is	4	105°C	120°C	130°C	155°C
39	The thermal breakdown stresses are	1	Lower under ac conditions than under dc condition	Greater under ac condition than dc condition	Equal in both condition	None of these
40	In A.S.C.R. conductor the function of steel is to	1	Provide additional mechanical strength	Prevent corona	Take care of surges	Reduce inductance and subsequently improve power factor
41	What is the value of capacitance to neutral for the two wire line?	1	Twice the line to line capacitance	Equal to line to line capacitance	Thrice the line to line capacitance	Half of line to line capacitance
42	What happens in case of capacitance of line to ground, if the effect of earth is taken into account?	2	Capacitance of line to ground decreases	Capacitance of line to ground increases	The capacitance remains unaltered	The capacitance becomes infinite

Transmission & Distribution

Question No.	Question	Correct Op.No.	Option 1	Option 2	Option 3	Option 4
43	Capacitance between the two conductors of a single phase two wire line is $0.5 \mu F/km$. What is the value of capacitance of each conductor to neutral?	2	$0.5 \mu F / km$	$1 \mu F / km$	$0.25 \mu F / km$	$2.0 \mu F / km$
44	What is the safe working temperature for a conductor in case of armoured cables?	3	$50^\circ C$	$75^\circ C$	$65^\circ C$	$40^\circ C$
45	The capacitances of a 3 phase belted cable are $12.6 \mu F$ between the three cores bunched together and the lead sheath and $7.4 \mu F$ between one core and the other two connected to sheath. What will be the charging current drawn by the cable when connected to a 66 kV supply?	4	100 A	99.3648 A	105.236 A	107.74 A
46	In a 3 core cable, the capacitance between two conductors is $3 \mu F$. What will be the capacitance per phase?	3	$1.5 \mu F$	$3 \mu F$	$6 \mu F$	$12 \mu F$
47	What does capacitance grading of cables mean?	3	Use of dielectrics in different concentrations	Introduction of capacitance at various lengths of cable to counter the effect of inductance	Use of dielectrics of different permittivities	Grading according to capacitance per km length of the cable
48	What happens in a long transmission lines under no load?	2	The receiving end voltage is less than the sending end voltage.	The sending end voltage is less than receiving end voltage	The sending end voltage is equal to receiving end voltage.	None of these
49	The transmission lines above what length is termed as the long lines?	2	More than 100 km	150 km and above	250 km and above	Less than 100 km
50	In the nominal p method which among these are divided into two halves?	2	Series impedance	Shunt capacitance	Both (A) and (B)	None of these
51	What are the A and D parameters in case of medium transmission line (nominal T method)?	1	$A = D = 1 + (YZ / 2)$	$A = D = 1 + (YZ / 2) * Z$	$A = D = (YZ / 2)$	$A = D = (YZ / 2) * Y$
52	Which among the following methods are used for the calculation of solution of a medium transmission line?	4	End condenser method	Only T method	Only p method	All of these
53	A line of what length can be classified as a medium transmission line?	2	90 – 100 km	50 – 150 km	150 – 200 km	Above 200 km
54	The ABCD constants of a 3 phase transposed transmission line with linear and passive elements	3	are always equal	never equal	only A and D are equal	only B and C are equal
55	What are the values of A, B, C, D parameters of a short transmission line?	3	Z, 0, 1, 1	0, 1, 1, 1	1, Z, 0, 1	1, 1, Z, 0
56	What is the line length if a load of 15000 kW at a power factor 0.8 lagging can be delivered by a 3 phase transmission line having conductors each of resistance 1Ω per kilometre? The voltage at the receiving end is to be 132kV and the loss is about 5%.	2	40.13km	37.18km	40.18km	42.38km
57	For a short line if the receiving end voltage is equal to sending end voltage under loaded conditions	4	The sending end power factor is unity.	The receiving end power factor is unity.	The sending end power factor is leading.	The receiving end power factor is leading.
58	Single phase transmission line of impedance $j0.8 \text{ ohm}$ supplies a resistive load of 500 A at 300 V. The sending end power factor is	4	Unity	0.8 lagging	0.8 leading	0.6 lagging
59	What is the power factor angle of the load for maximum voltage regulation?	3	$\tan^{-1} (X/R)$	$\cos^{-1} (X/R)$	$\tan^{-1} (R/X)$	$\cos^{-1} (R/X)$
60	For a zero voltage regulation the PF is	2	0	$\tan^{-1} (R/X)$	$\tan^{-1} (X/R)$	1

Transmission & Distribution

Question No.	Question	Correct Op.No.	Option 1	Option 2	Option 3	Option 4
61	If the % reactance upto the fault point is 20% then shortcircuit current will be ----- times the full load current	2	2	5	2.5	10
62	In the modelling of short length overhead transmission line, why is the line capacitance to ground not considered?	2	Equal to zero	Finite but very small	Finite but very large	Infinite
63	The capacitance effect can be neglected in which among the transmission lines?	1	Short transmission lines	Medium transmission lines	Long transmission lines	All of these
64	On what concept is electrically short, medium and long lines based?	2	Nominal voltage of the line	Physical length of the line	Wavelength of the line	Power transmitted over the line
65	If the double circuit 3 phase line has conductors of diameter 2 cm and distance of separation 2m in hexagonal spacing. What is the phase to neutral capacitance for 150 km of line?	2	2.4939 μ F	3.7408 μ F	1.8245 μ F	3.2548 μ F
66	What will be the capacitance of a 100 km long, 3 phase, 50Hz overhead transmission line consisting of 3 conductors, each of 2 cm and spaced 2.5 m at the corners of an equilateral triangle?	1	1.007 μ F/phase	2.0075 μ F/phase	2.5 μ F/phase	1.45 μ F/phase
67	What happens if the separation between the three phases of the transmission line is increased?	3	The inductance will increase and capacitance will remain unchanged.	Both inductance and capacitance will decrease.	Inductance will increase and capacitance will decrease.	Inductance will decrease and capacitance will increase.
68	A two conductor single phase line operates at 50Hz. Diameter of each conductor is 20mm and the spacing between the conductors is 3m. The height of the conductors above the ground is 6m. What is the capacitance of the line to neutral?	1	9.7 pF/m.	10.8 pF/m.	3.57 pF/m.	2.415 pF/m.
69	How many cores are used in a cable for the transmission of voltages upto 66 kV?	3	Single core	Two core	Three core	All of the above
70	What is the percentage of added materials like sulphur, zinc lead etc in vulcanised rubber?	2	5 – 10 %	3 – 5 %	4 – 8 %	10 – 12 %
71	What is empire tape?	4	Impregnated paper	Vulcanised rubber	Enamel insulation	Varnished cambric
72	What is the dielectric strength of impregnated paper?	1	30 kV/mm	20 kV/mm	15 kV/mm	5 kV/mm
73	What is the limit of the conductor cross section when paper insulation is used?	3	50 mm ²	250 mm ²	600 mm ²	1200 mm ²
74	What is the main drawback of using paper as the insulating material?	1	Is hygroscopic	Has poor dielectric strength	Has a very low insulation resistivity	Has high capacitance
75	The insulation resistance of a cable of length 10 km is 1M Ω . For a length of 100 km of the same cable, what will be the insulation resistance?	3	1 M Ω	10 M Ω	0.1 M Ω	0.01 M Ω
76	The thickness of insulation provided on the conductor in the cable depends on which among the following factor?	1	Operating voltage	Current to be carried	Power factor	Both (a) and (b)
77	A layer similar to bedding is provided on the armouring to protect the whole cable from all atmospheric conditions. Which layer is this?	3	Insulation	A layer of jute	Serving	Sheath
78	The armature of a DC generator has a 2 layer lap winding in 72 slots with 6 conductor per slot. What is the minimum no. of commutator bars required for the armature	3	72	432	216	36
79	Armouring is provided above the bedding. The armouring consists of one or two layers of which wire or tape?	1	Galvanised steel wire	Thin wires of copper	Wires of aluminium	Wire made of both copper and cadmium

Transmission & Distribution

Question No.	Question	Correct Op.No.	Option 1	Option 2	Option 3	Option 4
80	What is the total charging current per phase for a 33 kV, 50 Hz, 3 phase underground cable of 4 km length using 3 single core cables? Each conductor has a diameter of 2.5 cm and the radial thickness of insulation is 0.5 cm.	2	15.28 A	11.87 A	13.85 A	8.25 A
81	A single core cable has a conductor diameter of 1 cm and the internal sheath diameter of 1.8 cm. If impregnated paper of relative permittivity 4 is used as the insulation, calculate the capacitance for 1 km length of cable?	1	0.378 μ F	0.257 μ F	0.549 μ F	0.78 μ F
83	On which factor does the capacitance of the cable depend?	4	Length of cable	Relative permittivity of dielectric used in cable	Ratio of sheath diameter and core diameter	All of the above
84	Why solid type of conductors is not preferred for the voltages exceeding 66 kV?	1	A danger of breakdown of insulation	Skin effect dominates the conductor	There is corona loss between conductor and sheath material	Insulation melts due to overheating
85	For a distortion less transmission line (G = shunt conductance between two wires)	1	R/L =G/C	RL =GC	RG=LC	RLGC =0
86	What is the gas pressure of SF ₆ for a compressed gas insulated cable?	3	10 – 20 mm Hg	80 – 100 mm Hg	3 – 5 kg / cm ²	0 – 50 kg / cm ²
87	What is the advantage(s) of screened type over the belted cables?	4	Reduced possibility of core to core faults	Increased current carrying capacity	No possibility of formation of voids within the dielectric	All of the above
88	What is / are the advantages of using H-type cables?	2	The metallic screens assist in complete impregnation of the cable with the compound	The metallic screens increase the heat dissipating power of the cable	The lead sheaths in H type are thicker than S.L type cables	All of these
89	The cable best suited for the transmission of voltages from 33 kV to 66 kV is _____.	2	Belted cables	Screened cables	Pressure cables	None of these
90	Why the belted type cable constructions are not suitable for voltages exceeding 22 kV?	4	Development of both radial and tangential stress	Formation of vacuous spaces and voids on loading and unloading owing to non homogeneity of dielectric in belted construction	Local heating caused by power loss at the centre filling	All of the above
91	Which material is suitable for the manufacture of armour in a single core cable?	3	Magnetic material	Non magnetic and non conducting material	Non magnetic and conducting material	Magnetic and non conducting material
92	Which among the following cables are generally suited for the voltages upto 11 kV?	1	Belted cables	Screened cables	Pressure cables	None of these
93	Why is the single core cables not provided with armouring?	1	Avoids excessive loss in the armour	Make the cable more flexible	Make the cable non hygroscopic	None of the above
94	How many cores are used in a cable for the transmission of voltages upto 66 kV?	3	Single core	Two core	Three core	All of the above
95	What is the percentage of added materials like sulphur, zinc lead etc in vulcanised rubber?	2	5 – 10 %	3 – 5 %	4 – 8 %	10 – 12 %
96	The pressure of SF ₆ gas in Circuit Breaker is of the order _____	3	100mm Hg	1Kg/cm sq	3 to 5 Kg/cm sq	30 to 50 Kg/cm sq
97	What is the dielectric strength of impregnated paper?	1	30 kV/mm	20 kV/mm	15 kV/mm	5 kV/mm

Transmission & Distribution

Question No.	Question	Correct Op.No.	Option 1	Option 2	Option 3	Option 4
98	What is the limit of the conductor cross section when paper insulation is used?	3	50 mm ²	250 mm ²	600 mm ²	1200 mm ²
99	Fusing factor for HRC fuses is	1	Minimum fusing current /Current Rating	Minimum fusing current /Minimum rupturing time	Maximum fusing current/Minimum fusing current	Minimum fusing current /Prospective current of circuit
100	A system having connected load of 100 KW , Peak Load of 80 KW , Base Load of 20 KW and average Load of 40 KW will have a Load factor of	2	40%	50%	60%	80%
101	The Surge Impedance for over head line is taken as	3	10-20 ohms	50-60 ohms	100-200 ohms	1000-2000 ohms
102	Total Load transmitted through a three phase transmission line is 10000 KW at 0.8 p.f. Lagging the IR Losses are 900 KW .The efficiency of Transmission Line is	2	60%	90%	95%	99%
103	In a 6 pole DC machine 90 mechanical digrees coressponds to ----- --- Electrical digrees	4	30	180	45	270
104	Armouring is provided above the bedding. The armouring consists of one or two layers of which wire or tape?	1	Galvanised steel wire	Thin wires of copper	Wires of aluminium	Wire made of both copper and cadmium
105	What is the purpose of bedding on the underground cables?	4	To avoid leakage of current.	To protect the sheath against corrosion.	To protect the sheath from mechanical injury due to armouring.	Both (b) and (c)
106	Determine the average demand of plant if its load factor and maximum demand are 0.60 and 30 MW	2	20MW	18 MW	50 MW	13 MW
107	A generating station has a connected load of 55MW and maximum demand of 20 MW .What is the demand factor	2	0.4785	0.3636	2.75	1100
108	The maximum demand on power system is 100 MW If the annual load factor is 40% calculate the total energy generated in a year	3	3761*105 kWh	4174* 105 kWh	3504 *105 kWh	3500*105 kWh
109	Neglecting losses in transmission system . If the voltage is doubled , for the same power transmission, the weight of conductor material required will be	4	four times	double	Half	one forth
110	visual critical voltage is _____ than disruptive critical voltage	1	greater	lesser	equals	two times
111	for protection against synchronising power surges which relay is used	4	split phase relay	impedance relay	reactance relay	mho relay
112	Percentage differential protection is used to prevent against_____	4	interturn fault	External Fault	heavy loads	magnetising current
113	According to CEA regulation 2010 which type of fire protection is used for power transformers	4	water injection	forced air system	water and forced air system	N2 injection Kit
114	Load factor for the period 6-24 hours period is	2	0.438	0.5	0.876	1
115	The power station has annual load factor of 50 % and capacity factor of 44% if the maximum demand is 15 MW the reserve capacity of plant is -----kW	3	1250	2500	3750	4750
116	If the voltage across the units in a two unit suspension insulator is 60 % and 40 % resp. of line voltage , the ratio of capacitance of the insulator to that of its capacitance to earth will be	2	0.05	0.5	0.65	0.75

Transmission & Distribution

Question No.	Question	Correct Op.No.	Option 1	Option 2	Option 3	Option 4
117	An industrial consumer has a load pattern of 2000kw 0.8 lag for 12 hrs 1000 kw unity power factor for 12 hrs . What is the load factor	4	1	0.75	0.67	0.5
118	A THERMAL GENERATING station has a installed capacity of 15MW and supplies a daily load of 10MW FOR 12 hours and 5 MW for remaining 12 hours . The plant capacity for this station is	4	1	0.75	0.67	0.5
119	The inductance of a singal face two wire line is given by (D is the distance between conductors & 2v is the diametter of conductor)	1	0.4 log (D/r) mH/ km	0.55log (D/r) mH/ km	0.4 log (R/d) mH/ km	0.55 log (R/d) mH/ km
120	For high voltage ac circuit brakers, the rated short circuit current is passed for	3	0.01 Sec	0.1 Sec	3 sec	30 sec.
121	Which of the following is /are the charecteristics of negative feedback control system	4	Low sensitivity to parameter variation	Reduction in gain at the expense of better stability	Regjection of distrubance signals	all of the above
122	In load flow Studies PV bus is treated as PQ bus when	3	Phase angle become high	voltage at he bus become high	reactive power goes beyond limit	any of the above
123	The charging reactance of 50 km transmission line is 1500 OHMS what is the charging raactance for 100 KM length of line	3	1500	3000	750	1000
124	The material generally used for armour of high voltage cables is	2	aluminium	steel	brass	copper
125	Overhead lines generally use	3	copper conductors	all aluminium conductors	A.C.S.R. conductors	none of these
126	The power factor of industrial loads is generally	2	unity	lagging	leading	zero
127	High voltage transmission lines use	1	suspension insulators	pin insulators	both 1 and 2	none of the above
128	The distributors for residential areas are	3	single phase	three-phase three wire	three-phase four wire	none of the above
129	Most of the high voltage transmission lines in India are	2	underground	overhead	either of the above	none of the above
130	The voltage of the single phase supply to residential consumers is	3	110 V	210 V	230 V	400 V
131	The usual spans with R.C.C. poles are	3	40—50 meters	60—100 meters	80—100 meters	300—500 meters
132	Galvanized steel wire is generally used as	4	stay wire	earth wire	Structural component	all of above
133	By which of the following systems electric power may be transmitted?	3	Overhead system	Underground system	Both 1 & 2	None of the above
134	SAG depends on what factors in transmission lines:	4	Span length	tension in the conductors	Weight of the conductor per unit length	All the above
135	Effect of Temperature rise in overhead lines is to:	1	Increases the SAG and decreases the Tension of lines	Decreases the SAG and Increases the Tension of lines	Increase in both SAG and Tension of the lines	Decreases in both the SAG and Tension of the lines
136	Which material is used for manufacturing of ground wire:	4	Aluminum	Steel wire	Cast iron	Galvanised Steel
137	The function of steel wire in the ACSR conductors is to:	2	Compensate for Skin Effect	Provide additional mechanical strenght	Carry large currents	To Reduce Inductance
138	The minimum clearance between the ground and a 220 kV line is about	3	4.3 m	5.5m	7.0 m	10.5m
139	Full form of ACSR is :	1	Aluminum Conductors Steel Reinforced	Anodised Core Steel Reinforced	All Conductors Surface Reinforced	None of These
140	In overhead lines for transmitting power we generally use:	3	Copper Conductors	Aluminum Conductors	ACSR conductors	Galvanized Steel Conductors

Transmission & Distribution

Question No.	Question	Correct Op.No.	Option 1	Option 2	Option 3	Option 4
141	With the presence of earth in case of overhead lines:	4	Capacitance of the line decreases and Inductance increases	Capacitance of the line increases and Inductance increases	Capacitance and Inductance of the line increases	Only Capacitance of the line Increases
142	Which of the following is correct:	2	with increase in the frequency skin effect decreases	skin effect decreases with decrease in the conductor diameter	with increase in the conductor permeability skin effect decreases	with increase in resistivity of the material skin effect increases
143	Skin effect of the conductor results in :	4	decrease in the dc resistance	increase in the dc resistance	decrease in the ac resistance	increase in the ac resistance
144	The Skin Effect of a conductor reduces with increase in the:	4	Cross section of the conductor	Supply frequency	permeability of the conductor	Resistivity of the conductor material
145	On what factor does Skin Effect depends:	4	Cross section of the conductors	Supply Frequency	Permeability of the conductor material	all the above
146	The phenomenon in which the conductor surface carries more current compared to core when alternative voltage is applied is	1	Corona	Skin Effect	Ferranti Effect	Lenz's Law
147	If the frequency of the transmission line increases then:	4	Line resistance increases	Line resistance decreases	Shunt reactance increases	Shunt reactance decreases
148	A 500 KVA 3 Phase transformer has Iron losses of 300W and field load copper losses of 600W the percentage load at which the transformer is expected to have maximum efficiency is -----	2	50%	70.70%	141.40%	200%
149	A 100 KVA 415V (line) star connected synchronous machine generates rated open circuit voltage of 415V at a field current of 10A is equal to rated armature current the per unit saturated synchronous reactance is ----	3	1.731	1.5	0.666	0.577
150	For a salient pole alternator excitation voltage is 1.2 pu. $X_d = 1$, $X_Q = 0.6$ PU. The maximum power developed at rated voltage when excitation fails is	3	1PU	0.5PU	0.33PU	1.2PU
151	In a transmission line the distributed constants are:	4	Resistance and Capacitance	Capacitance and Inductance	Resistance, Inductance, and Capacitance only	Resistance, Inductance, Capacitance and Shunt Capacitance
152	On what factor does Skin Effect depends:	4	Cross section of the conductors	Supply Frequency	Permeability of the conductor material	all the above
153	With the presence of earth in case of overhead lines:	4	Capacitance of the line decreases and Inductance increases	Capacitance of the line increases and Inductance increases	Capacitance and Inductance of the line increases	Only Capacitance of the line Increases
154	The minimum clearance between the ground and a 220 kV line is about	3	4.3 m	5.5m	7.0 m	10.5m
155	The material generally used for armour of high voltage cables is	2	aluminium	steel	brass	copper
156	The phase to phase clearance of a 220 kV line is approximately equal to	2	8.5 m)	6.5 m.		
157	What is the purpose of bedding on the underground cables?	4	To avoid leakage of current.	To protect the sheath against corrosion.	To protect the sheath from mechanical injury due to armouring.	Both (b) and (c)
158	Armouring is provided above the bedding. The armouring consists of one or two layers of which wire or tape?	1	Galvanised steel wire	Thin wires of copper	Wires of aluminium	Wire made of both copper and cadmium

Transmission & Distribution

Question No.	Question	Correct Op.No.	Option 1	Option 2	Option 3	Option 4
159	The insulation resistance of a cable of length 10 km is $1\text{M}\Omega$. For a length of 100 km of the same cable, what will be the insulation resistance?	3	$1\text{M}\Omega$	$10\text{M}\Omega$	$0.1\text{M}\Omega$	$0.01\text{M}\Omega$
160	What is the limit of the conductor cross section when paper insulation is used?	3	50mm^2	250mm^2	600mm^2	1200mm^2
161	What is the dielectric strength of impregnated paper?	1	30kV/mm	20kV/mm	15kV/mm	5kV/mm
162	What is the percentage of added materials like sulphur, zinc lead etc. in vulcanised rubber?	2	$5 - 10\%$	$3 - 5\%$	$4 - 8\%$	$10 - 12\%$
163	Which among the following cables are generally suited for the voltages upto 11 kV?	1	Belted cables	Screened cables	Pressure cables	None of these
164	The cable best suited for the transmission of voltages from 33 kV to 66 kV is _____.	2	Belted cables	Screened cables	Pressure cables	None of these
165	What is / are the advantages of using H-type cables?	2	The metallic screens assist in complete impregnation of the cable with the compound	The metallic screens increase the heat dissipating power of the cable	The lead sheaths in H type are thicker than S.L type cables	All of these
166	The charging current drawn by the cable _____.	3	Lags behind the voltage by 90°	Leads the voltage by 90°	Are in phase with each other	Leads the voltage by 60°
167	A single core cable has a conductor diameter of 1 cm and the internal sheath diameter of 1.8 cm. If impregnated paper of relative permittivity 4 is used as the insulation, calculate the capacitance for 1 km length of cable?	1	$0.378\mu\text{F}$	$0.257\mu\text{F}$	$0.549\mu\text{F}$	$0.78\mu\text{F}$
168	What is the total charging current per phase for a 33 kV, 50 Hz, 3 phase underground cable of 4 km length using 3 single core cables? Each conductor has a diameter of 2.5 cm and the radial thickness of insulation is 0.5 cm.	2	15.28 A	11.87 A	13.85 A	8.25 A
169	What is the maximum stress in the insulation for a 33 kV single core cable with a diameter of 1 cm and a sheath of inside diameter 4 cm?	3	50.61kV/cm rms	45.231kV/cm rms	47.61kV/cm rms	49.231kV/cm rms
170	What will be the insulation thickness for a conductor of diameter 2 cm, with maximum and minimum stress 40kV/cm rms and 10kV/cm rms respectively?	2	5 cm	3 cm	2 cm	4 cm
171	What will be the most economical value of diameter of a single core cable to be used on 50 kV, single phase system, when the maximum permissible stress is not exceeding 50kV/cm ?	2	2.52 cm	2.828 cm	3.52 cm	3.82 cm
172	To get a minimum value of stress (g_{max}) what should be the ratio of core diameter to sheath diameter?	1	$1 / 2.718$	2.178	$1 / 3.78$	3.78
173	What does capacitance grading of cables mean?	3	Use of dielectrics in different concentrations	Introduction of capacitance at various lengths of cable to counter the effect of inductance	Use of dielectrics of different permittivities	Grading according to capacitance per km length of the cable
174	In a 3 core cable, the capacitance between two conductors is $3\mu\text{F}$. What will be the capacitance per phase?	3	$1.5\mu\text{F}$	$3\mu\text{F}$	$6\mu\text{F}$	$12\mu\text{F}$

Transmission & Distribution

Question No.	Question	Correct Op.No.	Option 1	Option 2	Option 3	Option 4
175	The capacitances of a 3 phase belted cable are $12.6 \mu F$ between the three cores bunched together and the lead sheath and $7.4 \mu F$ between one core and the other two connected to sheath. What will be the charging current drawn by the cable when connected to a 66 kV supply?	4	100 A	99.3648 A	105.236 A	107.74 A
176	What is the safe working temperature for a conductor in case of armoured cables?	3	$50^\circ C$	$75^\circ C$	$65^\circ C$	$40^\circ C$
177	capacitance between the two conductors of a single phase two wire line is $0.5 \mu F/km$. What is the value of capacitance of each conductor to neutral?	2	$0.5 \mu F / km$	$1 \mu F / km$	$0.25 \mu F / km$	$2.0 \mu F / km$
178	What happens in case of capacitance of line to ground, if the effect of earth is taken into account?	2	Capacitance of line to ground decreases	Capacitance of line to ground increases	The capacitance remains unaltered	The capacitance becomes infinite
179	What is the value of capacitance to neutral for the two wire line?	1	Twice the line to line capacitance	Equal to line to line capacitance	Thrice the line to line capacitance	Half of line to line capacitance
180	A two conductor single phase line operates at 50Hz. Diameter of each conductor is 20mm and the spacing between the conductors is 3m. The height of the conductors above the ground is 6m. What is the capacitance of the line to neutral?	1	9.7 pF/m .	10.8 pF/m .	3.57 pF/m .	2.415 pF/m .
181	What will be the capacitance of a 100 km long, 3 phase, 50Hz overhead transmission line consisting of 3 conductors, each of 2 cm and spaced 2.5 m at the corners of an equilateral triangle?	1	$1.007 \mu F/\text{phase}$	$2.0075 \mu F/\text{phase}$	$2.5 \mu F/\text{phase}$	$1.45 \mu F/\text{phase}$
182	If the double circuit 3 phase line has conductors of diameter 2 cm and distance of separation 2m in hexagonal spacing. What is the phase to neutral capacitance for 150 km of line?	2	$2.4939 \mu F$	$3.7408 \mu F$	$1.8245 \mu F$	$3.2548 \mu F$
183	On what concept is electrically short, medium and long lines based?	2	Nominal voltage of the line	Physical length of the line	Wavelength of the line	Power transmitted over the line
184	The capacitance effect can be neglected in which among the transmission lines?	1	Short transmission lines	Medium transmission lines	Long transmission lines	All of these
185	In a short transmission line, voltage regulation is zero when the power factor angle of the load at the receiving end side is equal to	2	$\tan^{-1}(X/R)$	$\tan^{-1}(R/X)$	$\tan^{-1}(X/Z)$	$\tan^{-1}(R/Z)$
186	What is the power factor angle of the load for maximum voltage regulation?	3	$\tan^{-1}(X/R)$	$\cos^{-1}(X/R)$	$\tan^{-1}(R/X)$	$\cos^{-1}(R/X)$
187	single phase transmission line of impedance $j0.8 \text{ ohm}$ supplies a resistive load of 500 A at 300 V. The sending end power factor is	4	Unity	0.8 lagging	0.8 leading	0.6 lagging
188	What is the line length if a load of 15000 kW at a power factor 0.8 lagging can be delivered by a 3 phase transmission line having conductors each of resistance 1 Ω per kilometre? The voltage at the receiving end is to be 132kV and the loss is about 5%.	2	40.13km	37.18km	40.18km	42.38km
189	The ABCD constants of a 3 phase transposed transmission line with linear and passive elements	3	are always equal	never equal	only A and D are equal	only B and C are equal
190	What are the A and D parameters in case of medium transmission line (nominal T method)?	1	$A = D = 1 + (YZ / 2)$	$A = D = 1 + (YZ / 2) * Z$	$A = D = (YZ / 2)$	$A = D = (YZ / 2) * Y$

Transmission & Distribution

Question No.	Question	Correct Op.No.	Option 1	Option 2	Option 3	Option 4
191	At no load condition a shunt inductive reactor is connected at the receiving end of the line to limit the receiving end voltage to be equal to the sending end voltage. What is the ohmic value of the reactor?	2	Infinity	2000 Ω	105.26 Ω	1052.6 Ω
192	Transmission efficiency of a transmission line increases with the _____.	2	decrease in power factor and voltage.	increase in power factor and voltage.	increase in power factor but decrease in voltage.	increase in voltage and decrease in power factor.
193	In Van de Graaff generators, the shape of high voltage electrode is nearly spherical to avoid _____.	4	High surface field gradients	Corona	Local discharges	All of these
194	While performing temperature rise tests, at any part of the bushing the steady temperature rise above the ambient air temperature should not exceed _____.	4	20 °C	25 °C	35 °C	45 °C
195	Pantograph collector is used in railways where the train runs at 100 to 130 kmph. Which among the following is true about pantograph collector?	4	It is unidirectional	The erection of the overhead network is complicated	Its height cannot be varied	None of these
196	The output voltage of constant voltage transformer contains excessive harmonics which can be filtered out by using _____.	3	RC filter	RL filter	LC filter	None of these
197	A power station has a maximum demand of 15000 kW. The annual load factor is 50% and the plant capacity factor 40%. What is the reserve capacity of the plant?	2	1875 kW	3750 kW	6000 kW	7500kW
198	A power station's plant load factor is defined as the ratio of _____.	2	The energy generated to the maximum energy that could have been generated	Average load to Peak load	Minimum load to Peak load	Minimum Load to Average load
199	Insulators in EHV lines are designed based on _____.	1	Switching Voltages	Peak Voltages	Corona	Lighting Voltages
200	Base Load of Power Station stands for _____.	4	2-4 hours/day	4-8 hours/day	8-12 hours/day	12-24 hours/day
201	A wire is placed on the top of a transmission line to protect from _____.	2	Surge High Voltage	Direct Lightning Strokes	Indirect Lightning Strokes	Switching over Voltages
202	A wire is placed on the top of a transmission line acts as _____.	4	Acts as a phase wire	Acts as neutral	Acts as a transmission wire	Acts as a ground wire
203	Boosters are basically _____.	3	Inductors	Capacitors	Transformers	Synchronous Motors
204	Conductors for high voltage transmission lines are suspended from towers _____.	2	To reduce clearance from ground	To increase clearance from ground	To reduce wind and snow loads	To take care of extension in length during summer.
205	Transmission efficiency increases as _____.	1	Voltage and power factor both increase	Voltage and power factor both decrease	Voltage increases but power factor decreases	Voltage decreases but power factor increases
206	With same maximum voltage to earth, which ac system (with p.f. 0.8) will require more copper as compared to dc 2 wire system.	4	Single Phase 2 wire (mid point earthed)	Single Phase 3 wire (neutral = 1/2 Outer)	Three Phase three wire	Three Phase four wire (neutral = outer)
207	When alternating current passes through a conductor _____.	2	It remains uniformly distributed throughout the section of conductor	Portion of conductor near the surface carries more current as compared to the core	Portion of conductor near the surface carries less current as compared to the core	Entire current passes through the core of the conductor
208	The fact that a conductor carries more current on the surface as compared to core, is known as _____.	1	Skin Effect	Corona	Permeability	Unsymmetrical Fault
209	The effective resistance of a conductor will be the same as ohmic resistance when, _____.	4	Current is in true sine wave form	Voltage is low	Power factor is unity	Current is uniformly distributed in the conductor cross - section

Transmission & Distribution

Question No.	Question	Correct Op.No.	Option 1	Option 2	Option 3	Option 4
210	For constant voltage transmission the voltage drop is compensated by installing	1	Synchronous motors	Capacitors	Inductors	All of the above
211	Ten discs usually suggests that the transmission line voltage is	4	11 kV	33 kV	66 kV	132 kV
212	For 66 kV lines the number of insulator discs used are	2	3	5	8	12
213	Pin insulators are normally used up to voltage of about	4	100 kV	66 kV	33 kV	25 kV
214	Strain type insulators are used where the conductors are	3	Dead ended	At intermediate anchor towers	any of the above	none of the above
215	The surge impedance for over head line is taken as	3	10-20 ohms	50-60 ohms	100-200 ohms	1000-2000 ohms
216	In transmission system a feeder feeds power to	3	Service Mains	Generating Stations	Distributors	All of the above
217	Guard ring transmission line	2	Improves power factor	Reduces earth capacitance of the lowest unit	reduces transmission losses	Improves regulation
218	The disadvantage of constant voltage transmission is	1	Short circuit current of the system is increased	Load power factor in heavy loads	Large conductor area is required for same power transmission	any of the above
219	When the power is to be transmitted over a distance of 500 km, the transmission voltage should be in the range	4	33 kV - 66 kV	66 kV - 100 kV	110 kV - 150 kV	150 kV - 220 kV
220	The power transmitted will be maximum when	1	Sending end voltage is more	Receiving end voltage is more	Reactance is high	Corona losses are least
221	Neglecting losses in a transmission system, if the voltage is doubled, for the same power transmission, the weight of conductor material required will be	4	Four Times	Double	Half	One Fourth
222	For economy in generation power	2	Diversity factor should be high	Plant utilization factor should be high	Load factor should be high	Load factor and diversity factor should be low
223	Which of the following category of consumers can provide highest load factor?	2	A domestic consumer	A continuous process plant	A steel melting unit using arc furnace	A cold storage plant
224	During summer months the increased load is due to	4	Increased water supply	Vacations in institutions	Increased business activity	Increased use of fans and air conditioners
225	In a system if the base load is the same as the maximum demand, the load factor will be	1	1	zero	Infinity	1 Percent
226	A system having connected load of 100 kW, peak load of 80 kW, base load of 20 kW and average load of 40 kW, will have a load factor of	2	40%	50%	60%	80%
227	Load due to one tonne air conditioner is nearly	3	100W	200 - 500 W	1 kW - 2 kW	5 kW - 10 kW
228	Which domestic utility item has highest power rating?	4	Refrigerator	Ceiling Fan	Tubelight	Electric Iron
229	Transmission lines link	4	Service points to consumer premises	Distribution transformer to consumer premises	Receiving end station to distribution transformer	Generating station to receiving end station
230	Which type of insulators are used on 132 kV transmission lines?	2	Pin type	Disc type	Shackle type	Pin & Shackle type
231	String efficiency can be improved by	4	Using longer cross arm	Grading the insulator	Using a guard ring	any of the above
232	Minimum horizontal clearance of a low voltage transmission line from residential buildings must be	3	11/2 feet	3 feet	4 feet	8 feet
233	If a 66 kV linespasses over a residential building, the minimum vertical clearance from the roof of the building must be	3	8 feet	12 feet	13 feet	16 feet

Transmission & Distribution

Question No.	Question	Correct Op.No.	Option 1	Option 2	Option 3	Option 4
234	Stranded conductors are used for transmitting, power at high voltages because of	3	Increased tensile resistance	Better wind resistance	Ease in handling	Low cost
235	Load factor for the period 6-24 hours period is	2	0.438	0.5	0.876	1
236	Which plant can never have 100% load factor?	3	Nuclear power plant	Hydro electric plant	Peak load Plant	Base load Plant
237	For certain industrial applications the energy requirement is 500 kWh. If the heat losses are 20 percent the total energy to be made available will be	4	3000 kWh	4000 kWh	5000 kWh	6000 kWh
238	A consumer finds that after running 10kVA equipment on full load six hours his energy consumption was 48kWh. It can be concluded that	4	The load factor of the consumer for the day was unity	The maximum demand of the consumer was 10 kW	The equipment was drawing reactive power only	Power factor of the equipment was 0.8
239	Which equipment provides fluctuating load?	3	Lathe machine	Exhaust fan	Welding transformer	All of the above
240	The ratio, maximum demand of the installation / sum of the individual maximum demands is known as	3	Demand Factor	Plant use Factor	Diversity Factor	Plant Capacity Factor
241	In a power plant a reserve generating capacity which is in operation but not in services known as	1	Hot reserve	Cold reserve	Spinning reserve	Firm power
242	5 consumers have peak demands of A,B,C,D and E have individual load factors of 0.5. It can be concluded that	3	Their combined load factor will 0.5	Their peak demand during the day will be (A + B + C + D+ E)	Their combined load power consumption in a day will be 12 (A + B + C + D+ E)	Their average demands are equal
243	The power station has annual load factor of 50% and capacity factor of 44%. If the maximum demand is 15 MW, the reserve capacity of the plant is	3	1250 kW	2500 kW	3750 kW	4750 kW
244	In a 440 V system, in order to obtain the minimum cost and maximum benefits, the capacitor should be installed	1	At the load	Near the transformer	Any where in the circuit	Near the earthing point
245	Which two factors are of importance for peak load plant? The following factors are associated with power plant operation I) High Efficiency II) High availability III) Quick starting IV) Low capital cost	4	I & III only	II & III only	I & IV only	III & IV only
246	Which two factors are of significant importance for base load plant? The following factors are associated with power plant operation I) High Efficiency II) High availability III) Quick starting IV) Low capital cost	1	I & II only	III & IV only	II & III only	I & IV only
247	Which is least important for base load plants? The following factors are associated with power plant operation I) High Efficiency II) High availability III) Quick starting IV) Low capital cost	3	I	II	III	IV

Transmission & Distribution

Question No.	Question	Correct Op.No.	Option 1	Option 2	Option 3	Option 4
248	The annual peak load on 30 MW power station is 25 MW. The power station supplies loads having maximum demands of 10 MW, 8.5 MW, 5 MW and 4.5 MW. The annual load factor is 45%. The average load is	2	1025 kW	1125 kW	1425 kW	1625 kW
249	The annual peak load on 30 MW power station is 25 MW. The power station supplies loads having maximum demands of 10 MW, 8.5 MW, 5 MW and 4.5 MW. The annual load factor is 45%. Total energy supplied in a year is	1	9,875,000 kWh	8345,000 kWh	7450,000 kWh	6395,000 kWh
250	The annual peak load on 30 MW power station is 25 MW. The power station supplies loads having maximum demands of 10 MW, 8.5 MW, 5 MW and 4.5 MW. The annual load factor is 45%. Diversity factor is	3	3.8	1.02	1.12	1.22
251	The annual peak load on 30 MW power station is 25 MW. The power station supplies loads having maximum demands of 10 MW, 8.5 MW, 5 MW and 4.5 MW. The annual load factor is 45%. Demand factor is	2	0.75	0.83	0.89	0.45
252	Which load has the highest value of average load?	4	Load A	Load B	Load C	Load D
253	The maximum load on the station will occur at	2	0 hr	6 hr	9 hr	12 hr
254	The highest point on a load curve represents	3	Average demand	Diversion field demand	Peak demand	None of the above
255	A diesel power plant is best suited as	2	Base load plant	Stand - by plant	Peak load plant	General pupose plant
256	A gas turbine power plant usually suits for	1	Peak load operation	Base load operation	Caasual run	none of the above
257	Two tariffs are offered (P) \$.200 plus 5 cents per unit (Q) A flat rate of 30 cents per unit. From the above it can be concluded that	2	Tariff P will give lower charges upto 800 kWh	Tariff P will give lower charges for consumption more than 800 units	Tariff Q will give lower charges for consumption more than 800 kWh	Both will give identical charges beyond 1500 kWh
258	In case the height of transmission tower is increased	4	The line capacitance and inductance will not change	The line capacitance will decrease but line inductance will decrease	The line capacitance will decrease but line inductance will increase	The line capacitance will decrease but line inductance will remain unaltered
259	Two steam turbines each of 20,000 kW capacity drive a total load of 30,000 kW. The steam rates in kilogram per hour are $TP_1 = 2000 + 10 P_1 - 0.0001 P_1^2$ $TP_2 = 2000 + 10 P_2 - 0.0001 P_1^2$	1	$TP_1 = 20,000 \text{ kW}$ $T_{p3} = 10,000 \text{ kW}$	$TP_1 = 10,000 \text{ kW}$ $T_{p3} = 20,000 \text{ kW}$	$TP_1 = 15,000 \text{ kW}$ $T_{p3} = 15,000 \text{ kW}$	$TP_1 = 3,000 \text{ kW}$ $T_{p3} = 0$
260	Which of the following is the protective device against lightning over voltages?	4	Rod gaps	Surge absorbers	Horn gaps	All of the above
261	Maximum demand tariff is generally not applied to domestic consumers because	4	They acnnot afford it	They consume less power	Their load factor is low	Their maximum demand is low
262	As the load factor approaches unity, the shape of the load duration curve will be nearly	4	L shaped	Inverted L shaped	Triangular	Rectangular
263	When maximum and average loads are equal, the load factor will be	4	0	0.01	0.5	1

Transmission & Distribution

Question No.	Question	Correct Op.No.	Option 1	Option 2	Option 3	Option 4
264	Which of the following relation is incorrect?	4	Capacity factor = Utilization Factor x Load factor	Load factor x Maximum load = Average load	Demand factor x Connected load = Maximum demand	none of the above
265	A low utilization factor for a plant indicates	3	Plant is under maintenance	Plant is used for base load only	Plant is used for stand - by purpose only	Plant is used for peak load as well as base load
266	Isolators are used to disconnect a circuit when	4	Line is on full load	Line is energized	Circuit breaker is not open	There is no current in the line
267	Which device automatically interrupts the supply in the event of surges	4	Earthing switch	Series reactor	Isolator	Circuit breaker
268	In a substation the equipment used to limit short circuit current level is	1	Series reactor	Coupling Capacitor	Lightning switch	Isolator
269	Which of the following correctly presents the sequence of operations of isolator circuit breaker and earthing switch while closing a circuit	2	Ensure circuit breaker is closed - close isolator - open earthing switch	Ensure circuit breaker is open - close isolator - open earthing switch if any close circuit breaker	Ensure circuit breaker is closed - open isolator - open earthing switch if any - close circuit breaker	None of these
270	750 kV is termed as	4	Medium high voltage	High Voltage	Extra High Voltage	Ultra High Voltage
271	If the height of a transmission tower is increased, which of the following parameters is likely to change?	3	Resistance	Inductance	Capacitance	None of these
272	A string efficiency of 100% implies that	2	Shunt Capacitance is 1MF	Potential across each disc is the same	Potential across each disc is zero	One of the insulator disc is shorted
273	Which type of copper wire will have highest tensile strength?	3	Soft drawn	Medium drawn	Hard drawn	none of the above
274	The servicemains connect	1	Distributor and consumer terminals	Distributor and transformer	Distributor and relay system	Transformer and earth
275	A 66 kV system has string insulator having five discs and the earth to disc capacitance ratio of 0.10 A. The string efficiency will be	3	89%	75%	67%	55%
276	If the voltage across the units in a two unit suspension insulator is 60% and 40% respectively of the line voltage, the ratio of capacitance of the insulator to that of its capacitance to earth will be	2	0.05	0.5	0.65	0.75
277	What does a load duration curve represent	3	The variation of load during different hours of the day	Average load	The number of hours for which a particular lasts during the day	None of the above
278	What is the shape of the load curve duration	1	Rectangular shape	Triangular shape	Parabolic shape	Free hand sketch
279	Maximum and minimum loads on the load duration curve is represented on which respective side	1	Left & Right	Right & Left	Randomly	None of above
280	What is a load factor	1	The ration of average to maximum demand	The ratio of maximum demand to average load	The product of maximum demand and average load	The ratio of average load to plant capacity
281	What is the load factor of a power plant	2	Greater than unity	Less than unity	Always more than unity	Normally more than unity
282	The load factor plays a key role in determining which among the following	2	Plant Capacity	Overall cost per unit generated	Overall demand	Both 1 & 3
283	An industrial consumer has a load pattern of 2000 kW 0.8 lag for 12 hours and 1000 kW unity power factor for 12 hours. What is the load factor	4	0.5	0.55	0.6	0.75

Transmission & Distribution

Question No.	Question	Correct Op.No.	Option 1	Option 2	Option 3	Option 4
284	What is the plant capacitor factor	3	A ratio of kWh generated to the product of plant capacity and the number of hours for which the plant is in operation	The ratio of the sum of individual maximum demands to the maximum demand on power stations	The ratio of actual energy produced to the maximum possible energy.	The ratio of maximum demand on the power station to the connected load
285	Capacity factor will be very low when the power plant	3	Is operated as base load plant	Is operated for supplying base load as well as the peak loads	Is operated in emergency only	Is under maintenance
286	A thermal generating station has an installed capacity of 15 MW and supplies a daily load of 10 MW for 12 hours and 5 MW for remaining 12 hours. The plant capacity factor for this station is	4	1	0.75	0.67	0.5
287	In a power station, the cost of generation of power reduces most efficiently when	2	Diversity factor alone increases	Both diversity factor and load factor increases	Only load factor increases	Both diversity factor and load factor decreases
288	What is the result of the product of diversity factor and maximum demand	2	Average demand	Sum of consumers maximum demand	installed capacity	Generated power
289	What is demand factor	2	Average load to maximum demand	maximum demand to connected load	Connected load to maximum demand	maximum demand to average load
290	What is the value of demand factor	2	Greater than unity	Less than unity	Always more than unity	Normally more than unity
291	What is connected load	1	Installed electrical load in the premises of the consumer	Maximum load a consumer draws	Load drawn by a consumer at any instant	none of the above
292	The power system experiences peak demand from	4	Midnight to 8 A.M	8 A.M - 2 P.M	2 P.M - 6 P.M	6 P.M - 10 P.M
293	The maximum demand on power system is 100 MW. If the annual load factor is 40%, calculate the total energy generated in a year.	3	3761 * 105 kWh	4174 * 105 kWh	3504 * 105 kWh	3500 * 105 kWh
294	A generating station has a connected load of 55 MW and maximum demand of 20 MW. What is the demand factor	2	0.4785	0.3636	2.75	1100
295	Determine the average demand of a plant if its load factor and maximum demand are 0.60 and 30 MW	2	20 MW	18 MW	50 MW	13 MW
296	To determine the polarity of the voltage drop across resistor, it is necessary to know	2	Value of current through resistor	Direction of current through the resistor	Value of resistor	E.M.F's in the circuit
297	Which method can be used for absolute measurement of resistance?	2	Ohm's Law method	Wheatstone's bridge method	Releigh method	Lorentz method
298	A network contains linear resistors and ideal voltage sources. If values of all resistors are doubled then voltage across each resistor is	2	Halved	Doubled	Increases by four times	Not changed
299	Which of the following is not a step in solving for total resistance in a series - parallel circuit?	3	Determine the equivalent resistance of all series connected resistor	Determine the equivalent resistance of all parallel connected combinations	Determine the equivalent resistance of all series and parallel connected combinations	Determine the equivalent resistance of remaining series connected resistor
300	If two points are directly connected by using good conducting wire then it represents	3	Open circuit	Network	Short circuit	none of the above