

COMMERCIAL PLANT BREEDING (ELE. GPB -244)

QUESTION BANK

Q. 1	The crops grown between March - June are known as
A	Kharif crops
B	Summer crops
C	Zaid Crops
D	Both 2 & 3
Q. 2	The Crops Require one full year to complete its life cycle is known as...
A	Perennial crop
B	Annual Crop
C	Biennial crop
D	Bi-seasonal crop
Q. 3	Breeder seed is the progeny of
A	Foundation seed
B	Nucleus seed
C	Registered seed
D	Certified seed
Q. 4	Rate of photorespiration is high in....
A	C3 plants
B	C4 Plants
C	CAM plants
D	C2 plants
Q. 5	Initial seed of an improved variety is called
A	Nucleus seed
B	Foundation seed
C	Breeder seed
D	Certified seed
Q. 6	Production of breeder seed in cotton requires an isolation distance of
A	20 metres
B	50 metres
C	30 metres
D	75 metres
Q. 7	Progeny of a nucleus seed is referred to as
A	Certified seed
B	Registered seed
C	Foundation seed
D	Breeder seed
Q. 8	The recommended ratio of male rows to female rows is in hybrid bajra production
A	2 to 4
B	4 to 8

C	1 to 2
D	3 to 6
Q. 9	Minimum isolation distance required in pearl millet for Hybrid seed production of foundation class is...
A	400 m
B	1000 m
C	200 m
D	100 m
Q. 10	Pollen producing plants observed in female lines or known as
A	A plants
B	B plants
C	Pollen shedders
D	R plants
Q. 11	Simultaneous flowering of male and female parent in seed production program.
A	Nicking
B	Synchronization
C	Synchrony
D	Planting ratio
Q. 12	The separation of seed field from the fields of other varieties or hybrids of the same crop or same variety or hybrids
A	Isolation
B	Roguing
C	Isolation Distance
D	Time isolation
Q. 13	..... is the female parent of CSH-1.
A	IS -84
B	CS 3541
C	CK – 60A
D	None of these
Q. 14	The planting ratio of male and female rows in seed production of commercial hybrid maize is ...
A	2 to 6
B	2 to 8
C	2 to 4
D	2 to 10
Q. 15	Adjustment in sowing dates of male and female parents in hybrid seed production is called as...
A	Staggered sowing
B	Nicking
C	Synchronization
D	Isolation
Q. 16	..... is a process of removing undesirable plants from seed production plot.
A	Field Inspection

B	Synchronization
C	Roguing
D	Rogue
Q. 17	.....methods are used to improve seed setting in rice crop.
A	Rope pulling
B	GA3 application
C	Leaf clipping
D	All of the above
Q. 18	..... line is used as female parent in hybrid seed production.
A	A line
B	C line
C	B line
D	R line
Q. 19	The planting ratio of male and female rows in seed production of hybrid Sorghum is
A	2 to 4
B	2 to 6
C	4 to 6
D	2 to 8
Q. 20	..... Line is a isogenic line of B line having only one gene difference.
A	R line
B	Inbred Line
C	Pure line
D	A line
Q. 21	The plant having morphological deviation from seed crop is known as....
A	Rogue
B	Offtype
C	Pollen shedder
D	Volunteer plant
Q. 22	The plant grown in seed field from previous harvest is a.....
A	Rogue
B	Offtype
C	Pollen shedder
D	Volunteer plant
Q. 23	The cross between two inbred line is a...
A	Single Cross
B	Three way cross
C	Double cross
D	Polycross
Q. 24	The planting ratio of male and female rows in seed production of hybrid Cotton is

A	1: 4
B	1:3
C	1:5
D	Both A and C
Q. 25	Exertion of panicle in hybrid seed production of rice can be enhanced by
A	Glutamic acid
B	Lactic Acid
C	Gibbrellic acid
D	Ethanol
Q. 26	The GOT is done for verification of
A	Physical purity
B	Germination %
C	Genetic purity
D	None
Q. 27	Type of seed for which seed certification is not necessary.
A	Certified Seed
B	Foundation Seed
C	Registered Seed
D	Breeder Seed
Q. 28	The standard for germination % (min.) for certified seed of Maize is
A	75
B	80
C	85
D	90
Q. 29	The standard for germination % (min.) for certified seed of Sorghum and Pearl millet is
A	75
B	70
C	90
D	85
Q. 30	Normally, male sterility in plants can be used to develop
A	Inbred lines
B	Hybrids
C	Purelines
D	Synthetic and composite varieties
Q. 31	Seed rate required for hybrid seed production of Sorghum is....
A	3.75 kg/ ha(Aline), 0.5 kg/ha (R line)
B	3.75 kg/ ha(Aline), 2.5 kg/ha (R line)
C	7.5 kg/ ha(Aline), 0.5 kg/ha (R line)
D	7.5 kg/ ha(Aline), 5 kg/ha (R line)
Q. 32	Bajra is a cross pollinated crops due to condition.
A	Protandry
B	Self Incompatibility

C	Protogyny
D	Monoceious
Q. 33	In hybrid seed production of sunflower, Female to male planting ratio is
A	4:1
B	3:1
C	2:1
D	8:2
Q. 34	First Hybrid variety of Pigeon pea in World is
A	ICPH - 8
B	ICPH 3762
C	ICPH 2740
D	ICPH 2671
Q. 35	Barnase gene induces..... in crop.
A	Fertility
B	Sterility
C	Partial sterility
D	none of these
Q. 36	.....is specific site location for binding barnase / barstar gene.
A	pSC101
B	TA29
C	pBR 322
D	none of these
Q. 37	..... male sterility is used in vegetatively propogated crop where seed is not a economic part.
A	CGMS
B	TGMS
C	GMS
D	CMS
Q. 38	.....type of male sterility is commonly used in hybrid seed production.
A	CGMS
B	GMS
C	CMS
D	PGMS
E	TGMS
Q. 39	CGMS is ist time reported by in 1944.
A	Shull
B	Jones
C	Stout
D	Jones and Devis
Q. 40	CGMS is 1st time observed in .....crop.
A	Potato
B	Sorghum

C	Onion
D	Radish
Q. 41	The pollen sterility which is caused by nuclear genes is termed as.....
A	GMS
B	CMS
C	CGMS
D	TrGMS
Q. 42	B line is a
A	Sterile line
B	Restorer line
C	Maintainer line
D	Multiline
Q. 43	The term Heterosis is coined by.....
A	Hull
B	G. H. Shull
C	Devenport
D	C. T. Patel
Q. 44	.....Male sterility results from interaction between Cytoplasmic and Nuclear genes.
A	GMS
B	CMS
C	CGMS
D	PGMS
Q. 45	.....line is used as female parent in hybrid seed production program.
A	R line
B	B line
C	A line
D	Pure line
Q. 46	Mendok is used in.....crop to induce Male sterility.
A	Sorghum
B	Wheat
C	Cotton
D	Rice
Q. 47	In hybrid seed production, .....is used as male parent.
A	A line
B	B line
C	R line
D	Inbred line
Q. 48	Male sterility is referred as.....
A	Interaction between cytoplasmic and nuclear genes.
B	Inability of pollen grains to fertilize the stigma of same flower
C	Pollen is absent or non functional
D	Pollen is viable and functional

Q. 49	The chemicals used to induce male sterility called as..
A	Male Gametocides
B	Male Sterilants
C	Pollenocide
D	All of these
Q. 50	In .....type of male sterility foreign gene is used for inducing male sterility.
A	Cytoplasmic male sterility
B	Chemically induced male sterility
C	Transgenic Male sterility
D	Thermosensitive genetic male Sterility
Q. 51	Male sterility is 1st time reported by
A	Koelruter
B	Stout
C	Jones and Davis
D	East and Mangeldorf
Q. 52	Hybrid between genetically different genotypes of same species is known as
A	Intra- specific hybrid
B	Intervarietal Hybrid
C	Intra - generic hybrid
D	Both 1 & 2
Q. 53	..... is a progeny of foundation seed.
A	Breeder seed
B	Nucleus seed
C	Certified seed
D	Truthful Seed
Q. 54	..... (1952) outlined the procedure for multiplication of nucleus seed.
A	Harrington
B	Kester
C	Hull
D	Roberts
Q. 55	Genetic constitution of hybrid varieties is...
A	Homozygous & homogeneous
B	Heterozygous & Homogeneous
C	Homozygous & heterogeneous
D	Heterozygous & heterogeneous
Q. 56	Hybrid Varieties are produced in....
A	Self Pollinated crops
B	Cross Pollinated crops
C	Asexually propogated plants
D	Both 1&2
Q. 57	Intra -specific Hybrids are always.....
A	Fully Sterile

B	Partially sterile
C	Partially Fertile
D	Fully Fertile
Q. 58	The line developed by continuous self fertilization of a cross pollinated species followed by selection is known as...
A	Pure line
B	Inbred Line
C	B line
D	A line
Q. 59	The average performance of an inbred line in a series of crosses with other inbred lines is referred as...
A	Combining ability
B	General combining ability
C	Specific combining ability
D	All of the above
Q. 60	..... are the genetic causes of varietal deterioration.
A	Mutation
B	Developmental Variation
C	Natural crossing
D	All of them
Q. 61	Developmental Variations may arise as....
A	Same Growth Response
B	Differential Growth response
C	Systematic growth response
D	Synchronized growth response
Q. 62	The minimum Isolation distance require for hybrid rice production is..
A	100 m
B	200 m
C	3 m
D	5 m
Q. 63	The Female to male planting ratio adopted in hybrid sunflower crop is...
A	4:1
B	5:1
C	3:1
D	8:2
Q. 64	The cross between an inbred line and Open pollinated variety is termed as...
A	Single cross
B	Top cross
C	Double top cross
D	Three way cross
Q. 65	Rice is highly..... crop.
A	Self Pollinated

B	Cross Pollinated
C	Often Cross pollinated
D	Asexually propagated
Q. 66	Proper synchronization of flowering of male and female in hybrid seed production of sorghum is achieved by...
A	Rope Pulling
B	Leaf clipping
C	Staggered Sowing
D	Spray of Gibbrellic acid
Q. 67	Cross pollinated crops required .....isolation distance than self pollinated crops in hybrid seed production.
A	Equal
B	Lower
C	Higher
D	Same
Q. 68	AOSCA stands for
A	Association of Official Seed Certification Agency
B	Association of Seed Corporation Agency
C	Agency of Seed Certification Association
D	None of These
Q. 69	The seeds Act 2004 includes
A	Agriculture
B	Forestry
C	Horticulture
D	All of these
Q. 70	The seeds Act 2004 includes
A	Plantation crops
B	Aromatic plants
C	Medicinal plants
D	All of these
Q. 71	The seeds Act 2004 permits sale of
A	Non-branded seeds
B	Truthfully labelled seeds
C	Certified seeds
D	All of these
Q. 72	Compulsory licence has to be obtained by
A	Seed dealers
B	Seed-sellers
C	Seed growers
D	All of these
Q. 73	Basic requirements for registration under PPV & FR Act are

A	Novelty and Distinctiveness
B	Uniformity
C	Stability
D	All of these.
Q. 74	Farmers can sell seeds matching to certified seeds in terms of
A	Germination
B	Genetic purity
C	Physical purity
D	All of these
Q. 75	As per the Seeds Act 2004, the variety of field crops can be registered for
A	5 years
B	10 years
C	15 years
D	20 years
Q. 76	The variety of perennial crops can be registered for
A	10 years
B	18 years
C	15 years
D	20 years
Q. 77	The PPV & FR Act 2001 was approved in
A	1999
B	2001
C	2004
D	2005
Q. 78	The PPV & FR Act 2001 provides for protection of
A	Plant varieties
B	Farmers' rights
C	Plant breeders'rights
D	All of these
Q. 79	The headquarter of PPV & FR Authority is located in
A	New Delhi
B	Kolkatta
C	Chennai
D	Hyderabad
Q. 80	The PPV & FR Act 2001 provides rights to breeders for their varieties to
A	Produce
B	Sell

C	Market
D	All of these
Q. 81	A PBRs holder of a variety can
A	Distribute seeds
B	Import seed
C	Export seeds
D	All of these
Q. 82	For their farm produce farmers have rights to
A	Save
B	Use
C	Sow
D	All of these
Q. 83	The Plant Breeders' Rights Act provides
A	Breeders' exemptions
B	Farmers' exemptions
C	A and B both
D	None of these
Q. 84	The Farmers' rights are also known as
A	Farmers' privilege
B	Farmer's exemptions
C	a and b both
D	None of these
Q. 85	Plant breeders' rights are also known as
A	Breeders' privilege
B	Research exemptions
C	a and b both
D	None of these
Q. 86	PBR can be granted to
A	Breeder of a variety
B	Legal owner of a variety
C	a and b both
D	None of these
Q. 87	PBRs may lead to
A	Unhealthy practices
B	Increase in price
C	Monopoly
D	All of these
Q. 88	PBR may lead to
A	Faster development of seed industry.
B	Improvement in quality because of competition.

C	Reduction in genetic variability.
D	All of these
Q. 89	During ploidy there is a change in the
A	Number of chromosomes
B	Arrangement of genes
C	Number of genes
D	Arrangement of chromosomes
Q. 90	The term genome refers to the
A	Haploid set of chromosomes
B	Diploid set of chromosomes
C	Triploid set of chromosomes
D	Tetraploid set of chromosomes
Q. 91	The addition or deletion of one or more chromosomes in a set is referred as
A	Aneuploidy
B	Deletion
C	Inversion
D	Translocation
Q. 92	The chromosomal condition of $2n-2$ is called
A	Tetrasomic
B	Polysomic
C	Nullisomic
D	Monosomy
Q. 93	Haploid plants can be obtained from
A	Anther culture
B	Bud culture
C	Leaf culture
D	Root culture
Q. 94	Guha and Maheshwari 1 st reported Haploid plant production from anthers of.....
A	Nicotiana tabaccum
B	Datura inoxia
C	Hordeum bulbosum
D	Triticum aestivum
Q. 95	Bulbosum techniques is used for
A	Haploid Production
B	Mutation
C	Transgenic
D	None of These
Q. 96	Androgenesis refers to...
A	Induction and regeneration of haploids and DH from male gametic cells

B	Induction and regeneration of haploids and DH from female gametic cells
C	Induction and regeneration of haploids and DH from somatic cells
D	All of these
Q. 97	Androgenesis includes
A	Anther Culture
B	Pollen culture
C	Ovule culture
D	Both A and B
Q. 99	Nitsch's culture techniques is used for
A	Pollen culture
B	Ovule culture
C	Embryo culture
D	Anther culture
Q. 100	An individual with gametic chromosome number in its somatic cells is
A	Haploid
B	Diploid
C	Polyploidy
D	Aneuploid

List of some Abbreviations used

AASCO - Association of American seed control officials

AICRP- All India coordinated Research project.

AOSA- Association of official seed Analysis.

AOSCA- Association of official seed certifying Agencies.

ASTA - American Seed Trade Association

ARS - Agriculture Research station.

CSC - Central seed Committee

CSCC - Central Seed certification Board

CSTL - Central seed Testing Laboratory

FAO - Food and Agriculture Organization

FIST - Federation of International seed Trade

GOT - Grow out Test

IARI - Indian Agriculture Research Institute

IBPGRI - International Board for plant Genetic Research Institute

ICAR - Indian council of Agriculture Research

ICIA - International crop Improvement Association.

ISO - International Standard Organization.

ISST - Indian society of seed Technology

ISTA - International seed Testing Association

MSSC - Maharashtra state seed corporation

MSSC - Maharashtra state seed certification Agency.

NCS - National Seed corporation

NSDC - National seed Development council

NSP National seed programs

NSSL National seed storage Laboratory

NSRS National seed Reasrch stock

SCA Seed certification Agency

SCST Society of Commercial Seed Technologists

SIDP Seed Improvement and Development Programme

SPP Seed processing plant

SRT Seed Review Team

SSC State seed corporation

SSCA State seed certification Agency

SSTL State seed Testing Laboratory

STL Seed Testing Laboratory

STO Seed Testing Officer

TSF Taluka seed farm

CVRC – Central Variety release committee

SVRC – State Variety release committee

AVT – Advanced Varietal Trial

IVT – Initial Varietal Trial

CVT – Coordinated Varietal Trial

AICCIP – All India Coordinated Crop Improvement Projects