- 1. The quarantine of germplasm pertaining to agricultural and horticultural crops is done by the following?
  - (A) Entomologist
  - (B) Plant pathologist
  - (C) Nematologist
  - (D) All the above
  - (E) Answer not known
- 2. Conservation of germplasm under natural habitat is referred to as
  - (A) Exsitu conservation
  - (B) Insitu conservation
  - (C) Both (A) and (B)
  - (D) Bio-diversity
  - (E) Answer not known
- 3. Gradual loss of variability from cultivated species and their wild forms and wild relatives are called
  - (A) Genetic recombination
  - (B) Genetic enhancement
  - (C) Genetic erosion
  - (D) None of the above
  - (E) Answer not known

- 4. Identify the wrong answer among the following about orthodox seeds.
  - (A) Can be dried to a moisture content of 5 percent or lower
  - (B) Can be stored for longer period
  - (C) Cannot be dried below 12 percent
  - (D) Can be stored lower humidity and lower temperature
  - (E) Answer not known
- 5. DNA markers can be used for which of the following purposes?
  - (I) Mapping of quantitative trait loci (PTL)
  - (II) Preparation of linkage maps
  - (III) Map based cloning of genes
  - (IV) Indirect selection of traits of economic importance
  - (A) (I), (II), (III), (IV)
  - (B) (I), (II), (IV)
  - (C) (II), (III), (IV)
  - (D) (I), (III), (IV)
  - (E) Answer not known
- 6. Which of the following mapping populations used for linkage mapping of molecular markers?
  - (A) Near isogenic line (NILs)
  - (B) Recombinant inbred lines (RILs)
  - (C) Backcross progeny
  - (D) Any of the above
  - (E) Answer not known

- 7. MAS (Marker Assisted Selection) is potentially useful for which of the following?
  - (I) Selection of QTLs
  - (II) As a substitute for a disease test
  - (III) Accelerated recovery of the recurrent parent
  - (IV) For reducing linkage drag
  - (A) (I), (II), (IV)
  - (B) (II), (IV)
  - (C) (I), (II), (III), (IV)
  - (D) (I), (IV)
  - (E) Answer not known
- 8. A substantial reduction in the number of backcross generations is achieved by which of the following?
  - (A) Accurate genotyping for the gene under transfer
  - (B) Accurate genotyping at loci other than the one being transferred
  - (C) Use of larger backcross populations
  - (D) Highly efficient phenotype based selection
  - (E) Answer not known
- 9. DNA ligase is used for which of the following
  - (A) Joining of two DNA fragments
  - (B) Synthesis of RNA
  - (C) Replication of DNA
  - (D) Replication of RNA
  - (E) Answer not known

10. The first transgenic crop commercially released was										
	(A)	Bt cotton								
	(B)	Golden rice								
	(C)	Flavr savr tomato								
	(D)	Herbicide-resistant soyabean								
	(E)	Answer not known								
11.	Whic	ch hormone combination is used for callus differentiation?								
	(A)	Auxin + cytokinin								
	(B)	Gibberellin + ABA								
	(C)	Ethylene + Auxin								
	(D)	Cytokinin + Gibberellin								
	(E)	Answer not known								
12.	First	genetically engineered tomato FLAVR SAVR was nercially produced in during 1994.								
	(A)	China								
	(B)	Netherlands								
	(C)	USA								
	(D)	Israel								
	(E)	Answer not known								

- 13. Which of the following is not a quality trait targeted in plant breeding programme?
  - (A) Disease resistance
  - (B) High vitamin content
  - (C) Improved taste
  - (D) Enhanced aroma
  - (E) Answer not known
- 14. The minikit trials are conducted at which of the following?
  - (A) Farmer's field
  - (B) Research station
  - (C) Farms of state government
  - (D) Farms of SFCI
  - (E) Answer not known
- 15. What is the purpose of Distinctness, Uniformity and stability (DUS) test in variety release?
  - (A) To check seed purity
  - (B) To determine yield potential
  - (C) To conform the variety has unique and stable tracts
  - (D) To assess pest resistance
  - (E) Answer not known

16.	Rice	variety developed for drought tolerance in TamilNadu.
	(A)	ADT-53
	(B)	CO-59
	(C)	CR 1009
	(D)	BPT 5204
	(E)	Answer not known
17.		ual purpose sorghum suitable for both grain and fodder with y maturity (95 days), recently released by TNAU
	(A)	CO-31
	(B)	K-12
	(C)	CO5
	(D)	CO-30
	(E)	Answer not known
18.	Whi	ch system in widely used for hybrid seed production in rice?
	(A)	Two line
	(B)	Four line
	(C)	Three line
	(D)	Self pollination
	(E)	Answer not known
19.	How	are synthetic varieties developed from?
	(A)	Derived from single genotypes
	(B)	Controlled crosses among selected genotypes
	(C)	Random pollination of plants
	(D)	Genetically modified organism
	(E)	Answer not known

20.	The	line which restores the ferti	lity	in hybrid seed production		
	(A)	A-line		(B) Maintainer line		
	(C)	B-line		(D) R-line		
	(E)	Answer not known				
21.	Com	posite varieties are popular	in			
	(A)	Wheat		(B) Ragi		
	(C)	Sunflower		(D) Maize		
	(E)	Answer not known				
22.	Cross pollination is promoted by which of the following.					
	(A)	Dicliny		(B) Dichogamy		
	(C)	Male sterility		(D) All the above		
	(E)	Answer not known				
23.	Whic	ch of the following is correct	ly p	aired?		
	(I)	Gregor Johan Mendel	_	Garden pea		
	(II)	Hugo de vries	_	Linear model of DNA		
	(III)	James Watson and Crick	_	DNA double Helical structure		
	(IV)	Beadle and Tatum	_	One gene one enzyme		
	(A)	(II), (III), (IV)		(B) (I), (II), (III)		
	(C)	(I), (III), (IV)		(D) (I), (II), (IV)		
	(E)	Answer not known				

24.	Which method is commonly used to transfer disease resistance crop plants?						
	(A)	Pureline selection	(B) Mass selection				
	(C)	Back cross breeding	(D) Pedigree breeding				
	(E)	Answer not known					
25.	Kuf	ri Red potato is developed by					
	(A)	Pureline selection	(B) Mass selection				
	(C)	Heterosis breeding	(D) Clonal selection				
	(E)	Answer not known					
26.	The	Genomic constitution of G. H	Iirsutum is				
	(A)	$\mathrm{AA}\;\mathrm{D}_2\;\mathrm{D}_2$	(B) AA $D_1 D_1$				
	(C)	AA DD	(D) $A_1 A_1 D_1 D_1$				
	(E)	Answer not known					
27.	Tota	<del>-</del>	h present in the upper jaw of adu				
	(A)	Zero	(B) Six				
	(C)	Twelve	(D) Thirty two				
	(E)	Answer not known					

28.	The	adva	intages	s of rea	aring b	oirds in cage system are		
	(1)	Hig	her ste	ocking	densi	ty		
	(2)	No	No litter-borne diseases					
	(3)	Les	s num	ber of	cracke	ed eggs		
	(4)		s broo					
	(A)		(2) an		ro cori	rect (B) (1), (2) and (4) are correct		
	(C)	, , ,				rect (D) All are correct		
	(E)		swer n			(b) All are correct		
	(E)	Alls	swer m	ot Kno	W 11			
20			0.11		-			
29.	_			wing b	ased o	on biomass conversion processes:		
	( )		esses		1	Products		
	` ′		bustio		1.			
	` ′		ficatio	n	2.			
		Pyro	=		3.	Producer gas		
	(u)	rern	nentat	1011	4.	Heat		
		(a)	(b)	(c)	(d)			
	(A)	4	3	2	1			
	(B)	4	2	3	1			
	(C)	3	4	2	1			
	(D)	3	1	4	2			
	(E)	Ans	swer n	ot knov	wn			
30.	Which of the following is not renewable source of energy?							
	(A)	Sol	ar			(B) Biomass		
	(C)	Fos	sil fue	ls		(D) Geothermal		
	(E)		swer n		wn			
	` /							

31.	The	Dammer bee comb is made which is a mixture of w	_			
	(A)	Bee bread	(B)	Propolis		
	(C)	Royal filly	` ′	Cerumen		
	(E)	Answer not known				
32.	Whi	ch among the following is a mus	shro	om nematode?		
	(A)	<u>Helicotylenchus</u>	(B)	<u>Bursaphlenchus</u>		
	(C)	<u>Ditylenchus</u>	(D)	<u>Meloidogyne</u>		
	(E)	Answer not known				
33.	Agaricus bisporus is the biological name of					
	(A)	Button mushroom	(B)	Milky mushroom		
	(C)	Oyster mushroom	(D)	Paddy straw mushroom		
	(E)	Answer not known				
34.	In th	ne honey bee colony, the worker	bee	is a		
	(A)	Sterile female	(B)	Fertile female		
	(C)	Sterile male	(D)	Fertile male		
	(E)	Answer not known	` ,			
35.	The bees	recommended number of bee is	hiv	es for pollination by Indian		
	(A)	4/ha	(B)	3/ha		
	(C)	5/ha	(D)	6/ha		
	(E)	Answer not known				

Eler	nent plays important role in sta	ability of protein structure is
(A)	Sulphur	(B) Phosphorus
(C)	Iron	(D) Manganese
(E)	Answer not known	
(A)	Zinc	(B) Boron
(C)	Potassium	(D) Phosphorous
(E)	Answer not known	
Wat	er as the sole nourishment for p	plants was given by
(A)	Van Helmont	(B) Glauber JR
(C)	Boussingault JB	(D) Theodore de Saussure
(E)	Answer not known	
Con	centrated organic manures incl	udes
(A)	Oil cakes	(B) Blood meal
(C)	Compost	(D) Only (A) and (B)
(E)	Answer not known	
	(A) (C) (E)  In _ of le (A) (C) (E)  Wat (A) (C) (E)  Cone (A) (C)	<ul> <li>(A) Sulphur</li> <li>(C) Iron</li> <li>(E) Answer not known</li> <li>In deficiency, yellow of leaves extending to the centre of (A) Zinc</li> <li>(C) Potassium</li> <li>(E) Answer not known</li> <li>Water as the sole nourishment for property (A) Van Helmont</li> <li>(C) Boussingault JB</li> <li>(E) Answer not known</li> <li>Concentrated organic manures included (A) Oil cakes</li> <li>(C) Compost</li> </ul>

40.	Ider	Identify the incorrect statement with respect to green manure crop.						
	1.	It should have little water requirement.						
	2.	. It should have fibrous root system.						
	3.	3. It should have large quantities of non fibrous tissue.						
	4.	. It should be a legume						
	(A)	1 alone incorrect	(B)	2 alone incorrect				
	(C)	3 and 4 are incorrect	(D)	2 and 4 are incorrect				
	(E)	Answer not known						
41.	Ster	n nodule green manure plant sj	o is					
	(A)	Sesbania rostrata	(B)	Sesbania speciosa				
	(C)	Sesbania aculeate	(D)	Sesbania grandiflora				
	(E)	Answer not known						
42.	Indicate the LER of groundnut + redgram inter cropping system with the following data is,							
	Sole groundnut yield - 1000 kg/ha							
	Intercropped groundnut yield - 750 kg/ha							
	Sole redgram yield - 800 kg/ha							
	Intercropped redgram yield - 400 kg/ha							
	(A)	0.250	(B)	0.375				
	(C)	0.640	(D)	1.250				
	(E)	Answer not known						
43.	Gro	Growing of two or more crops on the same field in one year is called						
	(A)	Agroforestry	(B)	Alley cropping				
	(C)	Multiple cropping	(D)	Cropping system				
	(E)	Answer not known						

44.		infiltration uniformity is aced in irr	s increased and deep percolation is igation.
	(A)	Cablegation	(B) Surge
	(C)	Wide spaced furrow	(D) Every furrow
	(E)	Answer not known	
45.	Grov	wing of four crops a year in	sequence is
	(A)	Relay cropping	(B) Fallow cropping
	(C)	Mixed cropping	(D) Quadruple cropping
	(E)	Answer not known	
46.	The	term 'triple response' is co	nnected with which hormone?
	(A)	Auxin	(B) Cytokinin
	(C)	ABA	(D) Ethylene
	(E)	Answer not known	
47.		ch one of the followin rophyll?	g elements is the constituent of
	(A)	Fe	(B) Mn
	(C)	Mg	(D) Cu
	(E)	Answer not known	
48.		is highly salt	tolerant crop.
	(A)	Sugar Beet	(B) Maize
	(C)	Rice	(D) Cotton
	(E)	Answer not known	

49.	Gibberellins are chemically					
	(A)	Sesquiter	pene	(B) Diterpenes		
	(C)	Monoterp	ene	(D) Triterpene		
	(E)	Answer no	ot known			
50.	Assertion [A]:			ther proportion of saturated fatty embrane has high temperature		
	Reason [R]:		Higher proportion of saturated fatty acids maintain fluidity and stability of their membrane at high temperature.			
	(A)	[A] is true	[A] is true but [R] is false			
	(B)	Both [A] and [R] are true and [R] is the correct explanation of [A]				
	(C)	[A] is false, [R] is true				
	(D)	Both [A] and [R] are true, but [R] is not the correct explanation of [A]				
	(E)	Answer no	ot known			
51.	The scale map used for watershed planning is					
	(A)	1:10,000		(B) 1:50,000		
	(C)	1:1,00,00	00	(D) 1:2,50,000		
	(E)	Answer no	ot known			
52.	Water holding capacity is the ar when are filled w			nount of moisture content of soil th water.		
	(A)	Macropore	es	(B) Micropores		
	(C)	Both mac	ro and micropores	(D) Mesopores		
	(E)	Answer no	ot known			
491-A	Agricu	lture	16			

<b>5</b> 3.	Main purpose of soil survey is								
	(A)	to measure the total area							
	(B)	to the fertility status of soil							
	(C)	to study and mapping of soils in their natural environment							
	(D)	to recognize their importance							
	(E)	Answer not known							
54.	Mul	tiple cropping is possible in		areas.					
	(A)	Dry farming	(B)	Rainfed farming					
	(C)	Dry land farming	(D)	Drought					
	(E)	Answer not known							
55.	The width of buffer strips varies from								
	(A)	2 - 4 m	(B)	3 - 6 m					
	(C)	5 - 10 m	(D)	10 - 15 m					
	(E)	Answer not known							
56.	Dry	land agriculture generally rece	eive ar	n annual rainfall of					
	(A)	Greater than 900 mm	(B)	Less than 900 mm					
	(C)	Less than 750 mm	(D)	Greater than 750 mm					
	(E)	Answer not known							
57.	Wat	Water quality is determined according to the							
	(A)	Mineral content of water	(B)	Purpose for which it is used					
	(C)	Toxicity level of elements	, ,	Electrical conductivity					
	(E)	Answer not known		-					

58. Match the water with their salt content

Water

Salt content (%)

- (a) Fresh water
- 1. 0.05-3 %
- (b) Brackish water
- 2. < 0.05 %
- (c) Saline Water
- 3. > 5 %

(d) Brine

4. 3.5 %

- (a)
- (c) (d)
- (A) 2
- 4
- 4

3

4

3

4

- (B) 1
- 2

(b)

1

- 3
- (C) 2

(E)

- 4
- 1
- (D) 2
- 3
- Answer not known
- 59. Active acidity in soil is due to:
  - 1. H<sup>+</sup> and Al<sup>3+</sup> ions concentration in soil solution.
  - 2. H<sup>+</sup> and Al<sup>3+</sup> ions concentration in soil colloids.
  - (A) Statement 1 is correct
  - (B) Statement 1 and 2 are correct
  - (C) Statement 2 is correct
  - (D) Statement 1 and 2 are wrong
  - (E) Answer not known

60. Sodium adsorption Ratio (SAR)

(A) 
$$\frac{Na}{\sqrt{\frac{Ca + Mg}{2}}}$$

(B) 
$$\frac{Na}{\frac{Ca + Mg}{2}}$$

(C) 
$$\sqrt{\frac{Na}{Ca + Mg}}$$

(D) 
$$\frac{Na}{Ca + Mg}$$

- (E) Answer not known
- 61. The Land capability classes suited to cultivation are
  - (A) V to VIII

(B) I to III

(C) I to IV

- (D) VI to VIII
- (E) Answer not known
- 62. The type of soil survey employed for micro level planning is
  - (A) Reconnaissance soil survey
  - (B) Exploratory survey
  - (C) Detailed soil survey
  - (D) Rapid reconnaissance soil survey
  - (E) Answer not known
- 63. Jarosite mottles are present in horizon.
  - (A) Calcic horizon

- (B) Oxic horizon
- (C) Sulphuric horizon
- (D) Natric horizon
- (E) Answer not known

- 64. Soils having an EC of more than 4 dSm<sup>-1</sup> and ESP of more than 15 % is classified as ———— soil
  - (A) Saline

(B) Saline – Sodic

(C) Sodic

(D) Cat clays

- (E) Answer not known
- 65. Assertion: [A]: Classes of soil structure indicates the degree of distinctness and durability of the individual peds.

Reason: [R]: Each primary structural type of soil is differentiated into five classes.

- (A) [A] is true [R] is false
- (B) Both [A] and [R] are true and [R] is the correct explanation of [A].
- (C) Both [A] and [R] are true but [R] is not explaining [A].
- (D) [A] is false [R] is true
- (E) Answer not known
- 66. Assertion: [A]: Soil structure is described under three categories.

Reason: [R]: Soil structure is described by shapes and arrangements, size and degree of distinctness and durability of the individual peds.

- (A) [A] is true and [R] is true
- (B) [A] is true and [R] is false
- (C) [A] is false and [R] is true
- (D) Both [A] and [R] are false
- (E) Answer not known

- 67. Match the following
  - (a) Blossom end rot
- 1.  $Zn^{2+}$
- (b) Grey speck
- 2.  $Cu^{2+}$
- (c) White bud
- 3.  $Ca^{2+}$
- (d) Die-back
- 4. Mn<sup>2+</sup>
- (a) (b) (c) (d)
- (A) 2 3 1 4
- (B) 3 1 2 4
- (C) 3 4 1 2
- (D) 3 4 2 1
- (E) Answer not known
- 68. Percent pore space is given by
  - 1. 100 % solid space
  - $2. \qquad 100 \frac{\text{Bulk density}}{\text{Particle density}} \times 100$
  - 3.  $100 \left[ 1 \frac{\text{Bulk density}}{\text{Particle density}} \right]$
  - 4. 100 Particle density
  - (A) 1, 2 and 3 are correct
- (B) 1, 2 and 4 are correct
- (C) 2, 3 and 4 are correct
- (D) All the four are correct
- (E) Answer not known

69.	Assertion : [A] :		Integrated nutrient envisages the use of chemical fertilizers in conjunction with organic manures legumes, biofertilizers etc.					
	Reas	on : [R] :	INM sustains soil health and productivity and produces higher crop yields.					
	(A)	[A] is true but [R] is false						
	(B)	[A] is false [F	R] is true					
	(C)	Both [A] and	[R] are true	and [R] i	s the correct e	xplana	ıtion	
	(D)	Both [A] and [R] are true and [R] is not correct explanation of [A]						
	(E)	Answer not k	nown					
70.		n single supe erted to?	r phosphate	is applie	ed to strongly	acid s	soil it is	
	(A)	Fe and Al ph	osphate	(B)	Calcium Phos	sphate		
	(C)	Sodium Phos	phate	(D)	Organic Phos	phate		
	(E)	Answer not k	nown					
71.	The j	problem assoc	iated with ze	ro tillage	e is			
	(A)	Low seed ger	mination	(B)	Built up of vo	luntee	r plants	
	(C)	Low minerals	S	(D)	All the above			
	(E)	• •						
72.	———relies on natural process without using any external							
	inpu	ts.						
	(A)	Organic farm	ning	(B)	(B) Natural farming			
	(C)	Biodynamic f	arming	(D)	(D) Permaculture			
	(E)	E) Answer not known						

73.	The symbiotic microbial inoculants is associated withtype of crops.							
	(A)	Cereals	(B) Millets					
	(C)	Pulses	(D) Noncotic crops					
	(E)	Answer not known						
74.	An e	example for fungal biofertilizer	is					
	(A)	Azospirillum	(B) Mycorrhiza					
	(C)	Frankia	(D) Azotobacter					
	(E)	Answer not known						
75.	Which part of India is not benefited by the SW monsoon							
	(A)	Eastern plains of Tamilnadu						
	(B)	Southern Tamilnadu						
	(C)	Whole Tamilnadu						
	(D)	East coast of Tamilnadu						
	(E)	Answer not known						
76.	is the process of heat transfer with in liquids at gases resulting from motions of fluid							
	(A)	Conduction	(B) Convection					
	(C)	Radiation	(D) Light					
	(E)	(E) Answer not known						

77.		nfed farming is the praction of the farming is the farming	ce of grow	ring of crops in mean annual					
	(A)	750 mm	(B)	650 mm					
	(C)	850 mm	(D)	950 mm					
	(E)	Answer not known							
78.	All India agro climatic zonal classification was done by								
	(A)	ICAR	(B)	PCI					
	(C)	IMD	(D)	WMO					
	(E)	Answer not known							
79.	No.	of Agro-ecological zones in	India is						
	(A)	31	(B)	21					
	(C)	7	(D)	9					
	(E)	Answer not known							
80.	The recording type raingauge measures the rainfall amount with respect to time, in the form of								
	(A)	Hyetograph	(B)	Mass curve					
	(C)	Double mass curve	(D)	Histogram					
	(E)	Answer not known							
81.	The	term factors of production	refers to						
	(A)	Land and labour							
	(B)	Land, labour and capital							
	(C)	Land and capital							
	(D)	Land, labour, capital and	d organiza	ation					
	(E)	Answer not known							
<b>491-</b> A	Agricu	ılture	24						

82.		many types of agroforestry o-economic principles?	y systems are those based on	l
	(A)	2	(B) 3	
	(C)	4	(D) 5	
	(E)	Answer not known		
83.	The K <sub>2</sub> O/	<del>-</del>	id rice is kg N P <sub>2</sub> O <sub>5</sub>	5
	(A)	150:50:50	(B) 120:50:50	
	(C)	75:50:50	(D) 175:60:60	
	(E)	Answer not known		
84.	Opti	mum temperature for warm sea	ason crops ranges between	
	(A)	$20~{ m and}~25^{\circ}{ m C}$	(B) 30 and 38°C	
	(C)	$38 \mathrm{\ and\ } 45^{\circ}\mathrm{C}$	(D) 25 and 30°C	
	(E)	Answer not known		
85.		is often referred a	s the wonder crop due to its	3
	vers	atility.		
	(A)	Red gram	(B) Groundnut	
	(C)	Sunflower	(D) Soybean	
	(E)	Answer not known		

86.	To avoid root snapping, 4 kg of and 1 kg of and 1 kg of /cent is to be applied in rice nursery 10 days after									
	sowing									
	(A)	DAP and Gypsum	(B)	Gypsum and DAP						
	(C)	Urea and Gypsum	(D)	Gypsum and urea						
	(E)	Answer not known								
87.		The recommended dose of Kaolin concentration for foliar spray to mitigate drought is								
	(A)	2%	(B)	3%						
	(C)	4%	(D)	5%						
	(E)	Answer not known								
88.	The recommended spacing for YRCHZ castor is in Tamil Nadu under irrigated condition.									
	(A)	$150~\mathrm{cm} \times 150~\mathrm{cm}$	(B)	$180~\mathrm{cm} \times 150~\mathrm{cm}$						
	(C)	$90 \text{ cm} \times 90 \text{ cm}$	(D)	$90\text{cm} \times 60\text{ cm}$						
	(E)	Answer not known								
89.	The ideal season for growing millets during purattasipatta during									
	(A)	September to October	(B)	January to March						
	(C)	June to July	(D)	March to April						
	(E)	Answer not known								

90.	At t	At the time of pudding water should be maintained at							
	(A)	5 cm	(B) 7.5 cm						
	(C)	$2.5~\mathrm{cm}$	(D) 3.5 cm						
	(E)	Answer not known							
91.		The following one is not coming under the business operations of National Seed Corporation (NSC)							
	(A)	(A) Production of Quality Seeds							
	(B)	Marketing of plan	ing material						
	(C)	Sale of biofertilizers							
	(D)	Expert of quality seeds							
	(E)	Answer not known							
92.	NATP stands for								
	(A)	National Agricultural Technology Project							
	(B)	(B) National Agricultural Transfer Project							
	(C)	C) National Agricultural Technology Programme							
	(D)	National Animal Technology Project							
	(E)	Answer not known							
93.	Wha		port of non-basmati rice from India during						
	(A)	27,522 crores	(B) 47,524 crores						
	(C)	37,804.42 crores	(D) 67,247 crores						
	(E)	Answer not known							

94.	The percentage of Gross sown area of Tamil Nadu for the ye 22-23 is								
	(A)	48%	(B) 45%						
	(C)	38%	(D) 41%						
	(E)	Answer not known							
95.		What is the productivity level of sugarcane in Tamil Nadu during 2022-23?							
	(A)	111 metric tonnes/ha	(B) 107 metric tonnes/ha						
	(C)	78 metric tonnes/ha	(D) 98 metric tonnes/ha						
	(E)	Answer not known							
96.	The	average Irrigation intensity of	Tamil Nadu in 2022-23 is						
	(A)	1.32	(B) 0.90						
	(C)	1.82	(D) 1.75						
	(E)	Answer not known							
97.	Per hectare productivity of rice in Tamil Nadu during 2011 was								
	(A)	$2800~\mathrm{Kgs}$	(B) 3200 Kgs						
	(C)	$3540~\mathrm{Kgs}$	(D) 3918 Kgs						
	(E)	Answer not known							

98.	the	The first step towards science - based development of agriculture in the country date back to when Imperial Bacteriological Laboratory was established at Pune.						
	(A)	1889	(B)	1839				
	(C)	1879	(D)	1859				
	(E)	Answer not known						
99.	The Growth percentage share of agriculture and allied sectors in the year 2022-23							
	(A)	4.3%	(B)	3.3%				
	(C)	8.00%	(D)	5.7%				
	(E)	Answer not known						
100. The rate of insurance premium charges payable bunder PMFBY for food and oil seeds crop for Kharif see								
	(A)	2.0%	(B)	1.5%				
	, ,	5.0%	` /	2.5%				
	(E)	Answer not known	` ′					
101.	Whic	ch of the following statements a	re co	orrect regarding ATMA?				
	(1)	ATMA is a state level registered body						
	(2)	SREPs are prepared at block level						
	(3)	SAMETI is a state level traini						
	(4)	Farmer Friends are coordinati	_					
	(A)	(1) and (2)	(B)	(2) and (3)				
	(C)	(3) and (4)	` '	(2) and (4)				
	(E)	Answer not known	` /					
	` /							

102.	. Lab to land programme was Launched by					
	(A)	Ministry of Science and Techn	nology			
	(B)	Indian Council of Agr./Resear	rch (ICAR)			
	(C)	Department of Biotechnology	,			
	(D)	National innovation foundation	on			
	(E)	Answer not known				
103	Thir	u C Narayanasamy Naidu	u Award given to farmers by			
100.		ernment of Tamil Nadu for the	ne highest productivity of			
	(A)	Ragi	(B) Paddy			
	(C)	Sugarcane	(D) Cotton			
	(E)	Answer not known				
104.	Arra	nging the degrees of Evaluation	on in correct order :			
	(1)	Extension studies				
	(2)	Self-checking evaluations				
	(3)	Casual every day evaluations	3			
	(4)	Do-it-Yourself evaluations				
	(A)	(2), (3), (1), (4)	(B) (3), (2), (4), (1)			
	(C)	(4), (3), (2), (1)	(D) (3), (1), (4), (2)			
	(E)	Answer not known				
105		is an outling of activities s	so arranged as to enable efficient			
100.		ution of the entire programme.				
	(A)	Calender of work	(B) Plan of work			
	(C)	Plan of activities	(D) Project			
	(E)	Answer not known				
491-A	gricu	lture 30				

106.	is the pattern of learned behaviour shared by the members of a society.						
	(A)	Caste	(B)	Taboos			
	(C)	Culture	(D)	Customs			
	(E)	Answer not known					
107.	Basic	c unit of society					
	(A)	Religion	(B)	Government			
	` ,	_	(D)	Economy			
	(E)	Answer not known		·			
108.	SMC	RE model of communication wa	as gi	ven by			
	(A)	Shanon-Weaver	(B)	Rogers and Shoe maker			
	(C)	Schramm	` ′	Aristotle			
	(E)	Answer not known					
109.	Kisa	nsuvidha app developed by					
	(A)	IARI – New Delhi					
	(B)	CICR – Nagpur					
	(C)	Department of Agriculture and	d Co	operation			
	(D)	ICAR – New Delhi		•			
	(E)	Answer not known					
110.	Grow	v More Food (GMF) Campaign v	was	launched in India during			
	(A)	1947	(B)	1957			
	(C)	1967	(D)	1977			
	(E) Answer not known						

111.	Mat			foll	owing	rural	develop	men	nt programme	with	its
		Rui	ral D	evel	opment	progra	mme		Initiator		
	(a)				t Projec			1.	Spencer Hatch	L	
	(b)	Gu	rgaor	Ex	perime	nt		2.	S. K. Dey		
	(c)	Ma	rthar	ndan	n Proje	$\operatorname{ct}$		3.	F. L. Brayne		
	(d)	Nil	okhe	ri Pr	roject			4.	Albert mayer		
		(a)	(b	)	(c)	(d)					
	(A)	(4)	(1	.)	(3)	(2)					
	(B)	(4)	(2	2)	(1)	(3)					
	(C)	(4)	(3	3)	(1)	(2)					
	(D)	(3)	(4	<u>.</u> )	(2)	(1)					
	(E)	Ans	swer	not l	known						
112.		ne following point was discussed in the World Summit on th formation Society (WSIS) held in 2003 in Geneva?				the					
	(A)	SI	HGs								
	(B)		POs								
	(C)			vital	for Wo	omen's l	Empowei	rme	nt		
	(D)						oowerme				
	(E)				knowr	_	50 W C1 111C	110			
	(12)	7 11	.16 W C	1100	KIIOWI	.1					
113.	The	sta	ge of	adoj	ption w	here in	group di	scu	ssion is most ef	fective	
	(A)	Av	warei	ness			(B)	Ev	aluation		
	(C)	Tr	rial				(D)	Pe	rsuasion		
	(E)	Aı	nswei	r not	knowr	ı	` ,				
	` /										

114.		In which of the following is the Experimentation of innovation on a limited basis?						
	(A)	Relative advantage	(B) Compatibility					
	(C)	Complexity	(D) Trialability					
	(E)	Answer not known						
115.	It is	a sample which represents the	whole					
	(A)	Diorama	(B) Model					
	(C)	Specimen	(D) None of the above					
	(E)	Answer not known						
116.	It is a single printed sheet of paper of small size, containing preliminary information relating to a topic							
	(A)	Folder	(B) News letter					
	(C)	Leaflet	(D) Booklet					
	(E)	Answer not known						
117.	Identify the false statement related to revamped public distribution system							
	(A)	A) Launched in the year 1992 in selected blocks of drought prone, tribal and hilly areas						
	(B)	Items are delivered by the Government directly to fair price shops						
	(C)	No vigilance committee for a v	vatch on the distribution system					
	(D)	Initially operated in 1775 bloc	ks					
	(E)	Answer not known						

118.		hich five year plan that provided large out lay for development of rge irrigation projects and soil conservation programmes							
(A) Second (1956-61) (B) Third (1961-66)									
	(C)	Fifth (1974-79)	(D)	Seventh (1985-90)					
	(E)	Answer not known							
119.	PDS	stands for							
	(A)	Private Distribution System							
	(B)	Public Direct Sale							
	(C)	Panchayat Distribution System	n						
	(D)	Public Distribution System							
	(E)	Answer not known							
120.	Worl	rld Trade Organization (WTO) was established in the year							
	(A)	1991	(B)	2001					
	(C)	1995	(D)	1998					
	(E)	Answer not known							
121.	What	t is the role of FCI with regard	is bu	uffer stock operations?					
	(i)	To purchase food grains from	surp	lus – producing regions					
	(ii)	To release the buffer stock to	he I	PDS to ensure food security					
	(iii)	RBI provides buffer stock fina	ncin	g facility					
	(A)	(i) only							
	(B)	(i) and (ii) only							
	(C)	(ii) and (iii) only							
	(D)	(i) and (iii) only							
	(E)	Answer not known							

## 122. UPOV refers to

- (A) Union for Protection of Plants
- (B) The International Union for the Protection of New Varieties of Plants

1. Pune

2. Cochin

3. Allepey

4. Delhi

- (C) The National Union for New Varieties
- (D) The International Union for New Varieties
- (E) Answer not known

123. Match the following boards and head quarters correctly:

- (a) Spices Board
- (a) Spices Doard
- (b) Coir Board
- (c) National Meat and Poultry Processing Board
- (d) Indian Grape Processing Board
  - (a) (b) (c) (d)
- (A) (2) (1) (4) (3)
- (B) (2) (3) (4) (1)
- (C) (3) (2) (1) (4)
- (D) (3) (1) (2) (4)
- (E) Answer not known

124.	Which of the following is incorrectly paired?								
	(1) FPO – Farmer Producer Organization								
	(2) SFAC – Small Farmer's Agri-Business consortium								
	(3) CBBO – Cluster Based Business Organizations								
	(4)								
	(A)								
	(B)								
	(C)								
	(D)								
	(E)								
125.	125. An example for Green box subsidies in Agreement an Agrico (AoA)								
	(A)	MSP			(B)	Research funding			
	(C)	Tarrification	n		(D)	disease control			
	(E)	Answer not	kn	own					
100	/III	C	1	L	4				
126.		e first state warehouse was setup in							
	(A)	Tamil Nadu	1		` '	Uttar Pradesh			
	(C)	Karnataka			(D)	Bihar			
	(E)	Answer not	kn	own					
127.	The warehousing Development and Regulation Act was enacted in the year								
	(A)	2007			(B)	2002			
	(C)	2005			(D)	2010			
	(E)	Answer not	kn	own					
491-A	Agricu	lture		;	36				

128.	Which	of the	follo	wing	statements	are	true	about	grading

- (i) Decentralized grading system for fruits, do not require elaborate testing arrangements for quality assessment
- (ii) Grading for internal trade is voluntary
- (iii) For inspection of goods, samples of the product are drawn from the market middleman only
- (A) (i) only
- (B) (i) and (iii) only
- (C) (i) and (ii) only
- (D) (ii) and (iii) only
- (E) Answer not known
- 129. At every stage of the marketing channel, one or other form of value is added to the product and hence it is called as
  - (A) Supply chain

(B) Value chain

(C) Marketing channel

(D) Processing

- (E) Answer not known
- 130. Which of the following statements are true about NAFED.
  - (i) To promote interstate and international trade in agricultural commodities
  - (ii) To act as an agent of the government for the purchase and distribution of agricultural products
  - (iii) To resolve disputes in trade among the countries
  - (A) (i) only
  - (B) (i) and (ii) only
  - (C) (i) and (iii) only
  - (D) (ii) and (iii) only
  - (E) Answer not known

131.	Mat	tch di	fferent	mark	ets co	rrectly with the corresponding stages:			
	(a) First stage		1.	Dealing with samples					
	(b)	, ,		2.	Dealing with grades				
	(c)			3.	Specialized markets				
	(d)			4.	General markets				
		(a)	(b)	(c)	(d)				
	(A)	2	1	4	3				
	(B)	2	4	1	3				
	(C)	3	1	4	2				
	(D)	4	3	1	2				
	(E)	(E) Answer not known			wn				
120	Тио	ding	toobnie	on of t	tronaf	Gerring the future price risk is called as			
104.									
	(A)		dging		1	(B) Speculation			
	(C)	Legitimate speculat				n (D) Illegitimate speculation			
	(E)	Ans	swer no	ot knov	wn				
133.	The presence of a new firm in the market, producing either a homogenous product or products which are close but not perfect substitutes to each other is known as								
	(A)	Mo	nopoly			(B) Oligopoly			
	(C)	Du	opoly			(D) Oligopsony			
	(E)		swer no	ot knov	wn				
134.	A specialised market complex for turmeric is available in the distriction								
	(A)	Erc	ode			(B) Namakkal			
	(C)	Ma	durai			(D) Coimbatore			
	(E)	Ans	swer no	ot knov	wn				
491-A	Agric	ultur	e			38			

	(a) Terminal markets					1.	Mae	chinery markets	
	(b)	Secu	ılar ma	rkets		2.	Sh	are markets	
	(c)	Capi	ital ma	rkets		3.	Sea ports		
	(d)	Spec	alized	l mark	et	4.	Co	tton markets	
		(a)	(b)	(c)	(d)				
	(A)	4	1	2	3				
	(B)	3	1	2	4				
	(C)	2	3	1	4				
	(D)	2	1	4	3				
	(E)	Ans	swer no	ot knov	wn				
136.	by		extent		_			nodities are governed m than by the supply of	•
136.	by com	the e imodi	extent	of den	nand	for, 1	rather	_	•
136.	by com	the e modi Lor	extent ty	of der	nand ket	for, 1	rather (B)	than by the supply of	•
136.	by com	the e nmodi Lor Sho	extent ty ng peri	of der	nand ket rket	for, 1	rather (B)	than by the supply of Periodic market	•
	by com (A) (C) (E)	the e nmodi Lor Sho Ans	extent ty ng perio ort peri	of den od mar iod ma ot knov	nand eket rket wn	for, 1	rather (B) (D)	than by the supply of Periodic market	•
137.	by com (A) (C) (E)	the enmodi Lor Sho Ans	extent ty ng perio ort peri swer no	of denoted man	nand eket rket wn	for, 1	rather (B) (D)	than by the supply of Periodic market	•
137.	by com (A) (C) (E)	the enmodi Lor Sho Ans BARI	extent ty ng perio ort perio swer no	of denoted market known into each	nand eket rket wn	for, 1	rather (B) (D) ring (B)	than by the supply of Periodic market Secular market	•

138.	Mat	tch th	e follo	wing co	orrectly:						
	(a)				f banks	1.	1955				
	(b)	Impe	erial ba	anks		2.	1935				
	(c)	RBI				3.	1921				
	(d)	SBI				4.	1969				
		(a)	(b)	(c)	(d)						
	(A)	2	1	4	3						
	(B)	4	3	2	1						
	(C)	2	4	3	1						
	(D)	3	2	4	1						
	(E)	Ans	swer n	ot knov	vn						
139.	Ass	ertion	n [A]	:	have a	rpose of in n institut anding of rity	tional age	ency w	vith clear		
	Rea	ison []	R]	:	RRBs commen	are sp cial banks	onsored	by	scheduled		
	(A)	[A]	is true	but [F	l] is false						
	(B)		Both [A] and [R] are true, but [R] is not correct explanation								
	(C)		[A] is false, [R] is true								
	(D)										
	(E)	[A] and [R] are false Answer not known									
	(12)	Alle	wei ii	JU KIIOV	V 11						
140.			nong t		owing rati	os reflects	the exten	t of ind	ebtedness		
	(A)	Acie	d test	ratio		(B) G	ross ratio				
	(C)	Ope	erating	; ratio		(D) L	everage ra	atio			
	(E)	_	_	ot knov	vn	` '	<i>G</i> -				
	()				· <del></del>						

	(A)	One tier structure	(B)	Two tier structure						
	(C)	Three tier structure	(D)	Four tier structure						
	(E)	Answer not known								
142.		farm business organisation in their lands, resources and culti								
	(A)	Peasant farming	(B)	Capitalistic farming						
	(C)	Cooperative farming	(D)	Collective farming						
	(E)	Answer not known								
143.	The f	financial risk in agriculture is d	lue t	50						
	(A)	Changes in production costs								
	(B)	Rise in temperature								
	(C)	Price fluctuation								
	(D)	Changes is fiscal policies of RI	3I							
	(E)	Answer not known								
144.	Which of the following repayment plan is also called as Balloon repayment plan?									
	(A)	Amortized decreasing repayme	ent j	olan						
	(B)	Variable repayment plan								
	(C)	Amortized even repayment pla	ın							
	(D)	Partial repayment plan								
	(E)	Answer not known								

141. Under single window system, cooperative credit is under

- 145. Arrange the following procedural formalities in sanction of farm loans.
  - (1) Scrutiny of records
  - (2) Recovery of loan
  - (3) Interview with the farmer
  - (4) Sanction of loan
  - (A) (4) (3) (2) (1)

(B) (2) (3) (1) (4)

(C) (3) (1) (4) (2)

- (D) (1) (2) (4) (3)
- (E) Answer not known
- 146. Among the discounted methods of investment analysis, which one is known as marginal efficiency of capital or yield on the investment.
  - (A) BCR-Benefit Cost Ratio
  - (B) NPV-Net Present Value
  - (C) Profitability Index
  - (D) IRR-Internal Rate of Return
  - (E) Answer not known
- 147. Profit maximizing level is one when?
  - (A) Marginal revenue is greater than Marginal cost
  - (B) Marginal revenue is equal to Marginal cost
  - (C) Average revenue is equal to Marginal revenue
  - (D) Marginal revenue is lesser than Marginal cost
  - (E) Answer not known

148.	In a	production function, when Mpp	) is z	ero TPP is							
	(A)	Increasing at increasing rate									
	(B)	Increases at decreasing rate									
	(C)	) Maximum									
	(D)	Decreases									
	(E)	Answer not known									
149.	Which of the following is the derivative of total cost with respect to output?										
	(A)	Marginal Revenue	(B)	Average cost							
	(C)	Marginal cost	(D)	Variable cost							
	(E)	Answer not known									
150.	The additional income obtained from producing one more unit of output is called										
	(A)	Average Revenue	(B)	Marginal Revenue							
	(C)	Profit	(D)	Opportunity cost							
	(E)	Answer not known									
151.	. A line which defines all possible combination of two produc would yield same revenue is called as										
	(A)	Iso-revenue line	(B)	Iso-cost line							
	(C)	Iso-cline	(D)	Iso-quant							
	(E)	Answer not known									

- 152. Under which system of farming ownership is individual and operatorship is collective?
  - (A) Cooperative collective farming
  - (B) Cooperative tenant farming
  - (C) Cooperative better farming
  - (D) Cooperative joint farming
  - (E) Answer not known
- 153. The present value of a given income in a future year is also known as
  - (A) comparative advantage
  - (B) compounding
  - (C) discounting
  - (D) time value of money
  - (E) Answer not known
- 154. The principle of factor substitution deals with important operational management decision of
  - (A) How much to produce
  - (B) How to produce
  - (C) What to produce
  - (D) Where to produce
  - (E) Answer not known

- 155. Identify the following one that is not true
  - (A)  $MPP = \frac{P_x}{P_y}$
  - (B) MC = MR
  - (C)  $\frac{\Delta X_1}{\Delta X_2} = \frac{P_{X_1}}{P_{X_2}}$
  - (D)  $\Delta Y.P_y = \Delta X.P_X$
  - (E) Answer not known
- 156. The type of ownership is collective and that of operatorship is individual in the case of
  - (A) Cooperative Tenant farming
  - (B) Cooperative Joint farming
  - (C) Cooperative Better farming
  - (D) Cooperative Collective farming
  - (E) Answer not known
- 157. Application of volatile chemicals into the soil to produce gas that will destroy weed is called as
  - (A) Fumigation

(B) Herbigation

(C) Fertigation

- (D) Irrigation
- (E) Answer not known
- 158. Atrazine is
  - (A) Pre-emergence herbicide
- (B) Insecticide

(C) Fungicide

- (D) Nematicide
- (E) Answer not known

159.	_	r cane pyrilla is biologically controlled by the release of a site named
	(A)	<u>Isotima</u> <u>Javensis</u>
	(B)	Epiricania melanoleuca
	(C)	Trichogramma chilonis
	(D)	Bracon brevicornis

160. Treating the seffs of sugarcane with aerated steam therapy at 50°C for 1 hour reduces.

(A) Red rot(B) Smut(C) Sett rot(D) Welt

(E) Answer not known

Answer not known

(E)

161. Foliar spraying with azoxystrobin 16.7 % + tricyclazole 33.3 % sc @ 500 ml/ha. reduces

- (A) Blast, brown spot and sheath blight
- (B) Blast, brown spot and sheath rot
- (C) Blast, sheath blight and sheath rot
- (D) Brown spot, sheath blight and sheath rot
- (E) Answer not known

162.	Mat	Match correctly the fungicides with their mode of action.							
	(a)	Metalaxyl			1.	Respiration			
	(b)		ystrobi	n	2.	Melonin biosynthesis			
	(c)		ıgamyc		3.	RNA synthesis			
	(d)		iconazo		4.	Protein synthesis			
	` ,	•				į.			
		(a)	(b)	(c)	(d)				
	(A)	(4)	(3)	(2)	(1)				
	(B)	(3)	(1)		(2)				
	(C)	(3)	(1)	(2)	(4)				
	(D)		(3)	(4)	(1)				
	(E)	Ans	swer no	t know	/n				
163.	Fine	d the	odd one	e from	the fo	ollowing			
	(A)	Trif	loxystr	obin		(B) Fludioxonil			
	(C)	Pyn	netrozi	ne		(D) Prochlora 2			
	(E)	Ans	wer no	t know	'n				
164.	The	scien	tific na	me of	Rice v	weevil is			
	(A)	Sito	philus	oryza	$\underline{\mathbf{L}}$	(B) Rhizopertha dominica			
	(C)	Sito	triga c	erellell	l <u>a</u>	(D) <u>Tribolium castaneum</u>			
	(E)		wer no			· · · ·			
	` /								

165.	The 1	the alkaloids								
	(1)	Nicotine and Narnicotine								
	(2)	2) Nicotine								
	(3)	) Nicotine and Anabasin								
	(4)	Anabasin								
	(A)	(1) only correct	(B)	(1) and (4) are correct						
	(C)	(2) and (4) are correct	(D)	(1) and (2) are correct						
	(E)	) Answer not known								
166.		gold crop is used as antagonis by releasing the following root	-							
	(A)	lpha -Bithenyl compounds	(B)	$\beta$ -Terthinyl compounds						
	(C)	lpha -Terthinyl compounds	(D)	Allyl isothiocyanates						
	(E)	Answer not known								
167.	Whic	ch of the following is incorrectly	pai	red?						
	(1)	Pine apple wilt – Mealy bug								
	(2)	Papaya ring spot – Aphids								
	(3)	Cassava Mosaic – White fly								
	(4)	Tomato leaf curl – Thrips								
	(A)	(1), (3) and (4) are correct	(B)	(2), (3) and (4) are correct						
	(C)	(1), (2) and (4) are correct	(D)	(1), (2) and (3) are correct						
	(E)	) Answer not known								

168.	Find	at the odd pair among the following								
	(A)	Coconut lethal yellowing – sugarcane grassy shoot								
	(B)	Sesame phyllody – Brinjal little leaf								
	(C)	Citrus greening – Citrus tristeza								
	(D)	Rice bakanae – Rice dirty panicle								
	(E)	Answer not known								
169.	Golden nematode of potato is endemic in									
	(A)	Darjeeling	(B) Kodaikanal							
	(C)	Shimla	(D) Nilgiris							
	(E)	Answer not known								
170.	Whic	ch among the following abiotic o	lisorder to due is air pollutant?							
	(A)	Green netting of citrus								
	(B)	Marginal drying of Banana								
	(C)	Black Tip of Mango								
	(D)	Hen and Chicken disease of grapevine								
	(E)	Answer not known								
171.		specific a type of parasitism peking scale insects and whiteflie	present in the <u>Encarsia formosa</u> es is							
	(A)	Superparasitism	(B) Hyperparasitism							
	(C)	Adelphoparasitism	(D) Simple parasitism							
	(E)	Answer not known								

172.	Which one of the following is an effective pollinator in nature?										
	(A)	Honeybees		(B) Syrphids							
	(C)	Bumble bees		(D) Black ants							
	(E)	Answer not known									
173.	The proportion of warfarin with bait material for rat management is										
	(A)	1:50		(B) 1:99							
	(C)	1:95		(D) 1:49							
	(E)	Answer not known									
174.		ch one of the following is alator (IGR) action?	s for	und to have an Insect Growth							
	(A)	Buprofezin		(B) Imidacloprid							
	(C)	Fipronil		(D) Chlorantraniliprole							
	(E)	Answer not known									
175.	Which of the insects and the causal symptom is incorrectly paired?										
	(1)	Paddy yellow stem borer	_	White ear							
	(2)	Brinjal Epilachna beetle	_	Leaf galls							
	(3)	Mango Gall midge	_	Skeletonization							
	(4)	Pepper pollu beetle	_	Pollu berries Berries crumble when pressed							
	(A)	(1) and (2) are correct		(B) (2) and (3) are correct							
	(C)	(3) and (4) are correct		(D) (1) and (4) are correct							
	(E)	Answer not known									

o) c)	Occa Spor	onal po Isional		1.				
2)	Spor		nagre	9	Leptocorisa acuta Amsacta albistriga			
•	_	eadic no	_		Rice case worm (Nymphula depunctalis)			
<i>1)</i>	$\mathbf{H}$ $\mathbf{n}$ $\mathbf{n}$	emic pe			Holotrichia consanguinea			
	Ella	emic po	2010	4.	11010tricina consangumea			
	(a)	(b)	(c)	(d)				
A)	3	2	4	1				
B)	1	2	3	4				
C)	2		1	4				
D)	3	2	1	4				
E)	Ans	swer no	t know	vn				
Coot	exu	dation	of mai	ze inł	nibits the growth of			
<b>A</b> )	Сур	perus r	otundı	ıs				
B)	Am	aranth	nus sp.					
C)	Che	enopod	ium al	bum				
D)	Eic	hhorni	a crass	sipes				
E)	<del>-</del>							
Vhi	ch or	ne of th	e follo	wing i	insect pest is called as Indigo caterpillar?			
A)	Ear	rias fab	oia		(B) <u>Spodoptera exeigua</u>			
C)	Ute	etheisa	pulche	<u>ella</u>	(D) <u>Sylepta derogata</u>			
E)	Ans	swer no	ot knov	vn	· /			
,								
	(C) (D) (D) (D) (A) (D) (Thi	C) 2 D) 3 E) Ans coot exu A) Cyp B) Am C) Che C) Eic E) Ans Thich or A) Ear C) Ute	C) 2 3 D) 3 2 E) Answer not coot exudation A) Cyperus r B) Amaranth C) Chenopod D) Eichhorni E) Answer not cook cook exudation Thich one of the cook of the cook exudation Thich one of the cook exudation Thick one of the cook exudation exuda	C) 2 3 1 D) 3 2 1 E) Answer not know oot exudation of mai A) Cyperus rotundu B) Amaranthus sp. C) Chenopodium al D) Eichhornia crass E) Answer not know on the follow A) Earias fabia C) Utetheisa pulcher	C) 2 3 1 4 D) 3 2 1 4 E) Answer not known  oot exudation of maize inh A) Cyperus rotundus B) Amaranthus sp. C) Chenopodium album D) Eichhornia crassipes E) Answer not known  Thich one of the following inh A) Earias fabia C) Utetheisa pulchella			

179.			oulation dynamics of pests, it at fixed intervals is referred as								
	(A)	Population assessment	(B) Pest surveillance								
	(C)	Pest forecasting	(D) Pest outbreak								
	(E)	Answer not known									
180.	Bronzing symptoms appearing on leaves are caused by										
	(A)	Rice BPH	(B) Rice GLH								
	(C)	Cotton leaf hopper	(D) Rice earhead bug								
	(E)	Answer not known									
181.	Whic	ch of the following is <u>incorrectly</u>	paired?								
	(A)	Roll mill – Difference in texture of seed coat									
	(B)	Magnetic separator – Degree of its ability to roll									
	(C)	Inclined draper – shape and surface texture of seed									
	(D)	Spiral separator – shape or degree of its ability to roll									
	(E)	Answer not known									
182.	Which of the following in considered is the basis seed - cleani machine in seed processing units?										
	(A)	Air screen machine	(B) Spiral separator								
	(C)	Length separator	(D) Gravity separator								
	(E)	Answer not known									

	(A)	Soaking - Drying		(B)	Dipping - Drying						
	(C)	Spraying - Drying		(D)	Moisture equilibration						
	(E)	Answer not known									
184.	Which among the following is the most ideal container for see storage in high humidity locations with inadequate seed storag facilities?										
	(A)	Gunny bags									
	(B)	Polythene bags of <	< 700	gauge thic	ekness						
	(C)	Rigid plastic contai	iners								
	(D)	Cloth bags									
	(E)	Answer not known									
185.	Which of the following is incorrectly paired?										
	(1)	Phenol test	_	Varietal id	dentification						
	(2)	Electrophoresis	_	Seed viab	ility testing						
	(3)	TZ test	_	Varietal id	dentification						
	(4)	Peroxidase test	_	Varietal id	dentification						
	(A)	(1) and (2)									
	(B)	(2) and (3)									
	(C)	(3) and (4)									
	(D)	(1) and (4)									
	(E)	Answer not known									

183. Which of the following seed invigouration method is ideal for seeds

of soaking injury prove crops?

- 186. Which of the following statements are true about seed sampling devices?
  - (1) The Nobbe Trier is suitable for sampling seed in bulk but not in bags
  - (2) The stick/sleeve trier is used for sampling seed in both bulk and bags
  - (3) Sampling of seed lots from bins is done by bin sampler
  - (4) Hand sampling is the most satisfactory method for sampling free-flowing seeds
  - (A) (1) only
  - (B) (1) and (2) only
  - (C) (2) and (3) only
  - (D) (1) and (4) only
  - (E) Answer not known
- 187. Which of the following is correctly paired?
  - (1) Ferric chloride test Mechanical damage
  - (2) Brick gravel test Seed viability
  - (3) Excised embryo test Seed vigour
  - (4) Tetrazolium test Quick viability
  - (A) (1) and (2) are correct
  - (B) (1) and (3) are correct
  - (C) (1) and (4) are correct
  - (D) (2) and (4) are correct
  - (E) Answer not known

188.	The Garnet divider used for mixing and dividing of seed samples is also called as									
	(A) Boerner divider					(B) Centrifugal divider				
	(C) Soil divider					(D) Conical divider				
	(E)				'n					
189.	Match the seed processing machine with their principle of operation									
	(a) Disc separator				1.	Shape or degree of its ability to roll				
	(b)	<u>.</u>				Shape and size				
	(c)	Gravity separator			3.	Difference in texture of seed coat				
	(d)	Spiral separator			4.	Floatation principle				
		(a)	(b)	(c)	(d)					
	(A)	3	4	1	2					
	(B)	2	3	4	1					
	(C)	1	4	2	3					
	(D)	4	2	3	1					
	(E) Answer not known									
190.	Assertion [A]: In hybrid seed production, the seed producer can use proper Chemical Hybridising Agents (CHAs) in order to induce male sterility.									
	ap (C. ou					hybrid seed produced through the ation of chemical hybridising agent shall be compulsorily subjected to grow est as a prerequisite for grant of cate.				
	(A)	[A]	is true	but [R]						
	(B)									
	(C)									
	(D)									

[A] is correct

Answer not known

(E)

- 191. Which among the following is not a field standard to be verified by the seed certification officer during field impection?
  - (A) Isolation

(B) Land requirements

(C) Seed germination

(D) Off types

- (E) Answer not known
- 192. Choose the right matches among type:
  - (1) CSCB Central Seed Certification Bureau
  - (2) SSCA State Seed Certification Agency
  - (3) CSTL Central Seed Testing Lab
  - (4) CHA Chemical Hybridizing Agency
  - (A) (1) and (2) are correct
  - (B) (2) and (4) are correct
  - (C) (1) and (3) are correct
  - (D) (2) and (3) are correct
  - (E) Answer not known
- 193. Unwanted plants growing from residual seeds of previous crops remaining in the field are referred as
  - (A) Inseparable other crop plants
  - (B) Volunteer plants
  - (C) Weed plants
  - (D) Designated plants
  - (E) Answer not known

## 194. Given below are the two statements:

Statement I : The validity period of seed certification tag shall

be 9 months from the date of test at the time of

initial certification.

Statement II : The extension of validity period of certified seeds

shall be for a period of 4 months.

Choose the most appropriate answer from the options given below:

(A) Both Statement I and Statement II are true

- (B) Statement I is true and Statement II is false
- (C) Statement II is true and Statement I is false
- (D) Both Statement I and Statement II are false
- (E) Answer not known

## 195. Which of the following statements are true about seed lot size?

- (i) A seed lot would represent any quantity of agricultural seeds upto a maximum of 20,000 kg for seeds of the size of rice or wheat.
- (ii) A seed lot would represent any quantity of agricultural seeds upto a maximum of 10,000 kg for seeds smaller then rice.
- (iii) A seed lot would represent any quantity of agricultural seeds upto a maximum of 30,000 kg for maize.
- (A) (i) only
- (B) (i) and (ii)
- (C) (ii) and (iii)
- (D) (i) and (iii)
- (E) Answer not known

196.	abun	A thick and massive structure made up of elongated cells containing abundant starch present in the mature seed and serves as food storage organ in monocot is referred as							
	(A)	Cotyledon	(B)	Endosperm					
	(C)	Embryo	(D)	Perisperm					
	(E)	Answer not known							
197.	Varieties being grown for seed production should periodically be tested for genetic purity by								
	(A)	Seed germination test	(B)	Seed vigour test					
	(C)	Seed viability test	(D)	Grow out test					
	(E)	Answer not known							
198.	Under which of the following condition five generation system of seed multiplication is followed:								
	(i)	) Seed multiplication ratio is very less							
	(ii)	Cross pollinated crop							
	(iii)								
	(iv)								
	(A)	(i) and (ii) only	(B)	(i) and (iii) only					
	(C)	(i) and (iv) only	(D)	(ii) and (iv) only					
	(E)	Answer not known							
199.		Breeder seed can be used for raising seed farm after expiry of validity period under seed certification programme upto							
	(A)	9 months	(B)	12 months					
	(C)	6 months	(D)	4 months					
	(E)	(E) Answer not known							

## 200. S.R.R. stands for

- (A) Seed Replacement Ratio
- (B) Seed Replacement Rate
- (C) Seed Renewal Ratio
- (D) Seed Reproduction Rate
- (E) Answer not known