# Master of Science – I (Agrochemical and Pest Management) Examination: Oct / Nov 2016 Semester – I (New CBCS)

	Плаш	mation			111Co			<u>''</u>	
SLR No	). I	Day & Date	Time	Subj	ect N	ame	Paper No.	Seat No.	
SLR – S - 01	P We 16/	dnesday 11/2016	10.30 AM to 01.00 PM	Chemistry o Their Fo	of Pes rmul	sticides and ation - I	HCT 1.1		
I :	Instructions : 1) All questions carry equal marks. : 2) All Sections are compulsory. 3) Attempt any two questions from Section – II and III 4) Figures to the right indicates full marks Total Marks:70								
<b>Q.1</b> 8 i)	elect mo Sulph a) c)	ost correct nonation c Electopl Nucleop	et alternative of benzene is a hilic addition philic addition	SECTION - from the follo example of	I owing b) d)	g (each carry Electrophili Nucleophili	<b>1 marks)</b> c substitution c substitution	14	
ii	) Whic a) c)	h of the formation $CH_3$ — $CH_3$ —	ollowing com CH <sub>3</sub> -C-Br CH <sub>3</sub> -Br	pound undergo	b) b) d)	$N^1 - reaction.$ $CH_3 - CH_1$ $B_1$ $C_6H_5 - B_1$	н —— СН <sub>3</sub> -		
ii	i) The p a) b)	product of α - hydr α - β -	`knoevenagel oxyl ketone Unsaturated a	reaction is	a) c)	$\beta$ – hydroxyl $\alpha$ – $\beta$ – Unsa	aldehyde aturated ketor	ne	
in O	<ul> <li>Aron</li> <li>potas</li> <li>a)</li> <li>c)</li> </ul>	natic aldel sium cyar Benzoir Derkins	hydes when u nide give α – a condensation condensation	ndergoes self o hydroxy ketor 1	conde ne. Th b) d)	ensation in pre his reaction is Aldol conde Knoevenage	esence sodiun known as ensation ed condensati	n on	
V	) Delta a) c)	metherin Chorine Iodine	contains		b) d)	Bromine Fluorin			
V	i) Nam Cl Cl a)	e the follo	owing Pyrethr	oid	b)	O Permethrin			
	c)	Deltame	etherin		d)	Alethrin			

	vii) Sulpi a) c)	hur is formulated in the form of Granules Smoke	b) d)	Dust Solution	
	viii) The a) c)	toxicity of pesticide can be graded by $LD - 10$ LD - 50	b) d)	LD – 40 None of these	
	ix) Azod a) c)	rin is trade name of Quinolphos Diaziaon	b) d)	Monocrotophos Phosalone	
	x) What a) c)	type of ring system is present in Diazi Pyrimidine Piperidine	non b) d)	Pyridine Pyrazolone	
	xi) Wetta a) c)	able powder contains Diluent Surface active agents	b) d)	Auxiliary Materials All the above	
	xii) Phos a) c)	phamidon is used as used as Systemic pesticide Herbicide	b) d)	Non-systemic pesticide Chemosterilant	
	xiii) Con a) c)	version of pinacol to pinacolone is Addition reaction Rearrangement reaction	b) d)	Elimination reaction Substitution reaction	
	xiv) Whi a)	ch of the following compound is used N – N – dimethyl benzamide	as ii b)	nsect attractant $N - N - dimethyl aniline$	
	c)	Aniline	d)	Acetamide	
	Attempt a	any two questions from this section.	L		
Q.2	a) What a	are pesticides? Discuss systemic and n	on-s	ystemic Pesticides.	07
-	b) Discus	ss knoevenagel reaction with mechanis	m.	-	07
03	a) Give s	vnthesis of Deltamethrin and Cynerme	othor	in	07
Q.J	b) Discus	ss synthesis and uses of Fenitrothion a	nd M	falathion	07
Q.4	a) Compl	lete the following reaction. Suggest month $\square$	echa	nism and name the reaction.	

$$+ CHCI_3 + 3KOH \xrightarrow{70°C} ?$$

- b) Describe the following pesticide formulations.
   i. Wettable powder
   ii. Emusifiable concentrate [EC]

ſ

07

#### **SECTION – III**

### Attempt any two questions from this section.

Q.5	a)	Discuss SN <sup>2</sup> reaction with mechanism and energy profile diagram.	05
	b)	What are insect attractant and repellents? Describe their mode of action.	05
	c)	Describe the use Neem plant extract for pest control.	04
Q.6	a)	Discuss the synthesis and uses of Chloropyriphos.	05
	b)	Complete the reaction and suggest the mechanism.	
		$(CHO + (CH_3CO)_2O \xrightarrow{CH_3COONA} ?$	
	c)	Give synthesis of Diazinon.	04
Q.7	a)	Discuss the synthesis and uses of Monocrophos and phorate.	05
	b)	Discuss Fridel-Craft reaction with mechanism.	05
	c)	Explain the aerosols and smoke formulation.	04

# Master of Science – I (Agrochemical and Pest Management) Examination: Oct / Nov 2016 Semester – I (New CBCS)

	Exa	mauv		ov 2010 Seme	SIC	I = I (I I I)		
SLR N	l <b>o.</b>	Day & Date	Time	Subject <b>N</b>	Nam	e	Paper No.	Seat No.
SLR – - 02	SP	Friday 8/11/2016	10.30 AM to 01.00 PM	Soil Science, Micronutrien growth Reg	Soil Science, Fertilizer Micronutrients & Plant growth Regulation			
	Instruc	tions:	<ol> <li>All quest</li> <li>All Section</li> <li>Attempt</li> <li>Figures t</li> </ol>	tions carry equal m ons are compulsor any two questions to the right indicat	nark y. fron es fu	s. n Section - ll marks	– II and I Total	II Marks:70
01	Soloot r	nost oorno	at altown ativ	SECTION - I	<b>σ</b> ( ο	aah aanna	1 manka)	1
Ų.1	Select I	nost corre	ct alternativ	e from the followin	ig (e	acii carry	1 marks)	14
	i) Ion	Exchange	takes place in	l				
	;	a) Sand			b)	Slit		
		c) Loan			d)	Colloids		
	ii) Wat	er holding	canacity of s	oil governed by				
	ii) wat	a) Type o	of soil	on governed by	b)	Organic 1	matter of	soil
		c) Colour	of soil		d)	Alkalinit	v of soil	5011
		,			,			
	iii)	is t	he byproduct	of steel industry.				
	;	a) Bone n	neal		b)	Basic sla	g	
		c) Blood	meal		d)	Guano m	eal	
	iv) Bre	eaking of s	eed dormancy	v is made by the tre	atme	nt of		
		a) Gibber	ellic acid	, 15 111000 0 5 010 0 0	b	) Auxin		
		c) Cytoki	nin		d	) Ethylene	e	
	`		• 4 1					
	v)	a) Phizoh	s associated w	ith root nodule of I	egun	ninous piar	nt.	
		c) Bacillu	IS		d)	E Coii		
		c) Duenie			ч)	L. con		
	vi) An	rangement	of soil particl	les in referred as		<u></u> _		
	:	a) Soil tex	xture	b)	Soi	l Mass		
		c) Soil sti	ructure	d)	Soi	l organs		
	vii) Ca	alcium Cva	namid contai	ns %r	itros	ven		
	(11) 00	a) 22			b)	21		
		c) 31			d)	41		
	••••		• 1					
	V111)	a) GA	_ is a growth i	etardant.	<b>b</b> )			
		a) UA c) Cvtoki	nin		(U - d)	ADA IAA		
		Cytoki			u)	11 11 1		
	ix) N	N:P:K (10:2	26:26) is a	fertilizer.				
	;	a) Only P	otassic		b)	Complex		
		c) Only n	itrogenous		d)	Only Pho	osphatic	

	<ul> <li>x) Chemical composition of single super phosp</li> <li>a) Ca(PO<sub>4</sub>)<sub>2</sub></li> <li>c) [3Ca (CH<sub>2</sub>PO<sub>4</sub>)<sub>2</sub> H<sub>2</sub>O]</li> </ul>	b) [Ca (H <sub>2</sub> PO <sub>4</sub> ) <sub>2</sub> H <sub>2</sub> O] d) [2Ca (CH <sub>2</sub> PO <sub>4</sub> ) <sub>2</sub> H <sub>2</sub> O]	
	<ul> <li>xi) pH of Regular soil varies from</li></ul>	b) 7.5 to 8.5 d) 6.0 to 7.0	
	<ul> <li>xii) Biogas is composed of</li> <li>a) Ethane &amp; CO<sub>2</sub></li> <li>c) Butane &amp; CO<sub>2</sub></li> </ul>	<ul><li>b) Methane &amp; CO<sub>2</sub></li><li>d) Isobutane &amp; CO<sub>2</sub></li></ul>	
	<ul> <li>xiii) is obtained from the waster</li> <li>a) Bone meal</li> <li>c) Oil Cake</li> </ul>	<ul><li>products of slaughter house.</li><li>b) Fish meal</li><li>d) Guano meal</li></ul>	
	xiv) microelement takes part in	the synthesis of Chlorophyll	
	pigment. a) Fe c) B	b) Mo d) Cl	
	SECTION	- II	
0,2	Attempt any two questions from this section.	ios of soil	07
Q.2	<ul><li>b) Describe the functions of various componer</li></ul>	its of soil.	07
Q.3	<ul><li>a) What are fertilizers? Describe the manufact</li><li>b) Write a note on specifications of grades of a</li></ul>	ure of Urea. Immonium phosphate.	07 07
Q.4	<ul><li>a) What are the practical applications of Gibbe</li><li>b) Write in brief Role of Cytokinin.</li></ul>	rellic acid?	07 07
	SECTION	( – III	
Q.5	<ul><li>Attempt any two questions from this section.</li><li>a) Use of Auxins in agriculture.</li><li>b) What are plant growth hormones?</li><li>c) What are the micronutrients?</li></ul>		05 05 04
Q.6	<ul><li>a) Classification of fertilizers.</li><li>b) Buffering capacity of soil.</li><li>c) Bangalore method of composting.</li></ul>		05 05 04
Q.7	<ul><li>a) Describe the role of Mn &amp; Mo.</li><li>b) Factors influencing the availability of micro</li><li>c) Write a short note on FYM.</li></ul>	nutrients.	05 05 04

## Master of Science – I (Introduction & Industrial Entomology) Examination: Oct/Nov 2016 Semester – I (New CBCS)

	Exa	mination		<u>2010 Seme</u>	:51	$\frac{1}{1} - \frac{1}{1}$	ew CBC	<u>)</u>		
SLR N	0.	Day & Date	Time	Subjec	t Na	ame	Paper No.	Seat No.		
SLR – S 03	5 <b>P</b> –	Monday 21/11/2016	10:30 AM to 01:00 PM	Introduc Industrial I	tor Ent	y and omology	НСТ 1.3			
Instructions:1) All Sections are compulsory.2) All questions carry equal marks.3) Solve any two questions from section II4) Solve any two questions from section IIITotal Marks: 70										
				SECTION	I					
Q.1 A	<ul> <li>A) C</li> <li>1)</li> <li>2)</li> <li>3)</li> <li>4)</li> <li>5)</li> </ul>	hoose the con Life cycle ( a) holome c) comple Elytra is the a) orthopte c) hemipte Filliform an a) Dragon c) Cockro Piercing an a) Female c) Bud fly Cursorial ty a) Ground	rrect answer of insect comp tabolus te e wing modifie era era ntance is found fly ach d sucking type mosquito	from options g leted within fo cation of d in e of mouth part	give ur s b) d) b) d) b) d) c b) d) c b) d) b) d) c b) b) d) c b) c b) c b) c b) c b) c b) c c c c c c c c c c c c c	n below. tages is cal hemimetal none of th  coleoptera dipteral Termite none of th und in Till hawk Gall fly	led bolus e above n e above  moth		14	
	6) 7) 8)	<ul> <li>c) Cotton</li> <li>The scienti</li> <li>a) <i>Helicov</i></li> <li>c) <i>Odonto</i></li> <li>All beetles</li> <li>a) orthopte</li> <li>c) hemipte</li> <li>Forgut of in</li> <li>a) stomod</li> <li>c) mesente</li> </ul>	ball worm fic name of the <i>perpa aemigere</i> <i>termus obesus</i> are included in era era nsect is called eum eron	e Termite is n or 	d) b) d) rder b) d) b) d)	Mango ste Hieroglyp Bombyx m coleoptera diptera	em borer hus banian hori n m ese			
	9)	In winter se a) hiberna c) parasiti	eason some lep tion c	pidopteran pest	go b) d)	es to the aestivation saprophyt	n ic			

		<ul> <li>10) Position of mouth parts in Grasshopper is</li> <li>a) ophisthognathous b) hypognathous</li> <li>c) prognathous d) lophopidae</li> </ul>						
		11) Apis dorsata is also known as.a) asian beeb) giant rock beec) little beed) none of these						
		<ul> <li>12) Scientific name of Muga silkworm is</li> <li>a) Bomyx mori</li> <li>b) Morus alba</li> <li>c) Antheraea assamensis</li> <li>d) none of the above</li> </ul>						
		13)of insect consist six fused segments.a)Thoraxb)Pupac)Abdomend)Head						
		14) Haemocytes are found in the						
		SECTION II Attempt any four						
Q.2	A) B)	Define sericulture. Describe the cultivation of Mulberry plant. Describe the morphological details of abdomen of Cockroach.	07 07					
Q.3	A) B)	Describe the digestive system of Cockroach. Describe the life cycle pattern of Grasshopper.	07 07					
Q.4	A) B)	Enlist the different types of mouth parts observed in insect and write nor biting and chewing type of mouth parts. Explain the female reproductive system of Cockroach.	te on 07 07					
		SECTION III						
Q.5	A) B) C)	Write short note on importance of apiculture. Describe the nature of damage by White grub. Write a note on Nematode.	05 05 04					
Q.6	A) B) C)	Describe the production of <i>Trichograma sps</i> Write a note on antennae of insect Describe the control measure of rat.	05 05 04					
Q.7	A) B) C)	Write a note on predators. Explain the life cycle of Aphid. Define Entomology. Write importance of insect in day today life.	05 05 04					

Master of Science – I (Agrochemical and Pest Management)
Examination: Oct / Nov 2016 Semester – I (New CBCS)

SLR No.	Day & Date	Time	Subject	Name	Paper No.	Seat No.				
SLR – SP – 4	Wednesday 23/11/2016	10:30 AM to 01:00 P.M	Plant Patholo Manage	gy & Weed ement	SCT 1.1					
Instructions:       1) Attempt totally five questions.         2) Question no. 1 is compulsory (section -1).         3) Attempt any two questions from question no. 2 to 4 (section II).         4) Attempt any two questions from question no. 5 to 7 (section III).         5) Figures to the right indicate full marks.										
					Total Mar	ks: 70				
			<b>SECTION 1</b>							
<b>Q.1 R</b> 1	Active the foll MLOs are a) Cell wall c) Photosyn	owing senten pla less thetic	<b>ces by choosing</b> int pathogenic of b) d)	g <b>correct alte</b> rganism. Eukaryotic Both a & b	rnative.	14				
2	)	is phanerogan	nic parasitic pla	nt.						
	a) Lotus c) Albigo	1 0	b) d)	Cercospora Mistletoe						
3	)	are the green	photosynthetic p	oathogens.						
	a) Algae c) Fungi		b) d)	Bacteria Viruses						
4	) Vein mosaic	diseases is ge	nerally caused b	v						
	a) Algae	U	b)	Fungi						
	c) Bacteria		d)	Viruses						
5	) Cephaleuros	viresense cau	ses	disease in M	ango.					
	a) Wilt		b)	Smut Mildow						
	c) Kusi		u)	windew						
6	)	seeds are used	1 in mustard ude	ltration	π.					
	c) Cvnadon	dactvlon	b) d)	Commelena	begolnesis					
_										
7	) Echornia spp a) Wastelan	o. Is d	type of weed	Aquatic						
	c) Coastal	iu.	d)	None of the	se					
Q	) Mosaic of su	oarcane is can	ised by							
0	a) TMV	Surcane 15 eac	b)	SMV						
	c) MLOs		d)	Bacteria						
9	) Most of plan	t viruses show	as	genetic mate	erial					
	a) RNA	_	b)	DNA						
	c) Both a &	b	d)	All of these						

		10) Little leaf Brinjal disease caused by			
		a) Fungi c) Nematodes	b) d)	MLOs Viruses	
		c) menutodes	u)	v nuses	
		11) Striga is parasite.	1 \	0	
		a) Bud	b) d)	Stem	
		c) Root	u)	Leai	
		12) Weeds that live for a year are called as		weeds.	
		a) Annual	b)	Biennials	
		c) Perennials	d)	None of these	
		13) Hand weeding is method of	fwe	ed control.	
		a) Biological	b)	Physical	
		c) Chemical	d)	None o these	
		14) Signtoka of Panana caused by			
		a) Xanthomonas citri	b)	Pseudomonas solanecearum	
		c) Agrobacterium tumefaciens	d)	Mycosphaerello fijiensis	
		CE CE LO	NT T	T	
		SECTIC	IN I	1	
Q.2	Expla	ain:			
	<b>A</b> )	Fungi as disease causing organism.			07
	B)	Histochemical method studying diseases.			07
Q.3	A)	Describe the role of IAA as plant growth re	gula	itors.	07
	B)	Write casual organism, disease cycle sympt	oms	s and control measure of wilt of	07
		Banana.			
04	A)	Define viruses Comment un viral diseases			07
2	<b>B</b> )	Discuss in general plant quarantine system.			07
	,				
		SECTION	III		
Q.5	A)	Classification of plant diseases studied by y	ou.		05
-	B)	Symptoms of fungal diseases.			05
	C)	Dissemination of weeds.			04
06	<b>A</b> )	Explain papaya ring spot			05
Q.0	B)	Physical methods of weed control.			05
	Ć)	Plant quarantine regulation.			04
0-	`				<b>. .</b>
<b>Q</b> .7	a) b)	Ulub rots of cabbage.			05 05
	c)	Agricultural weeds of your region			03
	~)	i Brivanarar novas or your region.			υr

## Master of Science – I (Agrochemical and Pest Management) Examination: Oct / Nov 2016 Semester – I (Old CBCS)

	<b>L</b> .	Adminution					)			
SLR	No.	Day & Date	Time	Subject N	lame	Paper No.	Seat No.			
SLR - - 0	– SP 6	Wednesday 16/11/2016	10.30 AM to 01.00 PM	Chemistry of Pe Their Formu	sticides and lation - I	Ι				
Instr	Instructions:1) All questions carry equal marks.2) All Sections are compulsory.3) Attempt any two questions from Section – II and III4) Figures to the right indicates full marksTotal Marks:70									
Q.1	Sele i)	<b>ct most correc</b> Natural pyretar a) Toxicity	<b>t alternative</b> roids cannot b	SECTION - I from the followin be used in field beca b)	g (each carry ause of High Cost	v 1 marks) —–	14			
	ii)	<ul> <li>c) Poor sta</li> <li>Chemical nature</li> <li>a) Esters</li> <li>c) Alcohol</li> </ul>	bility re of pyretaro s	d) ids are b) d)	<ul> <li>Low activity</li> <li>Acids</li> <li>Amides</li> </ul>	У				
	iii)	Sulphur is form a) Aerosol c) Solution	nulated in the	form ofb) d)	Emulsive co	oncentrate				
	iv)	Reimer – Tien a) Benzald c) Anisole	nann reaction lehyde	is useful for the pre b) d)	eparation of Salicyaldeh Acetophenc	yde one				
	v) v	What is the pro	duct of follow $+ H_2C$	ving reaction $COOC_2H_5 p$	yridine - H <sub>2</sub> O	- ?				
		<ul><li>a) Salicylie</li><li>c) Cinnam</li></ul>	c acid ic acid	b) d)	Benzoic aci Phthalic aci	d d				
	vi)	Benzene on tre reaction is kno a) Fridel C c) Sulphor	eatment CH <sub>3</sub> C wn as craft's acylation	$\frac{1}{2000}$ and $AlCl_3$ with $\frac{1}{200}$	h and gives A Fridel Craft Halogenatic	cetophenone 's alkylation	this			
	vii)	$SN^1$ – reaction	n is example o	of	Ela-4 1'''	م مطالف				

- a) Nuclophilic addition
- c) Nucleophic substitution
- b) Electrophilic addition
- d) Electrophilic substitution

viii) The neem extract is used to control of b) Mosquitoes a) Nematodes c) Insects d) All the above ix) Neem extract contains main active ingredient is b) Limonoid a) Terpentoid c) Alkaloid d) None of these x) The reaction between dimethly dithiophophoric acid and N-methyl chloroacetamide gives a) Malethion b) Phosphamidon c) Diazison d) Dimethoate xi) Dimecron is trade name of a) Phosphamidon b) Quinolphos c) Phorate d) Sehradon xii) Quinoxaline ring system is present in b) Monocrotophos a) Chloropyriphos c) Quinolphos d) Phorate xiii) Name the following pesticide CH a) Parathion b) Diazinon c) Malethion d) Phosphomidon xiv)  $CH_3Br$  is used as a) Fumigant b) Insect attractant c) Rodenticide d) Pesticide **SECTION – II** Attempt any two questions from this section. **Q.2** a) Discuss cannizarro's reaction with mechanism. b) Give synthesis and uses of Malathion and Dimethoate. a) Discuss Perkin's reaction with mechanism. **Q.3** b) Describe the following pesticide formulates. Dusts i. ii Aerosols **Q.4** Give synthesis and reactions of Permethrin and Deltamethrin. a)

b) Give synthesis and uses of Phorate and Quinolphos. 07

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#### **SECTION – III**

	At	tempt any two questions from this section.	
Q.5	a)	Discuss SN <sup>1</sup> reaction with mechanism and energy profile diagram.	05
	b)	Discuss pyrethrins and their synthetic analogues.	05
	c)	Discuss the uses of insect attractants and repellents.	04
Q.6	a)	Discuss Reimer – Tiemann reaction with mechanism.	05
	b)	Discuss how Neem extract is useful for plant protection.	05
	c)	Give synthesis and uses of Monocrotophos.	04
Q.7	a)	Discuss Wagner – Meerwein rearrangement reaction with mechanism.	05
	b)	Discuss different methods used for extraction of Neem plant.	05
	c)	Write note on Natural and synthetic Pyrathroids.	04

## Master of Science – I (Agrochemical and Pest Management) Examination: Oct / Nov 2016 Semester – I (Old CBCS)

Examination: Oct / Nov 2010 Semester – I (Old CBCS)								
SLR No.	Day & Date	Time	Subject	Name	Paper No.	Seat No.		
SLR – SP – 08	Monday 21/11/2016	10:30 AM to 01:00 P.M	Introduct Industrial E	ory and ntomology	III			
Instructions1) All questions are compulsory.:2) All questions carry equal marks.3) Solve any two questions from questions from Section II.4) Solve any two questions from questions from Section III.Total Marks: 70								
			<b>SECTION 1</b>					
Q.1 C	Choose the corr Abdomen of a) 4 c) 3	rect answer fr a cockroach is	rom options giv s made up of b) d)	<b>en below.</b> fused 11 6	l segments.	14		
2	) Mouth parts a) Chewing c) Sponging	of grasshoppe	r are of b) d)	type. Siphoning None of the	above.			
3	) The hind wir a) Elytra c) Scutelum	igs in dipteral	are made into _ b) d)	Halter None of the	above			
4	) Circulatory s a) Closed c) Both a ar	ystem occurs id b	in insect is ofb) d)	Open None of the	above			
5	<ul><li>Malpighian t</li><li>a) Malpighi</li><li>c) Both a ar</li></ul>	ubules is the n id c	ame given by s b) d)	cientist Mackel None of the	 above			
6	)is a) Monkey c) Both a ar	the polyphago 1d b	bus pest. b) d)	Polu beetle Grasshopper	r			
7	)is a) Apis dors c) Apis mell	called as rock <i>ata</i> lifera	bee. b) d)	Apis floraea Apis indica	!			
8	) Monoliform a) Termite c) Cricket	antennae occu	ir ini b) d)	nsect. Grasshopper None of the	r above			
9	) <i>Apis gassypi</i> a) White gr c) Aphid	is the scientifi ub	ic name ofb) d)	Dung beetle None of the	above			

10) \_\_\_\_\_\_types of legs found in Praying mantid. a) Fossorial

b) Raptorial

c) Saltotorial

d) None of the above

b) Molluscicides

d) None

11) Snail and slug are controlled by \_\_\_\_\_

- a) Nematicide
- c) Insecticides

#### 12) \_\_\_\_\_ is the scientific name of mulberry plant. a) Maras alba

- b) Azadiracta indica
- c) *Cajanus cajan* d) None
- 13) Foregut insect is called as \_\_\_\_\_.
  - a) Proctodum b) Mesenteron
  - c) Stomodeum d) None

14) Ecdysone hormone is secreted at the time of \_\_\_\_\_.

- b) Digestion a) Moulting c) Reproduction
  - d) None

#### **SECTION II**

Q.2	A)	Describe the structure and function of digestive system in insect with the help	07
	B)	What is sericulture? Describe various components of sericulture.	07
Q.3	A) B)	Describe the white grub. Enlist the different types of mouth parts can be observed in insect and explain the structure of mouth parts of cockroach.	07 07
Q.4	A)	Describe the life cycle pattern of aphid.	07
	B)	Enlist the different species of honey bee and explain Rock bee in detail.	07
		SECTION III	
Q.5	A)	Describe the control measures of rat.	05
	B)	Insect leg.	05
	C)	Snail.	04
Q.6	A)	Describe the nematode.	05
	B)	Describe the grasshopper.	05
	C)	Abdomen of an insect.	04
Q.7	a)	Disease of silkworm and their management.	05
	b)	Explain the predators and parasites.	05
	c)	Antennae of an insect.	04

### Master of Science – I (Agrochemicals and Pest Management) Examination: Oct / Nov 2016 Semester – II (New CBCS)

		ammation		V 2010	Semester = II (	THEW CD			
SLR	No.	Day & Date	Time	Su	bject Name	Paper No.	Seat No.		
SLR - 1	- SP - 1	Saturday 19/11/2016	10:30 AM to 01:00 PM	Analytic Ag	al Techniques for rochemicals	VI			
Instr	uction	s: 1) All a	uestions are a	omnulsoi	•V/				
msti	uction	$\begin{array}{ccc} 1 & 1 \\ 2 & 1 \\ \end{array}$	ucstions are v	ausstions	y. from contion II to	ш			
		$\frac{2}{2} = \frac{2}{2}$		questions		111.			
		5) Figu	res to right in	alcate Iul	i marks.				
		4) Ineat	and labeled o	nagram s	noula de arawn.				
. <u> </u>						I otal Ma	arks: 70		
				G	T				
				Sectio	<b>N-1</b>				
01	Chor	ose the most c	orrect alterna	tive and	write the sentences		14		
Q.1	1) T	be locating ag	ent of amino a	cide is		•	14		
	1) 1	Diazo reage	ent of annio a	h	ninhydrin spray				
	a	) Diazo reage	:	(U 1)	Maataal aaddaa				
			oxides	u)	Neutral Oxides	ı ·			
	2) 8	olvent extracti	on is more go	od 11 repea	ted extractions are c	ione using.			
	a	) Large solve	nt	b)	Small solvent				
	c	) Extra Solve	nt	(d)	None				
	3) 1	he hottest flame in $O_2$ is produced by							
	a	) Acetylene		b)	Cyanogen				
	c	) Butane		d)	Hydrogen				
	4) T	he good oxida	nts to excite n	netals in fl	ame is				
	a	) O <sub>2</sub>		b)	$N_2O$				
	c	) both a and b	)	d)	$H_2$				
	5) T	he elements us	sed as an ioniz	ation supp	pressor is				
	a	) Bi		b)	Cs				
	c	) Na		d)	Mg				
	6) T	he most widel	v used flame i	n atomic a	bsorption is	-			
	a	) Air acetyler	ie	b)	Air propane				
	c	) Air coal ger	I	d)	Oxvacetylene				
	7) T	he function of	nebulizer bur	ner system	is to				
	, ) - ล	) Convert test	solution to ga	iseous ator	n solution				
	h	) Produce mis	st or aerosol of	f these test					
	C C	) both a and b	N 01 <b>ue</b> 10501 01	i inese test					
	b d	) Convert liqu	, 1id to solid sta	te					
	8) T	be technique f	or back group	d correctio	n include				
	0) 1	Doutorium (	or back groun	h)	Zooman offact				
	a	) Smith Hiaft	inc in sustam	(U d)	All of above				
		(alan natation	je system	u)	All of above				
	9) N	$M_{\rm T}$ (100	s given by	1	Mr/1000				
	a	$\int Ma/100$		b	) 1/10/00				
	с	) 100M/a		d	) a(/100				
	10) Iı	n gas absorptic	on the solubilit	y of gas ir	a given solvent dec	creases with			
		·							
	a	) Temperatur	e	b)	Concentration				
	c	) Partial press	sure	d)	Lowering the temp	erature			

11) The measurement of optical rotation	as a function	of wavelength	is known
As			

- a) CD b) ORD
  - d) Octant rule
- c) Cotton effect 12) If specific rotation is multiplied by molecular weight of optically active compound and divided by 100 we get.
  - a) Molar rotation b) Molar rotator power d) None
  - c) Both a and b
- 13) All the single electron system emit.
  - a) Doublet b) Singlet c) Triplet
    - d) Quartet
- 14) The region of greatest importance for emission analysis is -----
  - a) 200 to 300 nm b) 200 to 500 nm c) 250 to 400 nm
    - d) 400 to 600 nm

#### Selection-II

Q.2	a) b)	Explain the detectors of column chromatography. Discuss the applications of conductivity measurement in the analysis of salinity and soil moisture.	07 07
Q.3	a)	Discuss the application of polarimetry in the analysis of optical active pesticides	07
	b)	Give an account of methallochromic indicators.	07
Q.4	a)	What is principle of nephlometry? Give its applications.	07
	b)	How accurately can the pH of unknown solution be measured and write their application in pesticide residues.	07

#### **Selection-III**

Q.5	a)	Write a note on chemical interferences prevented in atomic absorption	05
	b)	What are the factors affecting intensity of emitted radiation in flame emission spectroscopy?	05
	c)	What is the difference between nephlometry and turbidometry?	04
Q.6	a)	Explain different types of acid-base titration.	05
-	b)	What are the applications in the analysis of soil, water in atomic absorption spectroscopy?	05
	c)	What is specific and molecular rotation?	04
Q.7	Wr	ite a note on following:	
		1. Applications of TLC	05
		2. Applications of conductivity measurement in analysis of salinity	05
		3. Gravimetric estimation of $SO_4^{2-}$	04

## Master of Science – I (Agrochemical and Pest Management) Examination: Oct / Nov 2016 Semester – II (Old CGPA)

SLR No.	Day & Date	Time	Subject Name	Paper No.	Seat No.			
SLR – SP - 14	Thursday 17/11/2016	10.30 AM to 01.00 PM	Chemistry of Pesticides and Their Formulations – II	V				
Instructions1) All questions carry equal marks.:2) All Sections are compulsory.3) Attempt any two questions from Section – II and III4) Q. No. 1 should be answered by choosing the correct alternatives Total Marks:70								
O 1 – Sele	ct most correc	t alternative	SECTION - I from the following (each carry	v 1 marks)	14			
<b>i</b> )	Friphenvltin ac	etate is prepa	red by reacting three molecules of	of phenvl	11			
ľ	nagnesium bro	mide and	· · · · · · · · · · · · · · · · · · ·	- F) -				
	a) SnCl <sub>4</sub>		b) ZnCl <sub>2</sub>					
	c) CCl <sub>4</sub>		d) MgCl <sub>2</sub>					
ii) 7	Thallium sulph:	ate is used as						
п <i>)</i> .	a) Rodenti	cide	b) Herbicide					
	c) Growth	promoter	d) Acardicide					
:::) 1	) <b>1</b>		under et alle at fan an					
111) 1	a) Europal	ire is used to	b) Podent attack					
	c) Insect at	tack	d) None of these					
	,		,					
iv)	Organomercur	ial compound	ls are having activity.	d funciaidal	1			
	c) Only fur	ngicidal	d) Only Bacterici	dal	L			
	-) - ) -	0	., . ,					
v) Z	Linc phosphide	is used o kill	the					
	c) Rodent		d) Herbs					
	•)		•)					
vi)	Aldicarb is	ty	pe of insecticide.					
	a) Furyl ca	rbamate	b) Organophosphoru	S				
	c) Oxinic (	aibamate	u) Organoemornie					
vii)	Carbamate per	sticides act as	s inhibitor of					
	a) Respirat	ory system	b) Circulatory syst	em				
	c) Chonne	sterase enzyn	the d) Nerve signar tra	IISIIIISSIOII				
viii)	Maneb is obta	ained by reac	tion between ethylenediamine ar	nd	<u> </u> .			
	a) Carbon	disulphide	b) Sodium sulphid	e				
	c) Potassiu	m sulphide	d) Carbon dioxide					
ix)	Catechol whe	en treated with	h isopropyl chloride in presence	of base it fo	rms			
	a) Carbofu	ran	b) Aldicarb					

	x) Pentachlorobenzene on nitration gives_		
	a) Pentachloronitrobenzene	b) Pentachlroaminobenzene	
	c) Chloronitrobenzene	d) Nitrobenzene	
	xi) Hydrazine compounds which are used functional group	as pesticides contain	
	a) -NH <sub>2</sub>	b) –N=N–	
	c) –N=O	d) $NH_2-NH_2$	
	xii) Trifluralin is used to control		
	a) Fungi c) Rodents	b) Weeds in cotton d) All of these	
	c) Rodents	d) An of these	
	xiii) Tenuron is derivative of		
	a) Urea	b) Thiourea d) None of these	
	c) Thiocyanate	d) None of these	
	xiv) Sodium chlorate is used as	<u> </u>	
	a) Rodenticide	b) Acaricide	
	c) Fungicide	d) Herbicide	
	SECTIO	N – II	
	Attempt any two questions from this sec	tion.	
Q.2	a) Write synthesis and uses of Tenuron an	d Methiuron.	07
	b) Give an account of amines as pesticides	3.	07
Q.3	a) Describe the role of zinc oxide and zinc	e phosphide as pest control agent.	07
	b) Describe use of computers in formulation	on.	07
Q.4	a) Writ synthesis, reactions and applicatio	ns of maneb and zineb.	07
-	b) Explain structure – activity relationship	o of carbamates.	07
			-
	SECTIO	DN – III	
~ •	Attempt any two questions from this sec		
Q.5	a) Explain the role of arsenic compounds	as pesticides.	05
	b) Describe synthesis and uses of carbofu	ran.	05
	c) Write uses of mercaptans.		04
Q.6	a) Write synthesis and uses of MBC.		05
	b) Describe uses of various copper prepara	ations.	05
	c) Write synthesis and uses of propanil.		04
Q.7	a) Explain role of surfactants and wetting	agents in pesticide applications.	05
-	b) Describe uses of azo compounds.		05
	c) Write synthesis and application of have	ton	04
	by write synthesis and application of dayg	5011.	V4

## Master of Science – II (Agrochemical and Pest Management) Examination: Oct / Nov 2016 Semester – III (Old CGPA)

SLR No.	Day & Date	Time	Su	bject Name	Paper No.	Seat No.		
SLR – SP 18	Wednesday 16/11/2016	02.30 PM to 05.00 PM	<b>Pestici</b>	de Residues and Foxicology	IX			
Instructions:       1) All questions carry equal marks.         2) All Sections are compulsory.         3) Attempt any two questions from Section – II and III         4) Figures to the right indicate full marks.         5) Draw neat labeled diagrams wherever necessary.								
			SECTIO	N – I	I Utal IVI2			
O.1 Sel	ect most correc	t alternative	from the f	ollowing (each carry	(1 marks)	14		
1)	Minamata disea	ise is an exam	ple of	g (	,			
,	<ul><li>a) Air pollutio</li><li>c) Water pollu</li></ul>	n tion	b) d)	Noise pollution Soil pollution				
2)	Teratogenic sub	stances are re	esponsible f	or				
,	<ul><li>a) foetal abnor</li><li>c) headache</li></ul>	malities	b) d)	anemia pneumonia				
3)	3) Organo-phosphorus pesticides affectsystem by inhibition of acetyl cholinesterase enzyme.							
	a) digestive	-	b)	circulatory				
	c) nervous		d)	all of above				
4)	Insecticides kill a) insects c) fungi	s the	b) d)	bacteria all of above				
5)	In the	pesticides are	degraded b	v microorganisms				
• • • •	a) Bio-accumu	ilation	b)	Bio-activation				
	c) Bio-concentration			Bio-degradation				
6)	is def organism.	ined as abrup	t and perma	nent change in genor	ne of an			
	a) mutation		b)	expression				
	c) genetics		d)	None of above				
7)	Lead and Mercu a) moderately	urial pesticide	es areb)	persistent in a permanently	atmosphere	<b>)</b> .		
	c) temporarily		d)	None of these				
8)	is a natu a) Quinolphos c) Pyrethrum	ral pesticide.	b) d)	Aldrin Malathion				
9)	Inhalation of as	bestos causes	in ł	numan being.				
	a) asbestosis		b)	asbestoponia				
	c) asbetophobi	a	d)	None of these				

10) In gas chromatography column contains gas as \_\_\_\_\_ phase.

- b) mobile
- c) detector d) None of these

#### 11) HPLC is \_\_\_\_\_\_type of chromatography.

- a) high volume b) high pressure d) Name of the
- c) high profile d) None of these
- 12) Toxicology is the branch of \_\_\_\_\_

a) steady

- a) Entomology b) Biology b) Biology
- c) Pharmacology d) None of these
- 13) The conversion of certain chemically stable compounds to highly chemically reactive metabolites is termed as
  - a) bioactivation b) biodegradation
  - c) bioaccumulation d) None of these

#### 14) Hepatic necrosis is the disorder related to \_\_\_\_\_

- a) salivary gland b) liver
- c) both a and b d) None of these

#### **SECTION – II**

		SECTION – II	
Q.2	a)	What is pesticide residue? Discuss the effects of pesticide residue on soil micro-organisms.	07
	b)	What is bio-magnification? Explain bio-magnification of pesticide with a model ecosystem studied by you.	07
Q.3	a)	Define pesticide and comment on the mechanism of action of organo-chlorine pesticides.	07
	b)	Discuss about the 'Gas chromatography technique' applied for the analysis of pesticide residues in fruits.	07
Q.4	a)	What is toxicology? Comment on scope of Toxicology.	07
	b)	Explain entry of pesticide in aquatic environment with point and non point sources.	07
		SECTION – III	
Q.5	a)	Discuss in brief Cytochrome-P-450 enzyme system.	05
	b)	Write short note on Minamata disease.	05
	c)	Discuss in brief the effect of pesticides on different enzyme systems found in living organism.	04
Q.6	a)	Write brief account of entry of pesticide in atmosphere.	05
	b)	Discuss in brief the applications of HPLC in pesticide residue analysis.	05
	c)	Define poison and comment on any one type of poison with respect to symptoms and treatment.	04
Q.7	a)	Explain the role of Acetylcholine esterase enzyme.	05
	b)	Write short note on Bhopal gas tragedy.	05
	c)	Explain the effects of pesticides on human health.	04

## Master of Science – II (Agrochemicals & Pest Management) Examination: Oct / Nov 2016 Semester – III (Old CGPA)

SLR No.	Day & Date	Time	Subj	ject	Name	Paper No.	Seat No.	
SLR – SP - 19	Friday 18/11/2016	02.30 PM To 05.00 PM	Adva Co	nces ntro	in Pest ol – I	X		
Instructions1) All questions are compulsory.:2) All Questions carry equal marks.3) Solve any two Questions from section-II.4) Solve any two Questions from section-II.Total marks:70								
Q.1 A)	Choose the c	orrect alternat	ives: (One	mar	·k each)		14	
	<ol> <li>Campolet         <ol> <li>Campolet</li> <li>pest p</li> <li>predat</li> </ol> </li> </ol>	<i>is chlorideae</i> is arasitoid or		b) d)	larval parasi All of the ab	toid		
	<ul> <li>2) Avicides :</li> <li>a) to con</li> <li>c) instead</li> </ul>	are used used for trol weeds d of fertilizers	or	b) d)	control of bi All the abov	rds e		
	<ul><li>a) Hand pick</li><li>a) chemi</li><li>c) legal</li></ul>	cing of insect is	metl	hod b) d)	of mechanical None of abo	ve		
	<ul><li>4) Natural er</li><li>a) Dipha</li><li>c) Nymp</li></ul>	nemy of sugarca	ane aphid is b) Trich d) All th	loga ne al	mma pove			
	5) a) acidic c) neutra	medium is	suitable for	'Bt b) d)	' gene activity alkaline all the above	y.		
	<ul><li>6) Chemoste</li><li>a) Suppo</li><li>c) Suppr</li></ul>	rilants does the ress reproducti ess dwelling	work as on	b) d)	in insects Suppress fee All of the ab	eding oove		
	7) Pneumatio a) Mach c) powe	e hand sprayer i ine oprayed r oprated	is the type o	f d)	compression All of the al	sprayer. n bove		
	<ul><li>8) Azadiract</li><li>a) Neem</li><li>c) attract</li></ul>	in is ants		origi b) d)	inated insection Mulberry All of the ab	cide. oove		
	<ul><li>9) Chemical source are</li><li>a) repelle</li><li>c) attract</li></ul>	s that cause inso called ents ants	ect to make	orie b) d)	nted moveme Sterilants All the abov	nts towards e	their	

		10) Due to dominant R factor found on chromosome of Drosophila melanogaster is responsible for	
		a) Resistance to DDT b) Resistance to BHC	
		c) Both of 'a' and 'b' d) All of the above	
		11) Polu beetle is pest.	
		a) polyphagous b) oligophagous	
		c) monophagous d) All of the above	
		12) Sound waves are used in programmer.	
		a) auditory b) sensory	
		c) visual d) All of the above	
		13) Tin banding of Coconut plats controls	
		a) Rats b) Mites	
		c) Dragon fly d) Aphid	
		14) Iron hook is used to control	
		a) White grub e) Rhinoceros beetle	
		b) Grasshopper c) Termite	
		Section - II	
Q.2	A)	Give an account of pheromones in pest control programme.	07
	<b>B</b> )	Define host plant resistance. Explain mechanism of resistance in plants.	07
Q.3	A)	Give importance and side effects of Neem based preparations in pest	07
		management.	
	B)	Define pest and classify the pest with suitable examples.	07
Q.4	A)	Enlist various methods of pest control. Explain the chemical method of	07
		pest control with suitable example.	
	b)	Explain with neat labeled diagram parts of plunger type Duster.	07
		Section-III	
Q.5	A)	Natural method of pest control.	05
	<b>B</b> )	Breeding for insect resistance.	05
	C)	Plant products in pest control.	04
Q.6	A)	Bioassay method.	05
	B)	Estimation of losses caused by pest.	05
	C)	Antifeedants.	04
07	<b>A</b> )	Write a note on attractants	05
<b>V</b> •'	л) В)	Insect growth regulators	05
	$\mathbf{C}$	Legal method of nest control	0.0
	U)	Legar memor of pest control.	04

### Master of Science – II (Agrochemicals and Pest Management) Examination: Oct/Nov 2016 Semester – III (Old CGPA)

	LAC	mmation.			103101 - 111 (		<b></b>	
SLR 1	No.	Day & Date	Time	Sub	ject Name	Paper No.	Seat No.	
SLR – 20	SP-	Monday 21/11/2016	2:30 P.M to 5:00 P.M	An Agro	alysis of ochemicals	XI		
Instru	Instructions:1) All Questions are compulsory.2) Attempt any two questions from section II3) Attempt any two questions from section III.4) All questions carry equal marks.Total Marker 70							
			(	SECTION_	T			
Q.1	A (	hoose the corr	rect alternativ	ve given in t	the bracket.		14	
	1	) nuc	lear spin state	is of lower	energy.			
		a) $\alpha$		(d	β			
		c) γ		(۵	0			
	•	X T I		<b>c</b>				
	2	) In acetone	sets of	t proton are	observed.			
		c) Three		(U d)	Six			
		c) 111100		u)	DIA			
	3	) Mass spectro	scopy is	techniq	ue.			
		a) Low pres	ssure	b)	High pressure			
		c) Low tem	perature	d)	None of these			
	4	) of	following und	lerones frao	mentation easily	hv electron h	am	
	•	a) Ketones	tono wing un	b)	Ethers		ounn.	
		c) Aromatic	c compounds	d)	Alchols			
	_	) <b>T</b> I 1	. 1					
	5	) The radio iso $x^{2}$	topes have	 nd same ma	ss number			
		b) Same ato	mic number a	nd different	mass number			
		c) Different	atomic numb	er and same	mass number			
		d) Different	atomic numb	er and differ	rent mass number			
	6	) The current (	tue to support	ing electrols	te is called			
	U	a) Residual	current	h)	Diffusion curren	 It		
		c) Migration	n current	d)	None			
	_				~			
	7	) Electron don	ating groups o	otten	tluorescence.			
		c) Decrease	ng	(0 d)	Remains same			
		c, Decrease	,	u)	ixemanis same			
	8	) HPLC is use	d in					
		a) Pharmac	eutical	b)	Biochemical ana	alysis		
		chemistry	y Longhygig	<i>(</i> ۲	A 11			
		c) Unemica	i anaiysis	u)	All			

	9) The method of separation of vol phase is called	platile substance by using gas as a mobile	
	a) IR c) NMR	b) GC d) Mass	
	<ul><li>10) The intensity of fluorescence de</li><li>a) Volume</li></ul>	epends upon of solution. b) Pressure	
	c) Concentration	d) Polarity	
	11) The wavelength range for UV re	region of the electromagnetic radiation is	
	a) 100-400 nm	b) 400-800nm	
	c) Above 800 nm	d) 100-400 μm	
	12) When $\lambda_{\text{max}}$ value of certain mol	elecules shift towards longer wavelength	
	a) Hypsochromic shift	b) Hyperchronic shift	
	c) Bathochromic shift	d) Hypochromic shift	
	13) The absorption of radio frequen accompanied by	ncy radiations by organic molecule is	
	a) Electronic level change	b) Vibrational level change	
	c) Nuclear spin change	d) Molecular weight change	
	14) Due to hydrogen bonding the IR	R absorption band becomes	
	a) Sharp c) Broad	b) Weak d) Narrow	
	e) 21044		
	SEC	CTION-II	- <b>-</b>
a) b)	Describe types of vibrations in IR s Explain isotope and metastable ions	spectroscopy. Is in mass spectroscopy.	07 07
a) b)	Describe the method used for measure Write the principle of polarography	surement of radioactivity.	07 07
a) b)	Describe instrumentation of HPLC. Explain different types of electronic	te transitions.	07 07
	SEC	CTION-III	
a)	Write note on SO <sub>2</sub> analysis.		05
b)	Explain measurement of polarogram	m.	05
c)	Write applications of neutron activa	ation analysis.	04
a)	Write applications of mass spectros	scopy.	05
<b>b</b> )	How do you monitor the $H_2S$ in air	sample?	05
C)	write note on finger print region in	i ik spectroscopy.	04
a)	Explain shielding and deshielding p	phenomenon with example.	05

Q.2

Q.3

Q.4

Q.5

Q.6

**Q.7** 

a) Explain shielding and deshielding phenomenon with example.05b) Explain structural factors in fluorescence.05c) Distinguish between chromophore and auxochrome.04

## Master of Science – II (Agrochemicals and Pest Management) Examination: Oct / Nov 2016 Semester – III (Old CGPA)

SLR	No.	Day & Date	Time	Subject	Name	Paper No.	Seat No.
SLR - SP-	- -21	Wednesday 23/11/2016	2:30 PM to 5:00 PM	Pest and D Crop Pla	iseases of ants- I	XII	
Instru	Instructions:       1) All Questions are compulsory.         2) All questions carry equal marks.         3) Solve any two questions from section-II.         4) Solve any tow questions from section-III.         Total Marks:70						
				Section- I			
Q.1	<b>Rewr</b> 1)	ite the followin Zigzag golden	g sentences b marks on fore	y choosing app wings is the dia	ropriate alte gnostic featu	ernative. res of	08
		<ul><li>a) Gram pod b</li><li>c) Spodopteria</li></ul>	oorer a litura	b) d)	Tur plum me None of thes	oth se	
	2)	The casual orga a) Alibugo can c) Erysiphe cr	anism of white ndida uciferarum	e rust disease of b) d)	crucifer is Ephilis psidi Uncinula sp		
	3)	False smut Rice a) Eastern Ind c) North India	e disease was : ia	first time record b) d)	ed from South India West Indies	·	
	4)	Leaf blight of N 1876	Maize was firs	t time recorded	from	country in	
		a) India c) Ceylon		b) d)	Italy China		
	5)	stage	e of sorghum s	hoot fly causes	more damage	e to the sorgh	um.
		<ul><li>a) Caterpillar</li><li>c) Grub</li></ul>		b) d)	Maggot Nymph		
	6)	a) Toxicity c) Rapidity	to the disease	e producing pow b) d)	er of a micro Pathogenicit Immunity	organism. Ty	
	7)	Viral diseases ( a) Fruit flies c) Aphids	of crops mostly	y transmitted by b) d)	White grubs None of the	these	
	8)	Rust of Soybea	n can be contr	olled by sprayir	ıg		
		<ul><li>a) Sulphur dus</li><li>c) BHC</li></ul>	st	b) d)	Bordeaux m Dithane Z-7	ixture 8	

	9)	Na	tional sugar institute (NSI) is located a	t		
		a)	Pune	b)	Lucknow	
		c)	Indore	d)	Calcutta	
	10	)	exhibits sexual dimorphism			
	10	a)	Jussid	b)	Mealy bug	
		c)	Aphid	d)	None of the these	
	11	)	diseases of crons mostly trans	mitt	ted by anhide	
	11	)		1)		
		a)	Viral	b)	Bacterial None of these	
		0)	MLO	u)	None of these	
	12	)ET	L stands for			
		a)	Economic threshold level	b)	Economic Type limit	
		c)	Economic Top level	d)	Economic Travel Level	
	13	)Lo	ose smut of Jowar is type of	dis	ease.	
	10	a)	Seed borne	b)	Leaf borne	
		c)	Insect borne	d)	Wind borne	
	14	) ፐኬ	a angual organism of soubaan rust is			
	14	) 1 11 (a)	Phakonsora nachyrhiza	h)	 Sesamia inference	
		c)	Chilo polychysus	d)	Scirpophaga innota	
		,		r		
02	<b>A</b> )	W/ŀ	SECTION-II set is pest? Comment on classification	l hia	logy and control of any on	07
Q.2	лј	for	age crop pests that you have studied.	010	logy and control of any on	07
	B)	De	scribe symptoms, nature of damage and	l m	anagement of ear got of maize.	07
03	A)	Ext	nlain disease? Highlight symptoms nat	ure	of damage and management	07
<b>Z</b> .0	11)	of	wilt of cow pea.	uit	or dumuge and management	07
	B)	Dis pla	scuss in brief concepts and tools of pest nt resistance mechanism	ma	nagement. Highlight on host	07
0.4	• >	г		1		07
Q.4	A)	Des	scribe the biology, life cycle, nature of m borer	dan	nage and control of yellow	07
	B)	De	scribe symptoms, nature of damage and	1 m	anagement of Udbatta diseace	07
	,	of	rice.		C	
			SECTION-II	ſ		
0.5	A)	Pes	st management strategies	L		05
L.	B)	Ass	sessment of losses due to pests			05
	<b>C</b> )	Att	ractants			04
06	A)	Dis	sease forecasting model			05
2.0	B)	Ste	m borer of Sorghum: biology and man	agei	ment	05
	Ć	Pov	wdery mildew of gram	0		04
07	<b>A</b> )	Car	ngula harar of agetar. Life avale and me	1110	romont	05
Q./	A) B)	An	myworm pest. Mornhology and control	maş	zement	05
	C)	Lif	e cycle of groundnut leaf minor			04
	,					

## Master of Science – II (Agrochemical and Pest Management) Examination: Oct / Nov 2016 Semester – III (New CBCS)

SLR	No.	Day & Date	Time	S	ubj	ect Name	Paper No.	Seat No.
SLR - 22	- SP - 2	Wednesday 16/11/2016	02.30 PM to 05.00 PM	Pestic	Pesticide Residues and Toxicology			
Instr	Instructions:1) All questions carry equal marks.2) All Questions are compulsory.3) Solve any two questions from Section – II.							
	4) Solve any two questions from Section – III. Total Marks:70						:70	
			S	ECTION	– I			
Q.1	Choo	ose correct ans	wer from op	tions give	n b	elow.		14
	i)	Fungicides kil	ls the					
		a) insects			b)	bacteria		
	••	c) fungi	_		d)	all the above		
	11)	Teratogenic su	ibstances are	responsibl	e fo	or		
		a) foetal abno	ormalities		b)	anemia		
	;;;)	C) neadache	orus postiaid	as affact	a)	pheumonia system by in	hibition of	
	111)	acetyl choline	sterase enzvr	es alleet _		System by m		
		a) digestive	steruse enzyn		b)	circulatory		
		c) nervous			d)	all the above		
	iv)	Minamata dise	ease was obse	rved in	)	country.		
	,	a) Indonesia			b)	China		
		c) Africa			d)	Japan		
	v)	Azadiractin is	p	esticide.				
		a) synthetic			b)	imported		
	•	c) natural			d)	none of these		
	V1)	Sudden and pe	ermanent chai	nge in gen		e of an organism is		
		a) mutation			b)	expression		
	vii)	c) genetics	ourial postici	las ara	a)	none of above	, atmaanha	<b>r</b> 0
	vii)	a) moderate	currar pesticit	les ale	b)	persistence ii	i aunospile	IC.
		c) temporary			d)	none of above		
	viii)	Decomposition	n of pesticide	s by mierc	bes	is the pr	ocess	
	(111)	a) Bio-accum	ulation	<i>s e j mei e</i>	b)	Bio-activation		
		c) Bio-conce	ntration		d)	<b>Bio-degradation</b>		
	ix)	Ásbestos inhal	lation causes		in ł	uman being.		
		a) asbestosis			b)	asbestoponia		
		c) asbetophol	bia		d)	none of these		
	x)	In liquid chror	natography li	quid conta	ins	in column as	phase.	
		a) steady			b)	mobile		
	• `	c) detector			d)	none of these		
	X1)	HPLC is	type of c	hromatogr	aph	y.		
		a) high volum	ne		b)	high pressure		
		c) high profil	e		d)	none of these		

	xii)	Toxicology is the branch of	
		a) Entomology b) Biology	
	•••	c) Pharmacology d) None of these	
	X111)	The conversion of certain chemically stable compounds to highly	
		chemically reactive metabolites is term as	
		a) bioactivation b) biodegradation	
	• 、	c) bloaccumulation d) none of these	
	XIV)	Hepatic necrosis is the disorder related to gland.	
		a) salivary b) liver	
		c) both a and b d) none of these	
		SECTION – II	
02	A)	Give definition and scope of Toxicology	07
<b>~·</b> =	B)	Explain the Gas chromatography technique for the analysis of pesticide	- 07
	2)	residues in fruits.	, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
Q.3	A)	Give in detail mechanism of action of organochlorine pesticides.	07
	B)	Explain effects of pesticides on human health.	07
0.4	A)	State effects of pesticide residue on soil micro-organisms	07
~··	B)	Explain entry of pesticides in aquatic environment by point and	07
	_,	non-point sources.	
		SECTION – III	
Q.5	A)	Write a note on Bhopal gas tragedy.	05
	B)	Write a note on Minamata disease.	05
	C)	Define soil micro-biology and enlist any four microbes that are helpful	04
		for crop growth.	
0.6	A)	Comment on the entry of pesticide in water	05
<b>~··</b>	B)	Explain carcinogens	05
	C)	Discuss the applications of GC in pesticide residue analysis.	05
	-,		
Q.7	A)	Write brief account of Teratogens.	05
	<b>B</b> )	Discuss about selective pesticides.	05
	<b>C</b> )	Write the protocol for analysis of pesticide residues by HPLC.	04

## Master of Science – II (Agrochemicals and Pest Management) Examination: Oct / Nov 2016 Semester – III (New CBCS)

Examination: Oct / Nov 2010 Semester – III (New CBCS)							
SLR	No.	Day & Date	Time	5	Subject Name	Paper No.	Seat No.
SLR - 2	- SP - 3	Friday 18/11/2016	02:30 PM to 05.00 PM	A	dvances in Pest Control - I	X	
Instru	Instructions:1) All questions are compulsory.2) All questions carry equal marks.3) Solve any two questions from Section – II4) Solve any two questions from Section - III						
		· · ·				Total Mar	<sup>.</sup> ks: 70
Q.1 1	Rewrite t alternativ 1) Which a) us c) us 2) Bait at a) are bu b) ma	the following size. In item below is the the correct period the the correct dettract ants, so he placed outsid wilding ay have to be p	sentences by s not used to d esticide ose baits: le where there blaced inside	Section selecti delay p b) d) e is ant if the a	n-I ng correct answers esticide resistance? use the same pestic apply pesticide corr s activity to attract at nt colony has moved	from given ide repeated rectly nts out of a l inside.	<b>14</b> ly
3	<ul><li>c) are of</li><li>d) all</li><li>3) The m</li></ul>	e placed outsid ant. of the above nost important	le where there factor in keep	e are ar	nt activity and will re dent and birds away	educe the po from buildir	tential ng is
2	a) ex c) us d) Which a) IP b) IP c) IP d) IP	clusion ing bait n of the below M is a systems M promotes a M focuses its s M is the most	best defines t approach us single strateg strategies on l cost-effective	b) d) the prin ing mu gy for a biologi e means	using repellents using traps iciples of IPM in one ltiple strategies. Il pest problems. cal control. s of killing pests.	e statement.	
5	5) Pyreth a) Az c) Ta 6) Most 6	nrin is got from zadirachata ind agetus erecta effective pestic	n lica cide is	 b) d)	Utrica dioca Chrsanthemum cine	erarifolicum	
7	a) ca c) or 7) Which	rbamates ganochlorine n of following	substance is u	b) d) used to	organophosphates all of three control weed?		
8	a) he c) ins 3) An all a) Na	rbicide secticide kaloid nicotin s	sulphate is	b) d)	pesticide fungicide		
Ç	c) Cu c) Cu c) Red ri a) set c) au	istard apple bbons are imp nsory repellent ditory repellent	lemented in _ t	b) d) d)	Accasia stimuli repellent visual repellent		

	10) insecticide having anta	agonist	ic effect with NPV.	
	a) DDT	b)	endosulfan	
	c) aldrin	d)	malathion	
	11) Insect feeding on plants of severa	l gener	a within family are called	_
	a) phytophagous	b)	polyphagous	
	c) oligophagous	d)	monophagous	
	12) DDT is toxic to insects by		<del></del> .	
	a) contact	b)	ingestion	
	c) inhalation	d)	both a and b	
	13) Feeding in insects can be checked	d by the	use of	
	a) hormones	b)	pheromones	
	c) feeding deterant	d)	antibiosis	
	14) In the reduction of pest population mentained in	n, the b	alance of the natural enemies is	
	a) pest management	b)	pest control	
	c) pest eradication	d)	none of these	
	c	To ation	н	
<b>Q.2</b>	a) What is an ideal insecticides?	section	-11	07
•	b) What is chemosterilant? Explain	with su	itable example	07
	b) what is elemosternant? Explain	with Su	hable example.	07
Q.3	a) Define the biopesticide? Explain	with ef	fective and suitable examples.	07
	b) Explain the drawbacks of chemic	al conti	ol.	07
	, <b>1</b>			
Q.4	a) Describe the control measure of s	store gra	ain pests.	07
	b) Explain the equipments used for t	the pest	icide applications.	07
	G			
05	a) Write note on repellents	ection-	111	05
Q.J	<ul> <li>a) write note on repenents.</li> <li>b) Describe the format most</li> </ul>			05
	b) Describe the forest pest.			05
	c) Antibiosis			04
	,			
Q.6	a) Physical method of pest control			05
	b) Plant hybridization for pest resist	ance		05
	c) Disadvantages of applications			04
o -				<b>a</b> –
Q.7	a) Biological assessment			05
	b) Quarantine control			05
	c) Ecological pest control methods			04

### Master of Science – II (Analysis Of Pest Management) Examination: Oct/Nov 2016 Semester – III (New CBCS)

LAC						.5)	
SLR No.	Day & Date	Time	Subj	ect Name	Paper No.	Seat No.	
SLR – SP– 24	Monday 21/11/2016	2:30 P.M to 5:00 P.M	An Agro	alysis of chemicals	XI		
Instructions	Instructions:1) All Questions are compulsory.2) Attempt any two questions from section II3) Attempt any two questions from section III.4) All questions carry equal marks.Total Marks: 70						
			SECTION-	I			
<b>Q.1 A) C</b>	Choose the corr ) Sulphur diox a) IR c) Polarogra	rect alternativ kide is analyse aphy	ve given in t d by b) d)	<b>he bracket.</b> - method. GC Spectrophotome	etry	14	
2	<ul> <li>a) In acetone</li> <li>a) One</li> <li>c) Three</li> </ul>	sets o	f proton are b) d)	observed. Two Six			
3	<ul><li>) Mass spectro</li><li>a) Low press</li><li>c) Low tem</li></ul>	oscopy is ssure perature	techniqu b) d)	ie. High pressure None of these			
4	a) Ketones c) Aromatic	f following und c compounds	dergoes frag b) d)	mentation easily Ethers Alchols	by electron b	eam.	
5	<ul> <li>a) The radio iso</li> <li>a) Same ato</li> <li>b) Same ato</li> <li>c) Different</li> <li>d) Different</li> </ul>	otopes have omic number a omic number a t atomic numb t atomic numb	nd same ma nd different er and same er and differ	ss number mass number mass number ent mass number	<u>.</u>		
6	<ul> <li>i) In paper chro</li> <li>a) Solid</li> <li>c) Stationar</li> </ul>	omatography p Ty	baper acts as b) d)	phase. Liquid Support			
7	<ul><li>c) Electron don</li><li>a) Quenchin</li><li>c) Decrease</li></ul>	nating groups on ng	often b) d)	fluorescence. Enhance Remains same			
8	<ul><li>a) HPLC is use</li><li>b) HPLC is use</li><li>c) Pharmac</li><li>c) Chemica</li></ul>	d in eutical chemis l analysis	stry b) d)	Biochemical and All	alysis		

- 9) The RF value depends upon
  - a) Solvent system
  - c) Size of the vessel
- b) Temperature of environment
- d) All of these

#### 10) The intensity of fluorescence depends upon ------ of solution.

- a) Volume b) Pressure
- c) Concentration d) Polarity

#### 11) The wavelength range for UV region of the electromagnetic radiation is

a) 100-400 nm

- b) 400-800nm
- c) Above 800 nm
   d) 100-400 μm
- 12) When  $\lambda_{\text{max}}$  value of certain molecules shift towards longer wavelength region, then this phenomenon is known as ------.
  - a) Hypsochromic shift
- b) Hyperchronic shift
- c) Bathochromic shift d) Hypochromic shift
- 13) The absorption of radio frequency radiations by organic molecule is accompanied by ------.
  - a) Electronic level change
- b) Vibrational level change
- c) Nuclear spin change
- d) Molecular weight change
- 14) The RF value is always -----.
  - a) One b) More than one
  - c) Less than one d) Zero

#### **SECTION-II**

Q.2	a)	Describe principle and procedure of Thin Layer Chromatography.	07
	b)	Describe in detail G.M.Counter.	07
Q.3	a) b)	Draw a schematic diagram of experimental setup of polarography and discuss its principle and working. Describe principle and instrumentation of UV spectroscopy.	07 07
Q.4	a)	Describe instrumentation and application of HPLC.	07
	b)	Describe the applications of mass spectroscopy.	07
		SECTION-III	
Q.5	a)	Write applications of fluorescence measurement in pesticide residue analysis.	05
	b)	Write note on fingerprint region of IR spectroscopy.	05
	c)	Write applications of UV spectroscopy.	04
Q.6	a) b) c)	Write a note on neutron activation analysis. Distinguish following pair of compounds by IR spectroscopy. $CH_3COOH$ and $CH_3CHO$ Predict the NMR spectra of following.	05 05 04
Q.7	a)	Explain shielding and deshielding phenomenon with example.	05
	b)	Write a note on mass spectra of isotope ion.	05
	c)	Describe SO <sub>2</sub> analysis.	04

# Master of Science – II (AGPM) Examination: Oct / Nov 2016 Semester – III (New CBCS)

SLR	R No.	Day & Date	Time	Subje	ct Name	Paper No	Seat No.	
SLR 2	– SP- 25	Wednesday 23/11/2016	02:30 PM To 05:00PM	Pests of Ci	op Plants – I	XII		
Instr	Instructions:1) All Questions are compulsory.2) All questions carry equal marks.3) Solve any two Questions from Section- II4) Solve any two Questions from section- IIITotal Marks:70							
				Section-I				
0.1	Choo	se the most cor	rect alternati	ive and write	the sentences.		14	
<b>Z</b> .1	1) Th	ne scientific nar	ne of of Gram	pod borer is				
	a)	Microtermus	obesus	b)	Heliothis armi	gera		
	c)	Dichocerocis	punctiferalis	d)	Chilo partelus	0		
	2) In	ecosystem the	producers are	the	organisms.			
	a)	Hetrotrophic		b)	Autotrophic			
	c)	Parasitic		d)	Saprophytic			
	3) D	een nloughing t	ends to reduce	• st	age of an insect			
	$\frac{J}{2}$	I arvae and Pi	inae	b)	Only nunae			
	c)	Only pupae	.pue	d)	None of the ab	ove		
	•)	emj papae						
	4) Sk	cull like mark o	n the thorax is	the character	istics of	·		
	a)	Stem borer		b)	Till hawk moth	h		
	c)	Bud fly		d)	Gall fly			
	5) TI	1 1 6	D:1. 1					
	5) II	Groundnut	Pink ball wor	m is b)	Coconut			
	a)	Cotton		(U d)	Mango			
	0)	Cotton		u)	Wango			
	6)	is the	tool of IPM.					
	(a)	Physical meth	od	b)	Crop refuge			
	c)	Both a and b		d)	None of the ab	ove		
	_`	• •						
	7)	1s the	technique of a	ssessment of	crop losses.			
	a)	Altered timing	S	b)	Crop refuge	1		
	c)	Mechanical pi	rotection	d)	Physical metho	Da		
	8) D:	amaging stage o	of Gall midge	is				
	e) 2.	Larva		b)	пира			
	c)	Both		d)	None of these			
	,			,				
	9) In	winter season s	some lepidopte	eran pest goes	to the			
	a)	Hibernation		b)	Aestivation			
	c)	Parasitic		d)	Saprophytic			

	10)	Pyrilla belongs to the family a) Noctuide	b) d)	Arctiidae	
	11)	<ul> <li>Braconid species is parasitized on</li> <li>a) Larva</li> <li>c) Both</li> </ul>	b) d)	<i>pupa</i> None of these	
	12)	Life cycle of Grasshopper is a) Holometabolus c) Complete	b) d)	Hemimetabolus None of the above	
	13)	In Lepidoptera order 2 <sup>nd</sup> stage of insect is a) Adult c) Caterpillar	cal <i>b)</i> d)	led <i>pupa</i> Grub	
	14)	<ul><li>a) Use of insecticide</li><li>b) Pruning and thinning</li></ul>	od o b) d)	f pest control. Shaking Physical method	
		Section-	Π		
Q.2	a) b)	Describe in brief the techniques involved Enlist the pest of sugarcane and explain	d in any	biological pest controls. one of them.	07 07
Q.3	a) b)	Enlist pest of pulses. Give the control m Define IPM and describe Host plant resi	eası star	are and life cycle of any pest.	07 07
Q.4	a) b)	Explain the mode of damages of different in your area and suggest the control mean Explain in detail Red cotton bug.	nt in sure	sect pests attacking pulses crops es of any one.	07 07
		Selection	n- I	II	
Q.5	a) b) c)	Classify and describe nature of damage Describe Control measures of Pyrilla. Life cycle of Wheat jassid	of C	Brasshopper.	05 05 04
Q.6	a) b) c)	Describe damage and control of White f Write note on cultural control of White Shoot fly.	ly. gru	b.	05 05 04
Q.7	a) b) c)	Describe damage and control measures of Describe control measures of Bean fly. Life cycle of pink ball worm.	of B	lister beetle.	05 05 04

# Master of Science – II (AGPM) Examination: Oct/Nov 2016 Semester – III (New CBCS)

SLR - SP - 26       Wednesday 23/11/2015       02.30 PM to 05.30 PM       Diseases of Crop Plants - 1       XII         Instructions:       1) All sections are compulsory       2) All questions carry equal marks.       3) Solve any two questions from section - II       4)         4) Solve any two questions from section - II       4) Solve any two questions from section - II       10       11         4) Solve any two questions from section - II       11       10       11       12         6) Solve any two questions from section - II       11       13       14         1) 'Stem rot of Berseem' is cause by	SLR No.	Day & Date	Time	Subject 1	Name	Paper No.	Seat No.		
Instructions:       1) All sections are compulsory         2) All questions carry equal marks.       3) Solve any two questions from section – II         4) Solve any two questions from section – II       1         4) Solve any two questions from section – II       1         4) Solve any two questions from section – II       1         6) Solve any two questions from section – II       1         7) Stem rot of Berseem' is cause by       14         1) 'Stem rot of Berseem' is cause by       b) Sclerotiorum sp.         c) Bremia sp.       d) Fusarium sp         2) The pathogen Albugo candida survives through in affected host tissue       a) Zoo spores         a) Zoo spores       b) Conidia         c) Oospores       d) Oidia         3) The scientific name of Bajara is       b) Sorgun bicolor         c) Zea mays       d) Triticum aestivum         4) Pathogenecity is refferd as       a) Disease producing power of a microorganism         c) Disease producing power of a microorganism       b) Sulphur dust         5) Rust of Soyabean mostly controlled by spraying of       a) Bordeaux mixture b) dithaneZ-78         c) BHC       d) Sulphur dust         6) Erysiphe cruciferarum is the causal organism of	SLR – SP - 26	Wednesday 23/11/2015	02.30 PM to 05.30 PM	Diseases o Plants	f Crop – I	XII			
1) Solve any two questions from section – III     1) Solve any two questions from section – III     Total Marks: 70      SECTION – 1      (21 A) Rewrite the following sentences by choosing appropriate alternative.     1) 'Stem rot of Berseem' is cause by b) Sclerotiorum sp.     c) Bremia sp.     d) Fusarium sp      2) The pathogen Albugo candida survives through in affected host tissue         a) Zoo spores         b) Conidia     c) Oospores     d) Oidia      3) The scientific name of Bajara is     a) Pennisetum americanum     b) Sorgun bicolor     c) Zea mays     d) Triticum aestivum      4) Pathogenecity is refferd as     a) Disease producing power of     b) Disease protecting power of     b) Disease protecting power of     b) dithaneZ-78     c) BHC     d) Sulphur dust      6) Erysiphe cruciferarum is the causal organism of     a) Powdery mildew of grapes     b) Powdery mildew of mustard     c) Smut of Jowar     d) Tikka disease of groundnut	Instructions	Instructions:       1) All sections are compulsory         2) All questions carry equal marks.         3) Solve any two questions from section.							
9.1       A) Rewrite the following sentences by choosing appropriate alternative.       14         1) "Stem rot of Berseem" is cause by		4) Solve any two questions from section – III 							
Q.1       A) Rewrite the following sentences by choosing appropriate alternative.       14         1) 'Stem rot of Berseem' is cause by       b) Sclerotiorum sp.       c) Bremia sp.         a) Macrophomia sp.       b) Sclerotiorum sp.       c) Bremia sp.         c) Bremia sp.       d) Fusarium sp       in affected host tissue         a) Zoo spores       b) Conidia       in affected host tissue         a) Zoo spores       b) Conidia         c) Oospores       d) Oidia         3) The scientific name of Bajara is       b) Sorgun bicolor         c) Zea mays       d) Triticum aestivum         4) Pathogenecity is refferd as       b) Disease transmission capacity of a microorganism         c) Disease producing power of a microorganism       c) Disease survival power of a microorganism         c) Disease survival power of a microorganism       d) Disease protecting power of host         5) Rust of Soyabean mostly controlled by spraying of       a) Bordeaux mixture         b) dithaneZ-78       c) BHC       d) Sulphur dust         6) Erysiphe cruciferarum is the causal organism of       b) Powdery mildew of mustard         c) Smut of Jowar       d) Tikka disease of groundnut         7) In some order countries, Brown rust of wheat produces spermogonia and accia on species of		SECTION – 1							
<ul> <li>a) Macrophomia sp.</li> <li>b) Sclerotiorum sp.</li> <li>c) Bremia sp.</li> <li>d) Fusarium sp</li> </ul> 2) The pathogen Albugo candida survives through in affected host tissue <ul> <li>a) Zoo spores</li> <li>b) Conidia</li> <li>c) Oospores</li> <li>b) Conidia</li> <li>c) Oospores</li> <li>c) Oospores</li> <li>d) Oidia</li> </ul> 3) The scientific name of Bajara is <ul> <li>a) Pennisetum americanum</li> <li>b) Sorgun bicolor</li> <li>c) Zea mays</li> <li>d) Triticum aestivum</li> </ul> 4) Pathogenecity is refferd as <ul> <li>a) Disease producing power of</li> <li>b) Disease transmission</li> <li>c) Disease survival power of a</li> <li>d) Disease protecting power of</li> <li>c) BHC</li> <li>b) dithaneZ-78</li> <li>c) BHC</li></ul>	Q.1 A) Re	write the followin	ng sentences l	oy choosing ap	propriate a	alternative	. 14		
<ul> <li>2) The pathogen <i>Albugo candida</i> survives through in affected host tissue <ul> <li>a) Zoo spores</li> <li>b) Conidia</li> </ul> </li> <li>3) The scientific name of Bajara is</li> <li>a) <i>Pennisetum americanum</i></li> <li>b) Sorgun bicolor</li> <li>c) Zea mays</li> <li>d) <i>Triticum aestivum</i></li> </ul> <li>4) Pathogenecity is refferd as</li> <li>a) Disease producing power of</li> <li>b) Disease transmission capacity of a microorganism</li> <li>c) Disease survival power of a</li> <li>d) Disease protecting power of</li> <li>c) Disease survival power of a</li> <li>d) Disease protecting power of</li> <li>d) Disease protecting power of</li> <li>d) Bordeaux mixture</li> <li>b) dithaneZ-78</li> <li>c) BHC</li> <li>d) Sulphur dust</li> 6) <i>Erysiphe cruciferarum</i> is the causal organism of	1)	a) Macrophomia	<i>i sp</i> .	b)	Sclerotioru	im sp.			
<ul> <li>a) Zoo spores</li> <li>b) Conidia</li> <li>c) Oospores</li> <li>d) Oidia</li> </ul> 3) The scientific name of Bajara is <ul> <li>a) Pennisetum americanum</li> <li>b) Sorgun bicolor</li> <li>c) Zea mays</li> <li>d) Triticum aestivum</li> </ul> 4) Pathogenecity is refferd as <ul> <li>a) Disease producing power of</li> <li>b) Disease transmission</li> <li>c) Disease producing power of a microorganism</li> <li>c) Disease survival power of a microorganism</li> <li>c) Disease survival power of a microorganism</li> <li>d) Disease protecting power of host</li> </ul> 5) Rust of Soyabean mostly controlled by spraying of <ul> <li>a) Bordeaux mixture</li> <li>b) dithaneZ-78</li> <li>c) BHC</li> <li>d) Sulphur dust</li> </ul> 6) Erysiphe cruciferarum is the causal organism of <ul> <li>a) Powdery mildew of grapes</li> <li>b) Powdery mildew of mustard</li> <li>c) Smut of Jowar</li> <li>d) Tikka disease of groundnut</li> </ul> 7) In some order countries, Brown rust of wheat produces spermogonia and aecia on species of <ul> <li>a) Tradictrum sp</li> <li>b) Oxalis corniculata</li> <li>c) Barberry</li> <li>d) Brinial</li> </ul>	2)	The pathogen <i>Alk</i>	wao candida s	u)	<i>rusurium</i> s	in affacts	d host		
<ul> <li>a) Zoo spores</li> <li>b) Contrat</li> <li>c) Oospores</li> <li>d) Oidia</li> </ul> 3) The scientific name of Bajara is	2)	tissue	ugo cunaiaa s	b)	Conidia		tu nost		
<ul> <li>3) The scientific name of Bajara is</li></ul>		c) Oospores		d)	Oidia				
<ul> <li>a) Perimetrian under curant</li> <li>b) Sorgan broton</li> <li>c) Zea mays</li> <li>d) Triticum aestivum</li> </ul> 4) Pathogenecity is refferd as <ul> <li>a) Disease producing power of a microorganism</li> <li>b) Disease transmission capacity of a microorganism</li> <li>c) Disease survival power of a microorganism</li> <li>d) Disease protecting power of host</li> </ul> 5) Rust of Soyabean mostly controlled by spraying of	3)	The scientific nar	ne of Bajara is	b)	Sorgun hi	color			
<ul> <li>4) Pathogenecity is refferd as</li></ul>		c) Zea mays	incricanam	d)	Triticum a	iestivum			
<ul> <li>a) Disease producing power of a microorganism</li> <li>c) Disease survival power of a microorganism</li> <li>c) Disease survival power of a microorganism</li> <li>d) Disease protecting power of host</li> <li>5) Rust of Soyabean mostly controlled by spraying of</li> <li>a) Bordeaux mixture b) dithaneZ-78</li> <li>c) BHC d) Sulphur dust</li> <li>6) Erysiphe cruciferarum is the causal organism of</li> <li>a) Powdery mildew of grapes b) Powdery mildew of mustard</li> <li>c) Smut of Jowar d) Tikka disease of groundnut</li> <li>7) In some order countries, Brown rust of wheat produces spermogonia and aecia on species of <ul> <li>a) Thalictrum sp</li> <li>b) Oxalis corniculata</li> <li>c) Barberry</li> <li>d) Brinial</li> </ul> </li> </ul>	4)	Pathogenecity is a Disease prod	refferd as	$\overline{\mathbf{b}}$ b)	Disease tr	ansmission			
<ul> <li>b) Discuse survival power of a host</li> <li>c) Bust of Soyabean mostly controlled by spraying of</li></ul>		a microorgan	ism	a d)	capacity o	of a microor	ganism		
<ul> <li>5) Rust of Soyabean mostly controlled by spraying of</li></ul>		microorganis	sm	u u)	host	toteeting pe			
<ul> <li>a) Dorectain linitate</li> <li>b) Children 100</li> <li>c) BHC</li> <li>d) Sulphur dust</li> </ul> 6) Erysiphe cruciferarum is the causal organism of	5)	Rust of Soyabean	mostly contro	olled by sprayir	ng of	78			
<ul> <li>6) Erysiphe cruciferarum is the causal organism of</li></ul>		c) BHC		d)	Sulphur di	ust			
<ul> <li>a) Fowdery lindew of grapes</li> <li>b) Fowdery lindew of indicate</li> <li>c) Smut of Jowar</li> <li>d) Tikka disease of groundnut</li> </ul> 7) In some order countries, Brown rust of wheat produces spermogonia and aecia on species of <ul> <li>a) <i>Thalictrum sp</i></li> <li>b) <i>Oxalis corniculata</i></li> <li>c) Barberry</li> <li>d) Brinial</li> </ul>	6)	<i>Erysiphe crucifer</i> a) Powdery mil	<i>arum</i> is the ca	usal organism	of	_ mildew of r	nustard		
<ul> <li>7) In some order countries, Brown rust of wheat produces spermogonia and aecia on species of</li> <li>a) <i>Thalictrum sp</i></li> <li>b) <i>Oxalis corniculata</i></li> <li>d) Brinial</li> </ul>		c) Smut of Jow	ar	d)	Tikka dise	ease of grou	indnut		
a) <i>Thalictrum sp</i> c) Barberry b) <i>Oxalis corniculata</i> d) Brinial	7)	In some order cou aecia on species o	untries, Brown of	rust of wheat j	produces sp	ermogonia	and		
		a) <i>Thalictrum s</i> c) Barberry	р	b) d)	<i>Oxalis cor</i> Brinial	rniculata			

	8) Vir	al diseases of crops mostly the	ransmitted by	
	a)	White grubs	b)	Aphids
	c)	Fruit flies	d)	None of the above
	9)	is responsible for p	owdery mildew	v in mustard
	$\overline{a}$	Erysiphe cichoracearum	b)	Erysiphe polygoni
	c)	Ervsiphe graminis	d)	Ervsiphe crucigerarum
	-)	8		
	10) Be	ean rust is		
	a)	Macrocyclic	b)	Microcyclic
	c)	Polycyclic	d)	Nanocyclic
	11)	spores of sovahean rus	st has been reco	orded in Maharashtra state
	11) <u></u>	Uredospores	h)	Teleutospores
	() ()	Basidiospores	(0 d)	Pycniospores
	0)	Dustatospores	u)	r yemospores
	12) Bor	rdeaux mixture is		
	a)	Molluscide	b)	Fungicide
	c)	Repellent	d)	All above
	13) In	false smut of rice	disease was firs	st recorded
	a)	East India	h)	South India
	c)	North India	d)	West India
	,		,	
	14) The	e scientific name of chickpea	is	
	a)	Cicer arieinum	b)	Arachis hypogeal
	c)	Cajanus cajana	d)	Sorghum vulgure
		S	SECTION – II	[
0.1				
Q.2	A) De	escribe symptoms, nature of (	damage and ma	inagement of 11kka disease of
	gr	oununut.		
	B) En	numerate different disease of	sesam. Add a r	note on symptoms and
	ma	anagement of Leaf spot disea	se of sesame.	
03	A) W	hat is disaasa? Highlight sym	ontoma lifo ov	ala natura of damaga and
Q.3	A) w	anagement of Udbatta disease	e of Rice	inc, nature of damage and
			• • • • • • • • • • • • • • • • • • • •	
	B) En	numerate common disease of	cotton that occ	eurs in your region. Highlight
	sy	mptoms biology and control	measures of an	thracnose of cotton.
04		ecribe symptoms natura of	damage and me	inagement nowdery mildow
<b>V</b> .4	A) Dt	d Root rots of any one nulse	that you have a	magement powdery mildew
	all	a Root rots of any one pulse	that you have s	nuureu.
	B) De	escribe symptoms, life cycle,	nature of dama	age and management of Wilt
	of	Lucerne.		

### **SECTION – III**

Q.5	A)	Rust of Wheat-symptoms and control measures.	05
	B)	Root rot of safflower – symptoms and life cycle.	05
	C)	Symptoms, nature of damage and methods of control for powdery mildew of sunflower.	04
Q.6	A)	Enumerate common disease of pulse of your region. Highlight methods of management for Blight of Chickpea.	05
	B)	Anthracnose of French bean: symptoms, nature of damage and methods of management.	05
	C)	Disease cycle and management of powdery mildew of pennisetum	04
Q.7	A)	GSD	05
	B)	Seedling blight of Mustard-nature of damage and its management.	05
	C)	Shank rot of Tobacco.	04

## Master of Science – II (Agrochemical and Pest Management) Examination: Oct / Nov 2016 Semester – IV (CGPA Pattern)

SLR No.	Day & Date	Time	Su	bject N	ame	Paper No.	Seat No.	
SLR – SP 27	Thursday 17/11/2016	02.30 PM to 05.00 PM	Agro based Marketing Management			XIII		
Instructio	Instructions: 1) All questions carry equal marks.							
	2) All S	Sections are	compulsory	•				
	3) Atte	mpt any two	questions 1	from So	ection – II a	nd III		
	4) Figu	ires to the rig	ght indicate	e tull m	arks.	Total Ma	rks·70	
			SECTION	N – I			II K3.70	
O.1 Sele	ect most correc	t alternative	from the fo	ollowin	σ (each carr	v 1 marks)	14	
1)	is na	rt of promotic	nal tools of	market	ino	y i marks)		
1)	a) Process	n or promotic	h)	Sales r	promotion			
	c) People		d)	Produc	t			
	/ 1		)					
2)	RBI Establishm	ent in						
	a) 1932		b)	1935				
	c) 1937		d)	1930				
3)	NABARD form	n in						
5)	a) 1990		- b)	1982				
	c) 1987		d)	1986				
4)	w IO stands for	r do Organizati	0 <b>n</b>	<b>b</b> )	World Toriff	Organizati	<b>on</b>	
	c) World Tra	nsport Organi	ization	d)	None of thes	e	UII	
	•) ••••••			•••)		•		
5)	is	second stage	in PLC.					
	a) Introductio	n	b)	Matu	rity			
	c) Growth		d)	Decli	ne			
6)	STP stands for							
,	a) Shoot, Trai	nsfer, Produc	t	b) Se	egmentation,	Target,		
				Po	ositioning			
	c) Skill, Targ	et, Product		d) N	one of these			
7)	Producer to con	Isumer	chan	nel.				
	a) One level		b)	Two le	evel			
	c) Three level		d)	Four le	evel			
0)	TVia	4a - 1 - C						
8)	a) Personal sel	1001 01 f	harkeung.	Adver	isina			
	c) Brand	ling	d)	None of	of these			
	,							
9)	pro	blem in agro	marketing.					
	a) Competition	1 ( D. 1)	b)	Educat	tion			
	c) Governmen	t Policy	d)	All 0İ	inese			

	10) is a logo or company name.	
	a) Brand b) Packing	
	c) Both d) None of these	
	11) GATT stands for	
	a) General Agreement of Tariff b) General Agreement of Tax and Trade	
	c) Both d) None of these	
	a) LPG b) Socialism	
	c) Both d) None of these	
	13) Which tool vital in Agri business	
	a) Place b) Price	
	c) Promotion d) All of these	
	14) is not part of 4 Ps	
	a) Product b) Price	
	c) People d) Promotion	
	SECTION – II	
	Attempt any two questions from this section.	
Q.2	a) Explain the Product Mix.	07
	b) Describe target marketing.	07
Q.3	a) Advertising	07
	b) WTO	07
Q.4	a) Explain the importance of SCM.	07
	b) Define the stages Product Life Cycle.	07
	SECTION – III	
	Attempt any two questions from this section.	
Q.5	a) Explain problems of agri-business in India.	05
	b) Explain the advantage of direct marketing.	05
	c) Describe function of GATT.	04
Q.6	a) Marketing Research	05
	b) Marketing Environment	05
	c) Marketing Planning	04
07	a) Explain the one level distribution shares	0 <i>5</i>
Ų./	a) Explain the one level distribution channel.	05
	b) Describe product mix in fertilizer industry.	05
	c) Explain brand benefit to increase sale.	04

# Master of Science – II (Agrochemical and Pest Management) Examination: Oct/Nov 2016 Semester – IV (CGPA)

SLR	No.	Day &	Time	S	ubject Nam	ie ie	Paper	Seat No.
SLR - 28	- SP- 8	19/11/2016	02:30 PM To 05:00 PM	Advanc	es in Pest C II	ontrol -	XIV	
Instr	Instructions:1) All Questions are compulsory.2) All questions carry equal marks.3) Solve any two Questions from Section- II4) Solve any two Questions from section- IIITotal Marks:70							
Q.1	Choo 1) si a) c)	<b>ose the most co</b> ingle individual Parasite Parasitoid	<b>rrect alterna</b> organism whi usually kill l	ntive and ch is usua nost. b) d)	write the set lly much larg Predator None of th	<b>ntences.</b> ger than it he above	s prey and a	<b>14</b> a
	<ol> <li>In a)</li> <li>c)</li> </ol>	In the brain of insect hormones are present.a) Parathohormoneb) Neurohormonec) Growth hormoned) None of the above						
	<ul> <li>3) R</li> <li>a)</li> <li>c)</li> </ul>	Richal Carson is the author of booka) Applied entomologyb) Lehningerc) Silent springd) None of the above						
	4) M a) c)	Mycoses is the condition of having infection.a) Insectsb) Bacterialc) Virald) Fungal						
	5) A a) c)	Anabolic toxins are synthesized bya) Viruses onlyb) Insectsc) Pathogensd) Mammals						
	6) C a) c)	Chemosterillants does the important work in IPM isa) To kill the insectb) To produce the insectc) To attract insectd) To rendering them unattractive						
	<ul> <li>7) A</li> <li>a)</li> <li>c)</li> </ul>	Any chemical that inhibit the growth of gonads are called asa) Chemosterillantsb) Attractantsc) Synomonesd) Alarm pheromones						
	8) R a) c)	Restriction endonuclease enzyme is known to thea) Attach DNA fragmentb) Cut the DNA fragmentc) Cut the RNA fragmentd) All the above						
	9) M a) c)	ficromus is don ) Sugarcane w ) Termite	e the work to ooly aphid	b suppress b) d)	the Cut worm Fruit fly	pest.		

	10)	The full form of CPV a) Cytoplasmic polyhydrosis Virus	b) Cytophagous Virus	
		c) Cytochrome polished Virus	d) None of the these	
	11)	Due to Cytoplasmic incompatibilitya) Mechanicalb)c) Geneticd)	type of insect control occured. Legal All the above	
	12)	Neurohormones are present ina) brainb)c) kidneyd)	organ of insects. intestine none of the above	
	13)	Genetic control of screw worm fly was ina) F.E.Edwardb)c) C.Raymondd)	itiated by E.F.Kinipling None of the above	
	14)	<ul> <li>What do you mean by HaNPV0</li> <li><i>Heliothis armigera</i> Nucleur Polyhyd</li> <li><i>Helicoverpa armigera</i> Nuclear Polyh</li> <li><i>Helicopa army</i> Nuclear Polydimension</li> <li><i>Helicomb army</i> Nuclear Polymorphic</li> </ul>	rosis Virus ydrosis Virus mal Virus Virus	
		Selection-	II	
Q.2	a) b)	Define the biological control. Explain the biological control with suitable example Describe the importance of biotechnolog	e different techniques used in gical applications in pest	07 07
		management.		
Q.3	a)	What is the genetic control? Explain the control with suitable example	different techniques used in genetic	07
	b)	Describe in brief the methodology of <i>Ba</i> gene into plant so as to produce transger	<i>cillus thuringiensis</i> . To introduce nic plants.	07
Q.4	a) b)	Explain the role of predators and parasit Describe the implementation strategies i	oids in pest management. n IPM.	07 07
		Selectio	n- III	
Q.5	a) b) c)	Microbial method in pest control. Antifidants. Semichemicals.		05 05 04
Q.6	a) b) c)	Chemosterillants. Nucleur Polyhydrosis Virus Role of fungi in pest control.		05 05 04

Q.7 a)Protenase inhibitor.05b)Light activated pesticides05c)Attractants and Repellants04

## Master of Science – II (Agrochemicals and Pest Management) Examination: Oct / Nov 2016 Semester – IV (CGPM)

SLR No.	Day & Date	Time	Subject Name	Paper No.	Seat No.		
SLR – SP – 29	LR – SP – Tuesday 22/11/2016 02.30 PM Manufacture of Agrochemicals		f XV				
Instructions:       1) All sections are compulsory.         2) Question 1 should be answered by choosing the correct answer.         3) Attempt any two questions from section II and two questions from section III         4) All questions carry equal marks.							
			FCTION - 1	10	tai wiarks: /u		
0.1 A) Cho	ose the correct	ہ answer (one i	nark each)		14		
1) A	grograde sulphi	ir is used as	nur k cuch)				
a	Herbicide		b) Fun	gicide			
c	Growth retard	lant	d) Gro	wth promoter			
				-			
2) T	he acute toxicity	y of dimethoat	e for rat is				
3	320  to  500  m	ng/kg	b) 36	5 to 540 mg/kg			
(	e) 60  to  120  mg	g/kg	d) 30	to 45 mg/kg			
3) D m	istillation is a prixture.	rocess in whic	h compo	nents are separate	ed from the		
8	) Solid		b) Ga	seous			
C	) Volatile		d) Wa	ater			
4) D	istribution coef	ficient become	es equal to distribut	ion ratio when the	ere is		
8	) No associatio	on	b) No	dissociation			
C	) No polymeri	zation	d) Al	ll of these			
5) C	ontinuous count	ter current ext	raction is applicable	e when			
3	) Solute has sl	ow distributio	n b) So	lute has high dist	ribution		
	coefficient		COG	efficient			
C	) Solute is vol	atile	d) So	lute is non-volatil	e		
6) A	generalized fra	gment usually	an ion, produced b	y a disconnection	is		
8	) Synthon		b) Sy	nthetic equivalent	t		
(	) Reagent		d) 1a	rget molecule			
7) Ir	absorption tow	er packing the	e broken rock is gen	erally not used du	ue to		
8	) Easy availab	ility	b) Lo	w cost			
C	) Great weight		d) Un	usual size and sha	ape		
8) F	or drying of mil	k and milk pro	oducts dry	ers are used			
8	) Spray		b) Tu	rbo			
C	i) Iray		d) Co	nveyor			

9)	a) c)	plays an important role in wage Labour union Employer-employee union	and b) d)	l salary administration. Public union Trade union	I
10	)) Th pro	e reaction in which only one set of stere edominantly is called reaction	oise	omers is formed	
	a) c)	Stereospecific Stichiometric	b) d)	Stereoselective None of these	
11	) In ev	triple effect evaporator highest temperat	ture	is maintain in	
	a) c)	First	b) d)	Second Both first and second	
	c) ~		u)	John mist and second	
12)	Car	baryl is synthesized form methyl isocya	nate	e and	
	a) c)	Methyl alcohol	d)	Dimethyl amine	
12)	۔ 1.1		,	- <b>6</b> 4h <b>6</b> - 11 in - 9	
13)	Diei a)	S-Alder reaction is used to synthesize	h)	2 4 - D	
	c)	Captan	d)	Endosulphan	
14)	Tra	de name of phosphamidon is			
14)	a)	Rogar	b)	Sevin	
	c)	Dimecron	d)	Dithane	
		SECTIO	N –	П	
A	) Ex	plain in brief counter current extraction.			07
B)	) De	escribe working of compartment tray dry	ver.		07
A) B)	) De	escribe R and D laboratory specifications hich factors are responsible for setting u	s. pa	research laboratory?	07 07
A) B)	) W	hat is retrosynthetic approach? Explain i hat is mean by synthon? Explain it with	t w twc	r.t. butylated hydroxyl toluene. examples.	07 07
		SECTION	N —	Ш	
A) B) C)	) De ) W ) W	escribe the chemical reactions and flow s hy is batch inspection necessary? rite note on SSI.	shee	et diagram for dimethoate.	05 05 04
A) B) C)	) Ex ) W ) De	plain importance and various kinds of far rite note on ISI specifications. escribe different types of filters	irst	aids in case of accidental hazards.	05 05 04
A) B) C)	) W ) Ex ) W	rite the principle of centrifuge. plain the use of fractional distillation. rite note on HRD			05 05 04

Q.2

Q.3

Q.4

Q.5

Q.6

**Q.7** 

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## Master of Science – II (Agrochemical and Pest Management) Examination: Oct / Nov 2016 Semester – IV (CGPA)

17.	xammation		V 2010 B	UII			1)	
SLR No.	Day & Date	Time	Subj	ect	Name	Paper No.	Seat No.	
SLR – SP – 30	Thursday 24/11/2016	02:30 PM to 05:00 PM	Pest and Crop	l Di Pla	seases of nts - II	XVI		
Instructions	: 1) Se	ection I is con	nulsory.				_	
	2) All questions carry equal marks.							
	3) So	olve any two o	questions fr	om	Section II.			
	4) So	olve any two o	questions fr	om	Section III.			
						Total Mar	ks: 70	
			SECTION	1				
Q.1 C	hoose the corr	ect alternativ	e and rewr	ite 1	the sentences	ł	14	
1	) White grub s	hows its pupa	tion more in	1)	D 11			
	a) Leaves			b)	Balls Doth 'o' od '	· <b>L</b> '		
	c) 5011			a)	Both a ad	D		
2	) Scientific na	me of Rice str	iped borer is					
-	a) Chilo sup	pressalis		$\overline{b}$	Atherigona	soccata		
	c) Periplan	ta Americana	!	d)	Helocoverpa	armigera		
3)	) Red pumkin	bettle belongs	to the order					
	a) Hemipter	a		b)	Lepidoptera			
	c) Coleptera	1		u)	None of the	se		
4	) Which wooly	aphid of sug	arcane is firs	stlv	noticed in	state		
	a) Kashmir	1 0		b)	Assam			
	c) Maharasl	ntra		d)	Tamilnadu			
-		•, • •						
5	) Dacus cucur	oitae is known	as	<b>b</b> )	Stom horar			
	c) Shoot bo	n rer		d)	Fruit fly			
	<b>c</b> ) Shoot bo			u)	i fuit ily			
6	) Pollu bettle i	s1	pest.					
	a) Monophg	gous		b)	Oligophago	JS		
	c) Polyphag	gous		d)	None of the	se		
7`	) The network	of veins in les	aves is show	n h	v feeding of			
· .	a) Pink fly			b)	Stem borer			
	c) Leaf web	ber		d)	Midge fly			
8	) Blight of ton	nato caused by	fungus	1 \		1		
	a) Nurospoi	ra crassa		b)	Alternaria a	Iternata		
	c) Allernari	u soluni		u)	none of thes	50		
9	)	is mean by wa	art of potato					
	a) Corky ou	tgrowth on ste	em	b)	Corky outgr	owth on lea	ves	
	c) Corky ou	tgrowth on ro	ot	d)	None of the	above		

		10) Powdery mildew found on surface of bhendi.					
		c) Both 'a' and 'b' d) None of the above					
		<ul> <li>11) The chain of events in the disease development with the development of pathogen and affecting host issues is called as</li></ul>					
		<ul> <li>12) The causal organism anthracnose of Mango is</li></ul>					
		13) Berry anthracnose is the particular disease ofa) Teab) Coffeec) Grapesd) Guava					
		14) Black spot of Rose caused due toa) Alternaria spp.b) Sphaerotheca pannosac) Diplocarpon rosaed) None of these					
		SECTION II					
Q.2	A) B)	Describe the biology, nature of damage and control measure of Jassid.07Explain any two disease of Grapes studied by you with respect to causal organism, disease cycle & control measures.07					
Q.3	A)	Explain Blight and Wilt disease of Tomato with respect to causal organism, <b>07</b>					
	B)	disease cycle & control measures. Enlist major and minor pest of Tobacco. Explain any one pest with nature of damage & control measures. 07					
Q.4	A) B)	Describe major and minor pest attacking on Mango and describe one of them.07Describe in brief Bud rot and wilt of Coconut.07					
		SECTION III					
Q.5	A) B) C)	Thrips nature of damage.05Red cotton bug.05Write a short note on oily spot of Pomegranate.04					
Q.6	A) B) C)	Give an outline of life cycle of Termite.05Write a short note on capsule borer of caster.05Explain in brief Black spot of Rose.04					
Q.7	a) b) c)	Describe in brief cotton white fly.05Describe physical methods of disease control05Write a short note on wilt of chrysanthemum.04					