## **OBJECTIVE QUESTIONS**

- 1. The demand factor for a residential load is about
  - (a) 2.1

(b) 1.2

(c) 0.2

- (d) 0.7
- 2. The diversity factor (a) is always more than 1 (b) is always less than 1 (c) may be less or more than 1 (d) may be as high as 100.
- 3. Which statement is true
  - (a) peak diversity factor and group diversity factor are always equal.
  - (b) peak diversity factor is always less than group diversity factor.
  - (c) peak diversity factor cannot be less than group diversity factor.
  - (d) peak diversity factor may be more or less than group diversity factor.
- 4. The demand factor is equal to
  - (a) maximum demand/connected load.
  - (b) connected load/maximum demand.
  - (c) maximum demand/average demand.
  - (d) average demand/connected load.
- 5. The chronological load curve shows
  - (a) The variation in demand from instant to instant during 24 hours.
  - (b) the total number of hours for which a particular load lasts during the day.
  - (c) the total energy consumed upto different times of the day.
  - (d) variation in demand factor during 24 hours.
- 6. The load factor is equal to
  - (a) average load/peak load.
  - (b) peak load/average load.
  - (c) average load/connected load.
  - (d) average load/base load.
- 7. The curve shown in Fig. A-1 is
  - (a) chronological load curve.
  - (b) annual load duration curve.
  - (c) mass curve.
  - (d) energy load curve.
  - 8. The load factor of the curve shown in Fig. A-1 is
    - (a) 70%
- (b) 60%
- (c) 50%

- (d) 20%
- 9. The energy indicated by the curve of Fig. A-1 is
  - (a) 876000 MWh
- (b) 175200 MWh
- (c) 525600 MWh
- (d) 438000 MWh
- 10. The curve shown in Fig. A-2 is
  - (a) annual load duration curve.
  - (b) load duration curve.
  - (c) chronological load curve.
  - (d) mass curve.

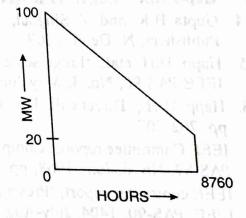


Fig. A-1

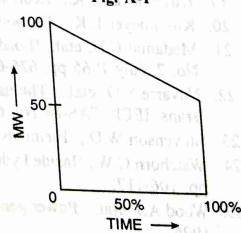


Fig. A-2

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As regards Fig. A-1 and A-2 which is true
 the curve in Fig. A-1 has higher load factor than that in Fig. A-2,
 (a) the curve in Fig. A-2 has higher load factor than that in Fig. A-2.
(b) the curves have the same boad factor than that in Fig. A-1.
     both the curves have the same load factor.
 the load factor of any one of these may be greater than that of other depending on efficiency.
 plant efficiency.
 for a generating plant
  the utilisation factor is always less than 1.
  (b) the utilisation factor is always more than 1.
  the utilisation factor may be more or less than 1.
  the utilisation factor and load factor are always equal.
  The capacity factor of a plant is equal to
                                               THE BURGEST ALL BURGEST
  (a) maximum load/average load. (b) average load/maximum load.
  (a) maximum load/plant capacity. (b) average load/plant capacity.
Which of the following is correct
  (a) load factor = capacity factor × utilisation factor.
  (b) utilisation factor = capacity factor × load factor.
  (c) Capacity factor = load factor/utilisation factor.
  (d) capacity factor = load factor × utilisation factor.
15. Which of the following is true
                                    Principle ductioning of northball discussing
   (a) the load factors of base and peak load plants are always equal.
   (b) the load factor of peak load plant is always more than that of base load plant.
   (c) the load factor of base load plant is always more than that of peak load plant.
   (d) the load factor of peak load plant may be more or less than that of base load plant.
16. A mass curve can be plotted from
   (a) load duration curve.
   (b) chronological load curve.
   (c) energy load curve.
   (d) both load duration curve and chronological load curve.
17. If the rated plant capacity and maximum load of a generating station are equal, then
                                                   (b) capacity factor is 1.
   (a) load factor is 1.
                                                   (d) utilisation factor is poor.
    (c) load factor and capacity factor are equal.
 18. The capital cost of a plant depends on
    (a) total installed capacity only.
    (b) total number of units only.
    (c) total installed capacity as well as number of units.
    (d) neither the installed capacity nor the number of units.
 19. Plants A and B have the same total installed capacity and are installed at the same time.
    However plant A has 10 units and plant B has 5 units. Then
    (a) capital costs of both the plants are equal.
    (b) capital cost of plant A is more than that of B.
                                                       (c) has no effect on system
    (c) capital cost of plant B is more than that of A.
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(d) capital cost of plant A may be more or less than that of B.

3

			SYSTEM : OPETIT
	20.	The interest on the capital cost is included in	The state of the s
		(a) annual fixed cost.	the annual operating cost.
		(c) both fixed and operating cost.  As the load factor of communication is a second factor of communication in the load factor of communication is a second factor of communication.	(b) aimate (b) aimate (cost or operating cost.
	21.	(c) both fixed and operating cost.  As the load factor of generating plant increase	the generation cost per unit energy generated
H	140	As the load factor of generating plant increase  (a) decreases.	(b) increases.
		(c) may increase or decrease.	(b) increases. (d) remains the same.
	22.	The annual depreciation reserve depends on	The contract of the contract o
		(a) capital cost only	et ave die desert de de la (e)
		<ul> <li>(a) capital cost only.</li> <li>(b) capital cost and salvage value only.</li> <li>(c) only the method of only lating deprecial</li> </ul>	in a savet
		(c) only the method of calculating depression	a 1lation
		(c) only the method of calculating depreciate (d) the capital cost, salvage value and the n	nethod of calculation.
	23.	(d) the capital cost, salvage value and the n. Which of the following is wrong?	n caream plant.
		(a) operating cost of a nydro plant is less	- c o bydro plant.
		<ul> <li>(a) operating cost of a hydro plant is less the</li> <li>(b) operating cost of a nuclear plant is less</li> </ul>	than that of a steam plant.
		(c) operating cost of a diesel plant is more	that of a nuclear plant.
		(d) operating cost of a steam plant is more. The long term load forecast is needed for	than that of a nage nouse time (th)
	24.	The long term load forecast is needed for	man a series and a man and a series for
		(a) planning the addition in generation cup	The state of the s
		<ul><li>(a) planning the addition in generation cap</li><li>(b) operation of the plant.</li></ul>	acity as well as operation of the plant.
		(c) planning the addition in generation cap	acity as
		(d) economic operation of the plant.	Lawever load diversity in area A is more
	25.	Two areas A and B have equal connected to	Jaus. However
		than that in B. Then  (a) maximum demands of the two areas w	
		(a) maximum demands of the two areas w	e than that of B.
		(b) maximum demand of A would be more	o than that of A
		(c) maximum demand of B would be mor	er loss than that of B
		(d) maximum demand of A may be more	or less than that or B.
	26.	The fuel cost is included in	(b) annual operating cost
		(a) annual fixed cost.	
		(c) both the annual fixed cost and operati	ng cost.
		(d) either fixed cost or operating cost.	e a sil europi bost (u) e e
	27.	Which of the following plants requires ma	ximum space for storage of fuel
		(a) hydro-electric plant.	(b) diesel plant.
		(c) steam plant.	(d) nuclear plant.
	28,	The power which must be available even	under emergency conditions is known as
		(a) spinning reserve.	(b) cold reserve.
		(c) firm power.	(d) hot reserve.
,	29.	A synchronous capacitor can supply	the second walking to the second
1	29.	네일이 가게 된 이 사용하다 하는 것이 되었다.	enthology of the state of the state of
		(a) lagging vars only.	(b) leading vars only.
•	20	(c) both leading and lagging vars.	(d) neither leading vars nor lagging var
3		The addition of static capacitors in a syst	
		(a) improves system stability.	(b) decreases system stability.
		(c) has no effect on system stability.	(d) none of the above.

The units for incremental cost are a manual to promise follows the second as set? (a) Rs. per MWh (c) Rs. per hour.

(d) Rs. per hour.

(e) Rs. per hour.

(b) Rs. per hour.

(c) Rs. per hour. the incremental fuel cost should be the same for the two stations. the two stations should share the load in the ratio of their installed capacities, the more efficient plant should supply more load. the incremental cost of power delivered at the load centre should be the same for both the plants. The principle of incremental costs is used. (a) to decide the total plant capacity to be operated. (a) to decide the load allocation between units in operation. (c) to decide the sequence of adding units. (d) all the above a label 4 (d) The penalty factor head on (a) (a) is always less than 1. (b) is always more than 1. (a) may be more or less than 1. (d) is equal to or less than 1. (a) is equal to or less than 1.

A system has two sources having plant loadings  $P_1$  and  $P_2$ . The transmission loss  $P_L$  is  $P_1 = P_2 = P_1 + P_2 = P_$ A system  $^{12}B_{11} + P_1P_2B_{12} + P_2^2B_{22}$ (a)  $P_1^2B_{11} + P_1P_2B_{12} + 2P_2^2B_{22}$ (b)  $2P_1^2B_{11} + P_1P_2B_{12} + 2P_2^2B_{22}$ (c)  $P_1^2B_{11} + 2P_1P_2B_{12} + P_2^2B_{22}$ 36. A generating unit in a power system is generating 100 MW. It is known that transfer of 100 (d) none of the above. MW from this unit to the load centre causes a transmission loss of 15 MW. The penalty (a) bruh teggippai ve igage- igage are factor will charge. factor for this unit is (b) 0.85 (like garder langer) 1.15 appears reverse (d) 1.43 37. If a generating unit is situated very close to load centre the penalty factor for this unit is (c) infinity (d) negative. (a) about 1 (b) zero 38. A generating unit has an incremental production cost of Rs. 60 per MWh. If the penalty factor for this unit is 1.2. the incremental cost of power delivered is (b) Rs. 72 per MWh (a) Rs. 50 per MWh (d) Rs. 48 per MWh (c) Rs. 61.2 per MWh 39. The units for heat rate are hydro-clectric (c) k cal/hour (d) kW (b) kWh/k cal (a) k cal/kWh 40. The advantage of hydro plants is 52. While of the infloying have, goodally after price (a) low operating cost. (b) they can be started and loaded very quickly. (c) they can be used as base load plants as well as peak load plants. (d) all the above. 41. The run off river plants have very high firm capacity. (b) false 42. For maximum economy the generation schedule in a hydro-thermal system should be decided (a) maximum hydro efficiency method. (b) equal incremental plant costs. (a) electronical writers voltage regulators (c) constant steam generation.

(d) solution of co-ordination equations.

			JEND
			APPENT AP
2	POWER SYSTE	M : OPERATION AND CONTROL	30. (a)
43.			(c) (d)
,	The successful parallel operation of alternator is due t (a) resistance		Th
	(c) reluctance	reactance armature reaction.	51. (a
44.	Two alternators A and B are operating in parallel. If	excitation of A is increased	(t
	(a) reactive power of A is increased while that of B	is decreased.	(
	(b) reactive power of A is increased while that of B	is remains unchanged.	(
	(c) reactive power of A is decreased.	The second second by the second second second	.0
45	(d) both real and reactive power of A are increased.	no in parallel depends on	58.
43.	The sharing of real power by two alternators operati  (a) voltage-load characteristics.  (b)	speed-load characteristics.	
	(C) DOID Voltage 1. 1	CONTRACTOR STATE AND TO THE BUILDING TO THE TOTAL THE TOTAL TO THE TOTAL THE TOTAL TO THE TOTAL	59.
	(d) Avoitation C.		20.8
46.			60.
	(a) full load.		
	(-)	d) no load.	
47.	An alternator is operating on an infinite bus bar. If the	e excitation of the alternator is increased	9 4 6
	(a) real power output of the machine will be incre	ased.	
	(b) power factor of the machine will decrease.	pig a . H. T. H E . T (w)	6
	(c) power factor of the machine will increase.		iggif
	(d) both the real power and power factor of the m	lachine will decrease.	
48.	An alternator is supplying a load. If the excitation	of the alternator is stated	(
	(a) power factor of the alternator will change.	The Control of the Co	
	(b) terminal voltage of alternator will change.	indical all and all soles of	
	(c) both terminal voltage and power factor will c	hange.	
	(d) either power factor or terminal voltage will c	nange.	
49.	An under-excited alternator operates at	(b) leading power factor.	
	(a) lagging power factor.	(d) leading or unity power factor.	
	(c) unity power factor.	(a) leading of unity power and in steam r	lants
50.	Which of the following statements is correct in r	(b) they have generally 2 or 4 pole	25
	(a) they have horizontal configuration.		
	(c) they have small diameters.	(d) all the above.	64
51.	Generally the alternators used in hydro-electric	plants have norizontal configuration	
	(a) true	(b) false	02 118
52.	Which of the following have, generally, salient	pole construction	
	(a) alternators used in steam plants.	(b) alternators used in hydro plan	nts.
	(c) both (a) and (b).	(d) neither (a) nor (b).	
53.	An excitation system should have		
	(a) low time constant.	(b) high transient response.	
	(c) high reliability.	(d) all the above.	
51	When two alternators are running in perfect sy		er is zero
54.		monitoring portional portional portional	1 1 444
	(a) true (b) false.	liam concretta con et ou nosero	
55.	Modelli alternators ase	tore a deal and	11.
	(a) electromechamical voltage regulators	(b) magnetic amplifier regulat	ors.
	(c) electronic regulators.	(d) none of the above.	

A power system needs injection of vars

(b) at a fine and a fine A pove at load.

(a) noth at peak load and (c) when the load is neither too high nor too low.

(d) when of reactive power is needed (d) when the injection of reactive power is needed

The injection of voltage profile. to get a good voltage profile.

(a) increase the voltage (a) to increase the voltage at the receiving end.
(b) to compensate for line locations. (b) to compensate for line losses.
(c) to compensate for line losses. (c) to supply a part of active power requirement of the load.
(d) changes in reactive power of - 1 (d) to series in reactive power at a bus have a great effect on the voltage magnitude.

The chart bus (a) of that bus (d) none of the above. (c) of all the busses (c) of maximum permissible change in system frequency is  $(c) \pm 2.5\%$ (a)  $\stackrel{+}{=}$  power system

In a power system

Section of n-f loop is forter the  $(a) \pm 6\%$ the action of p-f loop is faster than that of Q-V loop. (a) the action of Q-V loop is faster than that of p-f loop.

(b) the action of Tespones of the contract of the the speed of response of both Q-V and p-f loops is almost the same. the action of p-f loop may be faster or slower than that of Q-V loop. The units for speed regulation of governor are (a) Hz (d) none of above. 2. The speed regulation R for a large size alternator is about (c) Hz per MW (b) 5 Hz per MW (a) 10 Hz per MW (d) 0.02 Hz per MW (c) 1 Hz per MW 63. At times of peak load a power system needs (b) injection of leading vars. (a) injection of lagging vars, (d) none of the above. (c) injection of lagging or leading vars. 64. At times of low loads a power system needs (b) synchronous condensers (a) shunt capacitors (d) all the above. (c) shunt reactors and the state of (8) 65. A load curve is a plot of (b) load versus current (a) load versus generation capacity (d) load versus cost of power 66. In a system the base load is the same as maximum demand then the load factor is ment (d) 1% appropriate and to dotal if (a) 1 67. Which of the following plants takes least time in starting from cold conditions to full load (b) steam plant when the stead of condition (c) hydro electric plant (d) gas turbine plant 68. A high diversity factor of the load in a power system (a) reduces the installation cost of plant (b) increases the installation cost of plant (c) does not affect the installation cost of plant (d) any of above

	OFE.
60	Flow of active power through a line in a power system may be controlled by
UJ.	Flow of active power through a line in a power system may be controlled (a) tap changing transformer  (b) phase shifting transformer  (b) phase shifting transformer
	the audit
70	(c) synchronous phase modifier  The pumped storage scheme is employed to supply  (b) during off-peak hours
70.	The pumped storage scheme is employed to supply  (a) during peak load hours  (b) during off-peak hours  (c) any of above
	(a) during peak load hours (b) during out (c) base load (d) any of above (d) any of above
71	(c) base load of war and connected load of war.
/1.	(c) base load  A generating station has a maximum demand of 20 MW and connected load of 40 MW.  Total units generated are $4.36 \times 10^7$ per year. The demand factor is
	Total dillis generated are the
	Total units generated are $4.36 \times 10^7$ per year. (b) $\frac{2}{3}$
	the first and the section of the sec
	(a) 2 (b) $\frac{1}{3}$ (c) $\frac{1}{2}$ (d) $\frac{1}{3}$
72	
	(a) dc generator (b) induction motor (c) over excited synchronous motor (c) over excited synchronous motor (d) under excited synchronous motor (The province capacitors for improvement of power factor is
	(c) over excited synchronous motor
73.	The advantage of cially vapur
	The advantage of static capacitors for improvement of power factor is  (b) little maintenance cost  (a) low loss  (d) all the above
	(a) low loss (b) little maintenance cost (c) ease in installation (d) all the above
74	(c) ease in installation  The area under load curve divided by 24 gives  (b) peak load
	The area under load curve divided by 24 gives  (a) average load  (b) peak load  (d) energy generated
	(a) average load (b) peak load (c) minimum load (c) minimum load (d) energy generated (e) minimum load (f) peak load (g) peak load (h) peak load (g) peak lo
75	(c) minimum load A 100 MW station is connected to infinite bus. If its exitation is increased, the terminal
.13.	voltage will (b) decrease
	(7) (ICCI Cuo
	(a) remain constant
76.	The modern trend in electric power generation is
, 0.	( ) to have large number of small sized plants situated at different
	(b) to have large sized thermal plants hear load control
	(c) to have large sized thermal plants near coal fields.  (d) none of above
	(d) none of above
77	to infinite bus. If excitation of alternator is more
<i>77</i> .	(a) real power output of generator increases
78.	(a) desert areas (b) hilly areas (c) areas lands
	(c) Swamps
79.	and the Callagraphy to more main to
	(b) demand factor
	(c) diversity factor (d) capacity factor
80.	nt as a series factor is
ov.	(a) actual energy produced/maximum possible energy that could have been produced (based
	in talled connected
	have an anadycad (plant canacity × hours for which the plant has been in operation)
	(b) actual energy produced (plant capacity) in a control of the co
	(c) energy generated in a given period (maximum demand most)
	plant) seek to what it and at the set is at
	(d) none of above

STATE OF THE PERSON OF THE PER	289
For stable operation of interconnected system interconnecting element is	em, the passive element which can be used as
stable of element is	on, the passive element which can be
Forconnecting	(b) recictor region the nature to Cal
interection reactor capacitor	(b) resistor
(a) reaction capacitor (c) capacitor (c) capacitor (c) capacitor (d) capacitor (e) capacitor (e) capacitor (f) capacitor (g) cap	(d) any of above operates at lagging power factor when operated
(c) anchronous machine is underexcited, it of	operates at lagging power factor when operates
If a sy.	The contract of the
as synchronous motor	(b) synchronous generator
as synchronous motor (a) synchronous motor (b)	(d) none of above
t Club	power system, increasing the excitation will
for a synchronous generator connected to a for a decrease reactive power generation  (a) decrease reactive power generation	(d) none of above  power system, increasing the excitation will
(a) decrease reactive power generation (b) increase active power generation (c) arease active power generation	Military and the second of the
(h) include nower generation	WHAT LONGER METERS IN THE PARTY.
(d) increase active power generation (d) increase active power generation (d) of the steam turbo generators are wou (d) 2 poles	and for
test of the	(b) 10 to 20 poles
Most colles (a) 2 poles (b) 2 poles (c) 2 poles	(d) 6 poles
20 10 20 F	. : = nocessary to have
order to have lower cost of electrical en	ergy generation
In order to have lower cost of electrical end in order to have lower cost of electrical end in order to have lower and diversity factor (a) low load factor and high diversity factor	Supplied to a first of the supplied of the sup
(a) low load factor and diversity factor (b) low load factor and low diversity factor (c) low load factor and low diversity factor	The state of the s
(b) low load factor and low diversity factor (c) high load factor and low diversity factor (c) high load factor and high diversity factor	or and previous their chestipant in
(c) high load factor and high diversity fact (d) high load factor and high diversity fact	or
toad duration curve of all integrates	ystem, the uppermost crust represent
In the load duranteed by	ystem, the uppermost crust represents the energy
hace nower stations	(b) major thermal stations
(c) peaking hydro or gas stations	(d) any of above and a maximum demand of 1kW. The demand
(c) peaking to be a connected load of 2 kW	and a maximum demand of Ikw. The
7. A consumer mass	(A) 0.25
factor is (b) 0.5	(c) 4 (d) 0.25
(a) 2	creased without increasing the mechanical po
8. If the load on a stand alone generalized input to the prime mover	an and un
input to the prime mover  (a) the generator will slow down	(b) the generator will speed up
(a) the generator will slow down (c) the generator voltage will increase	THALL I P. D. SANDY JOHN RG.
(d) the generator field current will increas	e Cub a congrator
(d) the generator field current	rallel and the field current of one of the generators
89. When two ac generators are operating	adi di ngjeti i samili i manaji a materiti. ( a)
is increased, it will	(b) speed up
(a) take a larger share of load (c) cause a flow of reactive power between	een the two machines
(c) cause a flow of reactive power constant	Miles with a designation of the contract of th
(d) take a smaller share of load	chronous generators operating in parallel ar
accompalished by	
14	ators
<ul> <li>(a) adjusting the generator voltage regular</li> <li>(b) changing the mechanical power input</li> </ul>	t to prime movers of the generators
(a) leavaging the mechanical p	The Lines of Europe Downey December 1981
(c) lowering the system frequency	The second secon
(d) increasing the system frequency	

	JULIA : OF ELL
91.	When the mechanical power input to the prime mover of a synchronous generator operating in parallel with other generators is increased a synchronous generator will
	in parallel with other generators, is increased, the rotor of the generator will  (a) increase in average speed
	(b) retard with respect to stator result.
	(c) advance with respect to stator revolving field (d) none of above
	(d) none of above
92.	An ac generator is operating with a field current of 100A. If the field current is increased to 125A with the same electrical load on the machines, it will
02	(c) operate at a new torque and a (d) overheat
93.	result of
	(a) reactance of lines (b) resistance of lines
04	(c) voltage at which the lines operate (d) conductor size
74,	When power is transferred between two power systems, power will flow from the power system with
	(a) the greater leading power angle (b) the lesser leading power angle
0.5	(c) the higher voltage level (d) the lower voltage level
95.	Two power systems A and B are operating in parallel. If system A increases generation to deliver 100MW to system B and system B does not simultaneously reduce generation, what will be the effect
	(a) frequency will decrease (b) frequency will increase
	(c) frequency may or may not change (d) voltage of system B will rise
96.	When a phase shifting transformer's taps are moved in such a direction as to advance the phase position
	(a) var flows will increase (b) var flows will decrease
	(c) these will be an increase in power flow in the line
	(d) voltage will be increased
97.	In a single phase circuit, the active power is the product of
	(a) voltage and current in the circuit
	(b) voltage, current and sine of angle between voltage and current
	(c) voltage, current and tangent of angle between voltage and current
	(d) voltage, current and cosine of angle between voltage and current
98	. Var flows in a circuit
	(a) from a point of higher voltage to that of lower voltage
	(b) from a point of lower voltage to that of higher voltage
	(c) without any effect on the voltage of terminals
	(d) none of these
99	
	When a 100 MVA generator is operating at 0.8 logging power factor the vars produced ar
100	(0) - 00 $(c) 60$
100	which it is required that a synchronous generator should generate
	(a) Herd Carrent of generator should be decreased
	(b) field current of generator should be increased
	(c) speed of machine should be decreased
	(d) mechanical power input to machine should be increased

on long high voltage line, under peak load cor	editions was commention is provided by
on long ing	idulous, var compensation is provided by
	(b) shunt inductors
(a) seriors capacitors	그 그 그 그 그 그 그 그는 그는 그는 그는 그 그는 그 그는 그는 그
(a) shunt capacitors (b) shunt capacitors (c) shunt rapacitors (c) shunt capacitors (d) when vars flow in a circuit, the losses in the circuit when capacitors	rouit
, mei	(b) decrease
4 111007	eiving and subsequently affined conditions
and Cillon the Lawrence to the law of the la	age
Will	
(a) may be higher than sending end voltage (b) will always be equal to sending end voltage (c) any of above	a transfer of transport of the
Will St.	e arm make melli ya majarang king armagan.
(c) will always so equal to sending end voltage (d) any of above (d) any different types of sources are available.	and sometimes of action (const. 4 of
(a) many different types of sources are available	able, these sources should be used in such a
way that	連動し向前では、10
way that (a) steam generators supply maximum load (a) generators supply minimum load	THE PROPERTY OF THE PARTY OF STREET
(a) steam generators supply minimum load (b) steam generators supply minimum load	water an in out of the the test of the
(b) steam generators supply minimum (c) overale production cost is minimum (c) overale production system should supply m	man automorphism of the Baltimorphism (sur
(c) overale production cost is infinitum  (d) the most efficient system should supply make an a thermal plant is increased, the	ore load.
(d) the most efficient system should supply me When load on a thermal plant is increased, the	fuel input
When load on a sefected	(b) decreases
(4) 15 110	
(c) increases	rmal generating plants is to find
(c) increases  The use of incremental heat rate curves of the	(b) cost of generation
(a) 10tal luci	(A all the above
(c) loading of different generators  The advantage of computer control of thermal	generating units is that
tentage of computer control of thermal	Belletaring and several property and the special special several sever
(a) var output of generators can be optimized	Le Alexandramit Whall Frami Di
(a) var output of generators can be optimised (b) all generators will supply equal loads (c) each generator will be loaded proportions	I to its rating
(c) each generator will be loaded proportion	and incremental COST
(c) each generator will be loaded proportions (d) units will be loaded so as to operate at each 8. When thermal generating units are loaded as 1	qual incremental cost criterion, the
a material unite are material as	DCI Cquai internation
(a) fuel costs are minimum (b) production co	Sts are minimum
(a) fuel costs are minimum (b) production cost (c) generation cost is minimum	(a) total annual cost is immediately the proportion of hydrogeneration
le a system with hydro as well as thermal gener	ating units, are prop
he increased by	
(a) increasing the price (gamma) of water	
(b) reducing the price (gamma) of water	
(a) increasing the field current of all general	ors
(d) increasing the field current of hydro generation	erators
<ul><li>(d) increasing the field current of hydro general</li><li>10. In economic dispatch including transmission I</li></ul>	osses, the effect of increased penalty factor
to	(1) decrease load on that generator
(a) increase load on that generator	(b) decrease load on that generator
	(d) either (a) or (b)
(c) Keep the load on that generator constant	es, economic dispatch means
(a) annual in anamantal costs at generator bus	
(c) equal load on all generators	the second control of
<ul><li>(c) equal load on all generators</li><li>(d) that generators share the load proportion</li></ul>	nal to their rating
Berry Branch	

	the contract of the contract o		- P
112.	Governors for speed control of generating units	provide a stability of the stability of	
	(a) flat speed load characteristic	provide	12
	(b) an increase of speed units increase of load		r
	(c) a decrease of speed with increase of load		
		ntor has a 5% go	vernor drop
113.	Two synchronous generators are operating in part	allel. One of them has a 370 g	Tay Lop
	Two synchronous generators are operating in para and the other has 8% drop. The generator with h	(d) either (b) or (c)	The state of the s
	(a) tend to take less load	he ither (b) or (c)	
	(c) take the same load as the other generator In P-f control, an error signal corresponding to (c)	(d) eluler (b) seeming will ter	id to
114.	In P-f control, an error signal corresponding to o	decrease in a square mover in	iput
	(a) decrease prime mover input (c) decrease terminal voltage statistics are as a sixty interconnecting facility, each	(b) increase terminal voltage	ger Af tag -
g doay	(c) decrease terminal voltage stdellave ste 230	(a) increase	
115.	In two systems with interconnecting facility, eac	h system	
	In two systems with interconnecting facility, eac  (a) keeps its own reserve capacity  (b) can depend on the other system for reserve  (c) and because terminal voltage  (d) reserve the any reserve capacity	Langelty and a party of the same	
	(b) can depend on the other of	tion is the market being a trave	
	(c) need not keep any reserve capacity	min at a second and a second s	oral F Post
	(d) any of above depending on system size	respond to	
116			nly
	(a) frequency changes only	above depend	ing on system
	(c) both frequency and the line load changes  A power system I is having interconnecting with	two other power systems.	The frequency
117.	A sever cyctem I is naving interconnecting		is a generation
496	hige in this system is 0.2 112 per	· A A2 Uz Then DOWCL 3y	Stelli i Should
	loss of such a magnitude so that he que	(1) arouide 10MW to the	otner system
	(a) not be affected	(d) provide 20MW to the	other system
	(a) not be affected (c) import 10MW from the other system (c) import 10MW an interconnection of the control low and interconnection of the c	octed nower system will resp	ond to troubles
118.	If the frequency bias is set too low, an inter-	at a sense was not be set the	
	in other systems with	(b) less than its share of	bias response
(0)	<ul> <li>(a) more than its share of bias response</li> <li>(c) correct the bias response</li> </ul>	(d) none of above	at to
	The state of the s	(4) 110111	
	to own generation	(0) 400.000	dari
	(c) coordinating time error correction with oth	er interconnected systems	
	Calaus		Commore
	for a 220 kV/3 phase power s	system has 200: 1 ratio curr	ent transformers
	t the send 600 the ratio notential italish	Office Confidence and to E	,
	factor is unity, the actual power in kW will be o	btained by multiplying the	measured power
	by a factor	in the contract of the contrac	
	(a) 360 (b) 120	(c) 120000	(d) 3600
	SCADA systems require	DESTRUCTION FOR THE STATE OF	
		RTU	
	a) a separate communication channel for each		
(1	b) continuous attendence at each RTU		
(4	r) frequency shift data channels to RTUs	A BOWLET TO SERVICE	
(0	provision for entering the retrieving and de	ata at master unit	
71			

```
configuration of SCADA master unit can
   one master unit can serve many RTUs
   Fach communication channel can have many RTUs

Each is less than party line system

(b) Each RTUs
                                                   (b) Each RTU requires a separate master
   facilities than party line system
2A conectors
  are used only at RTUs
                                                   (b) provide graphic display
   are user voltage and current to proper form for transmission over channels
   convert digital data to analog data
 select before operate procedure' refers to
 the selection by RTU of the function to be performed the method by which the operator of
 selection by which the operator cheeks that correct devices have been selected before forming an operation
 performing an operation
 the information received by master unit from RTU
 (f) display of single line diagram of the power system
 Transducers
 (a) convert digital quantities to analog quantities
 (b) convey massage from master unit to RTU
 (c) convey confirmation message from RTU to master unit
 (d) convert quantities being measured to a current or voltage proportional to measured
 quantity.
 Automatic generation control (AGC)
 (a) always requires a special and separate computer
 (b) can be provided by a special program in the SCADA master unit computer
 (c) cannot include transmission losses (d) cannot be relied in some cases.
 If mechanical inputs to prime movers of generators of a power system does not match load
 changes.
                                                    (b) system losses will be increased
  (a) system frequency will be low
  (c) system losses will be decreased
  (d) system frequency and voltage will deviate from normal
Men a synchronous generator is operating stably and a load change occurs, the rotor will
  (a) not be affected
  (b) advance in its position relative to stator revolving field
  (c) oscillate for some time and finally settle to its new position
19. When the rotor of a synchronous generator oscillates because of load changes, corrective
  (d) either (a) and (b)
  action can be provided by
                                                    (b) manual control of excitation
  (a) governor
                                                    (d) all the above
  (c) fast acting voltage regulator
100. EHV lines and equipment
  (a) contain only inductance and capacitance
  (b) obey the some electrical laws which are valid at low voltages
  (c) donot obey the electrical laws which are valid at low voltages
```

(d) either (b) or (c) depending on system

131. \	When a long transmission line	is supplying		
ishiri, 1- (	When a long transmission line (a) shunt capacitance and cha	rging current	k load	
(	<ul><li>a) shunt capacitance and cha</li><li>b) the inductance of the line</li></ul>	results in	dominate	
(	<ul><li>(b) the inductance of the line</li><li>(c) the resistance of line cause</li></ul>	es lors	itial voltage drop	
(	(c) the resistance of line caus (d) voltage regulation may be	cs large voltage	drop	sess A CE TEE
132.	When a long transmission line	negative.	THE STATE OF THE PARTY.	A STATE OF THE STA
(	When a long transmission line (a) receiving end voltage is a	is operating und	ler off-peak load condition	IS The state of th
	2	11W2Vc 1- 11	and ing and VAITAGE	GENERAL CONTRACTOR CON
	o one voltage ma	V hall show o	anding end voltage	MAN (1997) 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
	ma spillor bill are ma	V ha than c	anding end voltage	** AP\$25% - BAS 3 - JANG 1.
	(w) und (c)		and the control of the first of the control of the	\$40 ACY 1885 F DAG
	When series capacitors are us  (a) line stability is decreased  (b) phase		sion line	
	(b) phase analy is decreased	H	Not appoint from	inndon model 1
	(b) phase angle between vo	oltages at sendin	g end and receiving end,	under peak load
	conditions, is reduced	interface bowed equ	to margarh ann argum of	under neak losa
	(c) phase angle between vo	oltages at sendin	g end and receiving end	, under peak load
	condition, is increased  (d) either (b) or (c) deposition	e, astronempage	opinie or sa parent milito	EDMHOUS LIST
134.	(d) either (b) or (c) dependi	ng on system	that is proportional to	ASTAURIN (6)
Frinter	The voltage drop across a se	eries capacitor ba	1K is proportional to	
1900/01/27	(a) line current	to instruct a of p	(d) both line current	and voltage
125	(c) size of conductor			
133.	Shunt reactors are connected			
	(a) increase the receiving e			
	(b) increase the receiving e			
	(c) decrease the receiving e			
bao!	(d) decrease the receiving of	and the second second second		Muras and Marie
136.	The real power transfer ove			taga V
	(a) power angle	(F. (A)	(b) sending end vol	-
	(c) receiving end voltage \		$(d) V_s - V_r$	
137.	The reactive power transfer	over a line mail	nly depends on	platatic (k)
	(a) power angle		(b) sending end vo	itage V <sub>s</sub>
	(c) receiving end voltage		$(d)  V_s  -  V_r $	
138	. For a long line the receiving			
	(a) equal to sending end v	oltage		
	(c) more than sending end	l voltage	(d) any of above	
139	. The units of inertia constar	nt H are		
	(a) J per MVA		(b) kV per MVA	
	(c) MJ per MVA		(d) kA per MVA	
140	. The inertia constant H of a	an alternator of 2	200 MVA is 6. The value	of H corresponding to
	a base of 300 MVA will be			
	(a) 9	(b) 4	(c) 6	(d) 13.5
141	Which has the highest inst		1.00	
1 7	(a) thermal	(b) hydro	(c) nuclear	(d) gasturbine
1.40	The percentage increase in			
142	. The percentage increase in	(L) CO/	(a) 20%	(A) 50%

/	installe	ed generating ca	pacity in India i	s about		£0:
1/1	nuclear installe otal total e following has	ed generating ca	(b) 0.5%	of total		
oreselle	otal	100	(d) 30%	of total		e in
ne 19/0 01	otal total e following has power plant or plant	s highest numbe	r of auseiliaries	Market Born		
h of the	power plant		(d) gastu	irbine nower nla	nt	7 1
himemai	ower plant	eds very long tr	ansmission lines	to carry nower	to load (	ent
liesel F	following "	pri Mak	(b) diese	el power plant	to load (	Jenn
h of th	ectric plant	. A. 101	(d) steam	m power plant		
hydroe	ne following her lectric plant line power plant ne following ha	eds very long tr t s highest forced	outage rate	the rike		
1 12	ing ha	s highest forces	(b) then	mal power plant		
1 1	Lord		(d) gas	turbine power p		
hydroe	ecurer plant		- allution	Parist P	iuiit	
i) ijosel 1	power r	uses highest air	pollution	ro power plant		
ich of t	he lore	uses highest air $\operatorname{nt}(d)$ diesel poughest efficiency	( <i>b)</i> Hyo	HE ALL		
steam	power pla	nt(d) diesel pov	ver plant			
gas tur	bine political	nt(d) diesel pove $ghest$ efficiency	, r s. r	ro power plant		
wich of t	hese has the ma al power plant power plant		(b) hyd	turbine power	plant	
therma	al power plant		(d) gas			
diesel	power plant renergy audit it asure and recor	is necessary				
or proper	energy audit	d the quantity a	nd quality of en	ergy input		4
OI P	asure and record	u une q	anality of wa	iste energy		
A 10 IIIC	1 macor	d the quantity a	na quality of me	5.0		
a) to me	asure and recor	d the quantity at	nd quality of en nd quality of wa osses			
$\frac{a}{b}$ to me	asure and recor ermine and reco	ord all energy lo	nd quality of en nd quality of wa osses			
$\frac{a}{b}$ to me	asure and recor ermine and reco	ord all energy lo	35565		and r	not
b) to me c) to det d) all the	asure and recor ermine and recor e above onous condenser	ord all energy lo	(b) ove	r excited synch	ronous r	note
b) to me c) to det d) all the synchro	asure and recordermine and recorder above onous condenser	ord all energy lo	(b) ove		ronous r	noto
b) to me c) to det d) all the synchro	asure and recordermine and recorder above condensed and condensed are above above are above above are above above above are above are above	ord all energy lo	(b) ove (d) ind	r excited synch		
(a) $(b)$ to me (c) to det (d) all the (d) synchro	asure and recordermine and recorder above condensed and condensed are above above are above above are above above above are above are above	ord all energy lo	(b) ove (d) indi	r excited synch		
b) to me c) to det d) all the A synchro a) de ge c) under	asure and recordermine and recorder above condensed and condensed are above above are above above are above above above are above are above	ord all energy lover is usually conous motor aswers to Object 3. (d)	(b) ove (d) indicective Questic 4. (a)	er excited synchrouction motor ons 5. (a)		(a)
b) to me c) to det d) all the A synchro (a) de ge (c) under	asure and recordermine and recorder above condenser and recorder above condenser are active as a condenser are active as a condense and a condense are active as a condense active acti	ord all energy lover is usually conous motor swers to Objection 3. (d) 9. (c)	(b) ove (d) indective Questic 4. (a) 10. (b)	er excited synchrouction motor  5. (a) 11. (b)	6.	(a) (c)
b) to me c) to det d) all the A synchro (a) de ge (c) under	asure and reconnection and reconnection and reconnection condenses and reconnection condenses are active synchronic condenses and condenses are active synchronic condenses are active synchro	ord all energy lover is usually conous motor aswers to Object 3. (d)	(b) ove (d) indi- ective Questic 4. (a) 10. (b) 16. (b)	er excited synchicuction motor  5. (a) 11. (b) 17. (c)	6. 12. 18.	(a) (c) (c)
b) to me c) to det d) all the A synchro (a) de ge (c) under (d) (b) (d)	asure and reconsermine and reconsermine and reconsermine and reconserment condenserment of the condenserment of th	ord all energy lover is usually conous motor swers to Objection 3. (d) 9. (c)	(b) ove (d) indi- ective Questic 4. (a) 10. (b) 16. (b) 22. (d)	ser excited synchronic excited s	6. 12. 18. 24.	(a) (c) (c) (a)
b) to me c) to det d) all the A synchro (a) de ge (c) under (d) (b) (d) (b)	asure and reconsermine and reconsermine and reconsermine and reconserment condenserment condenserment consermine and condenserment condenserme	ord all energy lover is usually conous motor swers to Object 3. (d) 9. (c) 15. (c)	(b) ove (d) indi- ective Questic 4. (a) 10. (b) 16. (b)	r excited synchrons  5. (a)  11. (b)  17. (c)  23. (a)  29. (c)	6. 12. 18. 24. 30.	(a) (c) (c) (a) (c)
b) to me c) to det d) all the A synchro (a) de ge (c) under (d) (b) (d) (b)	asure and reconserment and reconserment and reconserment and reconserment and reconserment and a surface above and a surface and	ord all energy lover is usually conous motor swers to Object 3. (d) 9. (c) 15. (c) 21. (a) 27. (c)	(b) ove (d) indi- ective Questic 4. (a) 10. (b) 16. (b) 22. (d)	r excited synchrons  5. (a)  11. (b)  17. (c)  23. (a)  29. (c)  35. (c)	6. 12. 18. 24. 30. 36.	(a) (c) (c) (a) (c) (d)
b) to me c) to det d) all the A synchro (a) de ge (c) under (d) (b) (d) (b) (c) (e)	asure and reconservation and reconservation and reconservation condenservation and reconservation and recons	ord all energy lover is usually conous motor swers to Object 3. (d) 9. (c) 15. (c) 21. (a) 27. (c) 33. (b)	(b) ove (d) indi- ective Questic 4. (a) 10. (b) 16. (b) 22. (d) 28. (c)	r excited synchrons  5. (a)  11. (b)  17. (c)  23. (a)  29. (c)	6. 12. 18. 24. 30. 36. 42.	(a) (c) (c) (a) (c) (d) (d)
b) to me c) to det d) all the A synchro (a) de ge (c) under (d) (b) (d) (b) (c) (a)	asure and reconservation and reconservation and reconservation condenservation and reconservation and recons	ord all energy lover is usually conous motor swers to Object 3. (d) 9. (c) 15. (c) 21. (a) 27. (c) 33. (b) 39. (a)	(b) ove (d) indi- ective Questic 4. (a) 10. (b) 16. (b) 22. (d) 28. (c) 34. (b) 40. (d)	r excited synchrons  5. (a)  11. (b)  17. (c)  23. (a)  29. (c)  35. (c)	6. 12. 18. 24. 30. 36. 42.	(a) (c) (c) (a) (c) (d) (d) (b)
(a) to me (b) to me (c) to det (d) all the (a) de ge (c) under (d) (b) (d) (e) (e) (a) (f) (f) (f) (f) (f) (f) (f) (f) (f) (f	asure and reconservermine	ord all energy lover is usually conous motor swers to Object 3. (d) 9. (c) 15. (c) 21. (a) 27. (c) 33. (b) 39. (a) 45. (b)	(b) ove (d) indi- ective Questic 4. (a) 10. (b) 16. (b) 22. (d) 28. (c) 34. (b) 40. (d) 46. (d)	ser excited synchronic	6. 12. 18. 24. 30. 36. 42. 48. 54.	(a) (c) (c) (a) (c) (d) (d) (b) (a)
(a) to me (b) to me (c) to det (d) all the (a) dc ge (c) under (d) (d) (b) (d) (b) (a) (b) (c) (a) (b) (d) (b) (d) (b) (d) (d) (b) (d) (d) (d) (d) (d) (d) (d) (d) (d) (d	asure and reconservation and reconservation and reconservation condenservation and reconservation and recons	ord all energy lover is usually conous motor swers to Object 3. (d) 9. (c) 15. (c) 21. (a) 27. (c) 33. (b) 39. (a) 45. (b) 51. (b)	(b) ove (d) indi- ective Questic 4. (a) 10. (b) 16. (b) 22. (d) 28. (c) 34. (b) 40. (d) 46. (d) 52. (b)	ser excited synchronic	6. 12. 18. 24. 30. 36. 42.	(a) (c) (c) (a) (c) (d) (d) (b) (a)
(d)	asure and reconservermine	ord all energy lover is usually conous motor as wers to Object 3. (d) 9. (c) 15. (c) 21. (a) 27. (c) 33. (b) 39. (a) 45. (b) 51. (b) 57. (a)	(b) ove (d) indi- ective Questic 4. (a) 10. (b) 16. (b) 22. (d) 28. (c) 34. (b) 40. (d) 46. (d) 52. (b) 58. (a)	r excited synchrons  5. (a)  11. (b)  17. (c)  23. (a)  29. (c)  35. (c)  41. (b)  47. (b)  53. (d)  59. (b)	6. 12. 18. 24. 30. 36. 42. 48. 54.	(a) (c) (c) (a) (c) (d) (d) (b) (a) (b)
(d)	asure and recordermine and recordermine and recorder above condenser and recorder above concurrent and condenser a	ord all energy lover is usually conous motor aswers to Object 3. (d) 9. (c) 15. (c) 21. (a) 27. (c) 33. (b) 39. (a) 45. (b) 51. (b) 57. (a) 63. (a)	(b) ove (d) indi- ective Questic 4. (a) 10. (b) 16. (b) 22. (d) 28. (c) 34. (b) 40. (d) 46. (d) 52. (b) 58. (a) 64. (c)	ser excited synchronic points  5. (a) 11. (b) 17. (c) 23. (a) 29. (c) 35. (c) 41. (b) 47. (b) 53. (d) 59. (b) 65. (c)	6. 12. 18. 24. 30. 36. 42. 48. 54.	(a) (c) (c) (a) (d) (d) (b) (a) (b) (a)
(a) to me (b) to det (c) to det (d) all the (a) dc ge (c) under (d) (d) (e) (f) (f) (f) (f) (f) (f) (f) (f) (f) (f	asure and reconservermine	ord all energy lover is usually conous motor as wers to Object 3. (d) 9. (c) 15. (c) 21. (a) 27. (c) 33. (b) 39. (a) 45. (b) 51. (b) 57. (a)	(b) ove (d) indi- (ective Questic 4. (a) 10. (b) 16. (b) 22. (d) 28. (c) 34. (b) 40. (d) 46. (d) 52. (b) 58. (a) 64. (c) 70. (a)	r excited synchrons  5. (a) 11. (b) 17. (c) 23. (a) 29. (c) 35. (c) 41. (b) 47. (b) 53. (d) 59. (b) 65. (c) 71. (c)	6. 12. 18. 24. 30. 36. 42. 48. 54. 60. 66. 72.	(a) (c) (c) (d) (d) (b) (a) (b) (a) (c)
(a) to me (b) to me (c) to det (d) all the (A synchro (a) do ge (c) under (b) (d) (c) (d)	asure and reconservermine and reconservermine and reconservermine and reconserver excited synchromatic rexcited synchromatic and synchromatic	ord all energy lover is usually conous motor aswers to Object 3. (d) 9. (c) 15. (c) 21. (a) 27. (c) 33. (b) 39. (a) 45. (b) 51. (b) 57. (a) 63. (a)	(b) ove (d) indi- (ective Questic 4. (a) 10. (b) 16. (b) 22. (d) 28. (c) 34. (b) 40. (d) 46. (d) 52. (b) 58. (a) 64. (c) 70. (a) 76. (c)	ser excited synchrons  5. (a) 11. (b) 17. (c) 23. (a) 29. (c) 35. (c) 41. (b) 47. (b) 53. (d) 59. (b) 65. (c) 71. (c) 77. (b)	6. 12. 18. 24. 30. 36. 42. 48. 54. 60. 66. 72. 78.	(a) (c) (d) (d) (b) (a) (b) (a) (c) (b)
(b) to me (c) to det (d) all the A synchro	asure and reconservermine and reconservermine and reconserver above condenserver and reconserver and reconserv	ord all energy lover is usually conous motor swers to Object 3. (d) 9. (c) 15. (c) 21. (a) 27. (c) 33. (b) 39. (a) 45. (b) 51. (b) 57. (a) 63. (a) 69. (b)	(b) ove (d) indi- (ective Questic 4. (a) 10. (b) 16. (b) 22. (d) 28. (c) 34. (b) 40. (d) 46. (d) 52. (b) 58. (a) 64. (c) 70. (a)	r excited synchrons  5. (a) 11. (b) 17. (c) 23. (a) 29. (c) 35. (c) 41. (b) 47. (b) 53. (d) 59. (b) 65. (c) 71. (c)	6. 12. 18. 24. 30. 36. 42. 48. 54. 60. 66. 72.	(a) (c) (d) (d) (b) (a) (b) (a) (c) (b) (a)

THE SECTION OF the following do not highest and pullethan - has

tay to ancayate and record the quantity and duality of energy repair

considered and rectard the quality and crews businesses of (6)

Intelly a road Lead to the first of planting to wear offered the east (a) the

148. Which of these has the highest officiency

LIP. For proper enemerable it is unchasely.

(a) steam power plant

more away trunsdy (c)

(a) dieset power Hant

	the same of the same of the same		A Section of the latest section of the latest	96. (c)	
91. (c)	92. (a)	93. (a)	94. (a)	95. (b) 90. (c) 102. (a)	
97. (d)	98. (a)	99. (c)	100. (b)	101. (6)	
103. (b)	104. (c)	105. (c)	106. (c)	107. (a)	
<b>109.</b> (b)	110. (b)	111. (b)	112. (c)	113. (a)	, , ,
115. (a)	116. (c)	117. (a)	118. (b)	119. (c)	
121. (c)	122. (a)	123. (d)	124. (b)	125. (a)	
127. (d)	128. (c)	129. (c)	130. (b)	131. (6)	
<b>133.</b> ( <i>b</i> )	134. (a)	135. (d)	136. (a)	137. (a)	100
<b>139.</b> (c)	<b>140.</b> (b)	141. (a)	142. (b)	143. (a)	
145. (a)	<b>146.</b> (b)	147. (a)	148. (b)	male remon lessib (3)	
		Louise Asy		MUNICIPALITY OF THE PROPERTY O	

(d) game where you're posite

(f) bydro pow. plant

(In bydro pake: plant