

Test Booklet No. _____

This booklet consists of 100 questions and 11 printed pages.

RGUCET/2024/___/___

Series

NIL

RGUCET 2024
Common Entrance Test, 2024

MASTER OF SCIENCE (GENETICS AND PLANT BREEDING)

Full Marks: 100

Time: 2 Hours

Roll No.

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Day and Date of Examination: _____

Signature of Invigilator(s) _____

Signature of Candidate _____

General Instructions:

PLEASE READ ALL THE INSTRUCTIONS CAREFULLY BEFORE MAKING ANY ENTRY.

1. DO NOT OPEN THIS TEST BOOKLET UNTIL YOU ARE TOLD TO DO SO.
2. Candidate must write his/her Roll Number on the space provided.
3. This Test Booklet contains 100 Multiple Choice Questions (MCQs) from the concerned subject. Each question carries 1 mark. There shall be negative marking of 0.25 against each wrong attempt.
4. Please check the Test Booklet to verify that the total pages and total number of questions contained in the test booklet are the same as those printed on the top of the first page. Also check whether the questions are in sequential order or not.
5. Candidates are not permitted to enter into the examination hall after the commencement of the entrance test or leave the examination hall within one hour thirty minutes.
6. Making any identification mark in the OMR Answer Sheet or writing Roll Number anywhere other than the specified places will lead to disqualification of the candidate.
7. Candidates shall maintain silence inside and outside the examination hall. If candidates are found violating the instructions mentioned herein or announced in the examination hall, they will be summarily disqualified from the entrance test.
8. In case of any dispute, the decision of the Entrance Test Committee shall be final and binding.
9. The OMR Answer Sheet consists of two copies, the Original copy and the Student's copy.

1	At present father's age is thrice of son's age. After 15 years father's age will be double of son's age. What is son's present age?				
	a)16 years	b)15 years	c)12 years	d)10 years	b
2	If in a code language CRACKS is written as DQBBLR, then how would SPROUT be written in that same code language?				
	a) TOSNVS	b) TQSPVU	c) TQSNVS	a) TOSNVS	a
3	A train travels 360 km in 6 hours, including two stops of 15 minutes each. What is the average speed of the train in km/h for the entire journey, considering the stops?				
	a) 55 km/h	b) 80 km/h	c) 65 km/h	d) 90 km/h	Answer c
4	The circumference of a circle is equal to the perimeter of a square. If the radius of the circle is 8 cm, what is the area of the square?				
	a) $16\pi^2 \text{ cm}^2$	b) $32\pi^2 \text{ cm}^2$	c) $4\pi^2 \text{ cm}^2$	d) $8\pi^2 \text{ cm}^2$	a)
5	The digit in the unit's place of the product $81 \times 82 \times 83 \times 84 \times \dots \times 99$ is				
	a) 0	b) 4	c) 6	d) 8	a
6	Silicon city of India				
	a) Bangalore	b) Goa	c) Jaipur	d) Delhi	a
7	The tropic of cancer does not pass through which of these Indian states?				
	a) Madhya Pradesh	b) West Bengal	c) Rajasthan	d) Odisha	d
8	Fathometer is used to measure				
	a) Earthquakes	b) Rainfall	c) Ocean depth	d) Sound intensity	c
9	Wake up India book was written by				a
	a) Annie Besant	b) Helen Keller	c) Javed Akhtar	d) Lisa Ray	
10	The world's only floating lake (Loktak lake) is located in				
	a) Meghalaya	b) Srinagar	c) Manipur	d) Kerala	c)
11	Which among the following trophies is related to badminton?				
	a) Ranji	b) Santosh	c) Agha Khan	d) Uber Cup	d)
12	Match the followings				
	A)Kuchipudi		i) Tamil Nadu		
	B)Sattriya		ii) Andhra Pradesh		
	C)Bharatnatyam		iii) Kerala		
	D)Mohiniyattam		iv) Assam		
	a) A- iii	B- i	C- iv	D- ii	b)
	b) A- ii	B- iv	C- i	D- iii	
	c) A- i	B- ii	C- iii	D-iv	
	d) A- iv	B- i	C- ii	D- iii	
13	Two coins are tossed simultaneously, what is the probability of getting at least one head?				
	a) 1/2	b) 3/4	c) 1/4	d) 1/3	b)
14	Choose the sentence with the correct use of the past perfect tense				
	a) She had went to the store before it closed.	b) She had gone to the store before it closed	c) She had went to the store before it close.	d) She had went to the store before it closes.	b)
15	Choose the word that is a synonym for "exquisite"				
	a) Ordinary	b) Mediocre	c) Beautiful	d) Ugly	c)

16	Statement: All dogs are mammals. Conclusion: Some mammals are dogs.				
	a) Logically true	b) Logically false	c) Uncertain	d) Inconclusive	Answer b
17	What is the antonym of 'Ancient'?				
	a) Modern	b) Old	c) Historic	d) Primitive	a
18	Choose the correct option i) Vitamins are essential inorganic compounds required in small amounts for various physiological functions in the body. ii) There are two main categories of vitamins: fat-soluble vitamins and water-soluble vitamins iii) Vitamin B1 deficiency causes beriberi disease iv) Vitamin D, K, E, A are water soluble vitamins				
	a) Only ii	b) ii and iii	c) Only iii	d) i and iv	b)
19	Match List I with List II				
	List I		List II		
	A. Environment Protection Act		I. 1974		
	B. Air Prevention & Control of Pollution Act		II. 1987		
	C. Water Act		III. 1986		
	D. Amendment of Air Act to include noise as an air pollutant		IV. 1981		
	Choose the correct answer from the options given below:				
	a) A-III, B-IV, C-II, D-I	b) A-IV, B-I, C-II, D-III	c) A-III, B-IV, C-I, D-II	d) A-I, B-III, C-II, D-IV	d
20	Match the following:				
	A. Blue revolution		i. Oil seeds		
	B. yellow revolution		ii. Aquaculture		
	C. Pink revolution		iii. meat		
	D. white revolution		iv. milk		
	a) A-iv, B-iii, C-i, D-ii	b) A-ii, B-iii, C-iv, D-i	c) A-iv, B-iii, C-ii, D-i	d) A-ii, B-i, C-iii, D-iv	d
21	Growth of a cash outlay is also known as				
	a) Compound interest	b) Discounting	c) Rate of interest	d) Profit	a
22	Match the following:				
	E. Processing		v. Specification of goods		
	F. Packaging		vi. Form Utility		
	G. Storage		vii. Time Utility		
	H. Standardization		viii. Wrapping of goods		
	a) A-ii, B-iv, C-iii, D-i	b) A-iv, B-iii, C-i, D-ii	c) A-iv, B-ii, C-iii, D-i	d) A-i, B-iii, C-ii, D-iv	a
23	Which of the following is not an administered price				
	a) Procurement price	b) MSP	c) Equilibrium Price	d) Issue price	c
24	When prices of goods fall, the total expenditure on inelastic goods will				
	a) Increase	b) Decrease	c) Not change	d) Not be affected	b
25	Market where buyers and sellers are drawn from around the globe is called				

	a) Spot market	b) Seaborard market	c) World market	d) Regulated market	c
26	The first nationalization of banks happened on				Answer option
	a) 29 th July 1996	b) 16 th July 1996	c) 15 th April 1969	d) 19 th July 1969	d
27	Mark true or false A. A data set cannot have more than one mode B. Mean is a measurement of dispersion C. Median is not a measurement of central tendency				
	a) A-False; B-False; C- false	b) A-False; B- False; C-True	c) A- False; B- True; C- False;	d) A-True; B-True; C- False	a
28	Two statements labelled as Assertion (A) and Justification (B) are given. Read both the statements carefully and select the correct answer with the help of the codes. Assertion (A): The marginal product of a factor of production is the change in total product resulting from a one-unit increase in the quantity of that factor, holding all other factors constant. Justification (B): The marginal product of a factor of production shows how much the total product increases or decreases as one more unit of the factor is employed, keeping other factors fixed.				
	a) Both A and B are true and B is the correct justification for A	b) Both A and B are true, but B is not the correct justification for A	c) A is false, but B is true	d) Both A and B are false	Answer a
29	Cannons of taxation are enunciated by				
	a) Adam Smith	b) J. M. Keynes	c) Karl Marx	d) Milton Friedman	Answer a
30	Malthusian theory of population is _____ in its approach				
	a) Optimistic	b) Pessimistic	c) Negative	d) Neutral	Answer b
31	Price elasticity of demand of food products is generally				
	a) Infinite	b) Less elastic	c) More elastic	d) Zero	Answer b
32	Match the following terms with their definitions				
	Term		Definition		
	A. Average Cost (AC)		i) Total cost per unit of output produced.		
	B. Marginal Cost (MC)		ii) Change in total cost due to a change in one unit of production.		
	C. Average Fixed Cost (AFC)		iii) Total fixed cost per unit of output produced.		
	D. Average Variable Cost (AVC)		iv) Total variable cost per unit of output produced.		
	a) A - (iii), B - (ii), C - (i), D - (iv)	b) A - (i), B - (ii), C - (iii), D -	c) A - (i), B - (iii), C - (ii), D - (iv)	d) A - (iv), B - (i), C - (ii), D -	Answer b

		(iv)		(iii)	
33	Price discrimination is seen in _____ market situation				
	a) Duopoly	b) Oligopoly	c) Monopoly	d) Perfect competition	Answer c
34	Utility in economics refers to				
	a) Usefulness	b) Pleasure	c) Satisfaction	d) Want satisfying power	Answer d
35	Choose the correct match for depth of tillage according to CRIDA:				
	A. Medium		i. >30 cm depth		
	B. Very deep		ii. 5-6 cm depth		
	C. Deep		iii. 15-20 cm depth		
	D. Shallow		iv. 25-30 cm depth		
	a) A-i, B-ii, C-iii, D-iv	b) A-iii, B-iv, C-ii, D-i	c) A-iii, B-ii, C-iv, D-i	d) A-iii, B-i, C-iv, D-ii	d)
36	The most common irrigation methods for field crop is:				
	a) Basin method	b) Check basin method	c) Border strip method	d) Furrow method	b)
37	Which of the following nutrient is immobile in plants?				
	a) P	b) Ca	c) Zn	d) Fe	b)
38	Which of the following statements is/are true? A. Weeds are prolific breeder and seeder. B. Weed seeds have shorter viability. C. Weed seeds remain dormant for longer time. D. Weeds are less competitive than crops.				
	a) Both A&C	b) Only A	c) Both B&C	d) Only D	a)
39	<i>Beushening</i> is a practiced followed in which crop				
	a) Wheat	b) Maize	c) Paddy	d) Millets	c)
40	Given below are two statements: one is labelled as Assertion A and the other as Reason R . Assertion A: Crown root initiation is the most critical stage for wheat crop Reason R: Irrigation is not required in crown root initiation stage In the light of the above statement, choose the correct answer from the options given below:				
	a) Both A and R are true and R is not the correct explanation of A	b) Both A and R are true and R is the correct explanation of A	c) A is true but R is false	d) R is true but A is false	c)
41	The term <i>Agronomy</i> is derived from which word/words				
	a) Latin	b) Greek	c) Both a & b	d) Anglo-Saxon	b)
42	The concept of sustainable development is intertwined with which of the following principles?				
	a) Social justice and empowerment	b) Inclusive growth	c) Globalisation	d) Carrying capacity	Answer : a
43	Which of the following schemes supports organic farming endeavours?				
	a) Paramparik Krishikaran Yojna	b) Paramparagat Krishi Vikas	c) Prayogiti Krishi Vikas Yojna	d) Khushal Kheti Yojna	Answer :b

		Yojna			
44	Which of the following crop is grown as a trap crop in tomato for management of <i>Helicoverpa armigera</i>				
	a) Marigold	b) Mustard	c) Rose	d) Castor	Answer : a
45	<p>Given below are two statements, one is labelled as Assertion A and the other is labelled as Reason R</p> <p>Assertion A: The temperature increases with increasing height in the stratosphere.</p> <p>Reason R: Ozone absorbs ultra violet radiation in the stratosphere and makes it warm.</p> <p>In light of the above statements, choose the correct answer from the options given below</p>				
	a) Both A and R are true and R is the correct explanation of A	b) Both A and R are true but R is NOT the correct explanation of A	c) A is true but R is false	d) A is false but R is true	Answer : a
46	The value of NDVI ranges from				
	a) 0 to 1	b) -1 to 0	c) -1 to +1	d) None of these	Answer : c
47	The term 'LEISA' is related to				
	a) Precision farming	b) Organic farming	c) Conventional farming	d) Hill farming	Answer : b
48	Photothermal unit is the product of.....and corresponding day length for the particular day.				
	a) Maximum temperature	b) Growing Degree Days	c) Minimum temperature	d) Daily Sunshine hours	Answer : b
49	Which of the following is used in nutritional studies?				c
	a) Ants	b) Blow flies	c) Cockroaches	d) Dragonflies	
50	Trilobites were found in the period of				
	a) Carboniferous	b) Devonian	c) Palaeozoic	d) Silurian	c
51	Which caste of the termite causes damage to crops?				
	a) King	b) Queen	c) Worker	d) Soldier	c
52	Which of the following is called the resting and inactive stage in the insect life cycle?				c
	a) The Egg stage	b) The Larva stage	c) The pupa stage	d) The Adult stage	
53	Which of the following insects is the carrier of grassy stunt pathogenic virus?				c
	a) Red ants	b) Pink ants	c) Leafhoppers	d) All of the above	
54	<p>Given below are two statements:</p> <p>Statement I: Dusky cotton bug is also pest on Bhendi</p> <p>Statement II: Damaging stahe is both nymph and adult</p> <p>In light of the above statements, choose the most <i>appropriate</i> answer from the options given below:</p>				
	a) Both Statement I and Statement II are correct	b) Both Statement I and Statement II are incorrect	c) Statement I is correct but Statement II is incorrect	d) Statement I is incorrect but Statement II is correct	a

55	Match List I with List II				
	List I		List II		
	A. Water sticks		I. Hydrometridae		
	B. Gerridae		II. Water striders		
	C. Natonectidae		III. Back Swimmers		
	D. Nepidae		IV. Water Scorpions		
	Choose the correct answer from the options given below:				
	a). A - 1, B - 2, C -3 ,D -4,	b). A - 2, B - 1, C -3 ,D -4,	c). A - 3, B - 2, C -31 ,D -4,	d). A - 4, B - 2, C -3 ,D -1,	a
56	Assertion (A)- The deficiency symptoms of N, P and Mg are visible first in senescent leaves Reason (R)- Elements like N, P and Mg are mobile Which of the following is correct.				
	a) Both A and R are true and R is the correct explanation of A.	b) Both A and R are true but R is not the correct explanation of A.	c) A is true but R is false.	d) A is false but R is true.	a
57	Which of the following structures is not the part of the insects head capsule?				c
	a) Vertex	b) Antennae	c) Pronotum	d) Tentorium	
58	Insects are classified into the phylum				c
	a) Nematoda	b) Mollusca	c) Arthropoda	d) Platyhelminthes	
59	Which of the following statements is true about Entomology?				b
	a) The study of Birds	b) The study of Insects	c) The study of Microbes	d) The study of Parasitic worms	
60	Which of the following statements is true about the holometabolous insects?				a
	a) These insects undergo complete metamorphosis	b) These insects undergo incomplete metamorphosis	c) Both A and B	d) None of the above	
61	Aphid, small, sap-sucking insects are examples of				b
	a) Oviparous	b) Viviparous	c) Paedogenesis	d) Parthenogenesis	
62	Insects breathe through				c
	a) Gills	b) Nostrils	c) Spiracles	d) None of the above	
63	What is the ratio of inhibitory gene action?				
	a) 13:3	b)15:1	c) 9:3:4	d)9:3:3:1	(a)
64	Nullisomy is represented by				
	a) $2n + 2$	b) $2n-1$	c) $2n-2$	d) $2n + 1+1$	(c)
65	Number of anthers present in rice, maize, wheat respectively				
	a) 3, 6, 3	b) 6, 4, 3	c)6, 3, 3	d) 6, 3, 4	(c)
66	U's triangle was given by				

	a) C.T. Patel	b) Pushkarnath	c) Nagaharu	d) Ramaiah	(c)
67	“FLAVR SAVR” a transgenic variety which has delayed ripening trait belongs to				
	a) Tobacco	b) Tomato	c) Pepper	d) Papaya	(b)
68	Match the following				
	A Wheat seed		I gluten		
	B Wheat protein		II Caryopsis		
	C Tetraploid wheat		III T. monococcum		
	D Diploid wheat		IV T. dicoccum		
	a) A-I B-II C-IV D-III	b) A-II B-I C-IV D-III	c) A-I B-II C-III D-IV	d) A-IV B-II C-III D-I	(b)
69	Self-incompatibility promotes				
	a) Allogamy	b) Autogamy	c) Homogamy	d) Chasmogamy	(a)
70	Mutation theory was given by				
	a) Bateson	b) Hugo de Vries	c) Correns	d) Mendel	(b)
71	True /False statements: A. IPGRI (International Plant Genetic Resource Institute) is located at – Rome B. NBPGR (National Bureau of Plant Genetic Resources) is located at- New Delhi C. Directorate of Plant Protection Quarantine and Storage is located at - Faridabad				
	a) Only A True	b) Only B True	c) Both A and C True	d) A, B and C True	(d)
72	Assertion and justification A: Assertion- Plant breeding is now increasingly being carried out by using molecular genetic tools. B: Justification- Advancement in genetics, molecular biology are being used today for crop improvement activities.				
	a) Both A and B are correct and B explains A	b) Both A and B are correct, but B does not explain A.	c) A is correct, While B is not.	d) A is incorrect, but B is correct	(a)
73	The term heterosis was coined by				
	a) East (1908)	b) Shull (1914)	c) Hull (1945)	d) Davenport (1908)	(b)
74	Source of dwarfing gene in wheat is				
	a) Dee-gee-woo-gen	b) Norin-10	c) Tift23A	d) Both a & b	(b)
75	In inter locus interaction, the gene whose effect is masked is termed as				
	a) Dominant gene	b) Hypostatic gene	c) Epistatic gene	d) Recessive gene	(b)

76	Assertion and justification A: Assertion- Oil content of safflower has increased from 37 % to 50 %. B: Justification- Increase in oil content has been due to breeding for reduced hull content.				
	a) Both A and B are correct, but B does not explain A.	b) Both A and B are correct and B explains A	c) A is correct, while B is not.	d) A is incorrect, but B is correct	(b)
77	Which method is effective for managing plant diseases caused by nematodes?				
	a) Using resistant varieties	b) Spraying insecticides	a) Removing affected parts	d) Applying fungicides	b
78	Which of the following is a bacterial disease in plants?				
	a) Fire blight	b) Potato blight	c) Corn smut	d) Wheat rust	a
79	Which disease is known for causing the 'Great Irish Famine'?				
	a) Apple scab	b) Citrus canker	c) Potato blight	d) Wheat rust	c
80	What type of pathogen is primarily responsible for causing 'smut' in cereals?				
	a) Bacteria	b) Virus	c) Fungi	d) Nematodes	c
81	What is the primary vector for the spread of plant viruses?				
	a) Wind	b) Water	c) Insects	d) Soil	c
82	Antimicrobial compounds present in plant prior to infection by pathogens are known as?				
	a) Phytoalexin	b) Pathotoxin	c) Phytoanticipin	d) Phytotoxin	c
83	Antibiotic used against rice blast pathogen is? a. Streptomycin b. Blastidicin c. Tetracycline d. Aureofungin				
	a) a and c	b) only b	c) b and d	d) only d	b
84	Fungicide which is known as Kittleson's Killer? a. Captan b. Thiram c. Metalaxyl d. Carbendazim				
	a) a and b	b) b and d	c) only a	d) only d	a
85	Which fungal pathogen causes coffee leaf rust, severely impacting coffee production globally?				
	a) <i>Hemileia vastatrix</i>	b) <i>Botrytis cinerea</i>	c) <i>Fusarium oxysporum</i>	d) <i>Ophiostoma novo-ulmi</i>	a
86	Match the pairs				
	A. Buttoning of cauliflower		I. Boron		
	B. Top Sickness of Tobacco		II. Zinc		
	C. Little leaf of Mango		III. Calcium		
	D. Blossom end rot of Tomato		IV. Nitrogen		
	a) A-I, B-III, C-II, D-IV	b) A-IV, B-I, C-II, D-III	c) A-II, B-I, C-III, D-IV	d) A-I, B-IV, C-II, D-III	b

87	Which management strategy involves growing different types of crops in succession to reduce pest incidence?				
	a) Monoculture	b) Polyculture	c) Crop rotation	d) Intercropping	c
88	Match the pairs				
	A. Father of Seed Pathology		I. S.A. Waksman		
	B. Father of Soil Microbiology		II. Robert Hartig		
	C. Father of Forest Pathology		III. E.F. Smith		
	D. Father of Plant Bacteriology		IV. Paul Neergard		
	a) A-I, B-III, C-II, D-IV	b) A-IV, B-I, C-II, D-III	c) A-II, B-I, C-III, D-IV	d) A-I, B-IV, C-II, D-III	b
89	Chemicals used in reducing the phytotoxicity of another chemical are?				
	a. Sticker b. Spreader c. Safener d. Wetter				
	a) a and b	b) b and c	c) only c	d) c and d	c
90	There are two statements marked as Assertion (A) and Reason (R). Mark your answer as per the codes provided below				
	A: Dimethyl Sulfoxide is a Cryo-protectants R: It lowers the melting point of water on dissolving and hence protects the cells.				
	(a) Both A and R are true and R is the correct explanation of A. (b) Both A and R are true but R is not the correct explanation of A. (c) A is true but R is false. (d) A is false but R is true.				
	a)	b)	c)	d)	a
91	Broomrape is a phanerogamic parasite which is				
	a. Holo root parasite b. Semi root parasite c. Holo stem and root parasite d. Semi stem and root parasite				
	a) Only a	b) c and a	c) only b	d) b and d	a
92	The sexual spores in white rust fungi are?				
	a) Zoospores	b) Basidiospores	c) Oospores	d) Sporangia	c
93	What symptom is indicative of a plant suffering from a virus?				
	a) Leaf curl	b) Leaf scorch	c) Wood rot	d) Root nodules	a
94	Swelling and Shrinking is a morphological process in				
	a) Red Soil	b) Black soil	c) Laterite soil	d) Alluvial Soil	b
95	Which is/are Igneous rock?				
	A. Basalt B. Shale C. Slate				

	D. Marble E. Dolomite Choose the correct answer from the option below:				
	a) A & B	b) A, B, C	c) D & E	d) A only	d
96	For determination of pH soil water suspension ratio is				
	a) 1:2	b) 1:2.5	c) 1:4	d) 1:6	b
97	Number of orders in soil taxonomy?				
	a) 10	b) 11	c) 8	d) 12	d
98	A layer of soil approximately parallel to the soil surface produced by the soil forming factors is called as				
	a) Soil Profile	b) Pedon	c) Polypedon	d) Soil horizon	d
99	The process of ammonification and nitrification are collectively called as				
	a) N fixation	b) Mineralization	c) Immobilization	d) Demineralization	b
	Consider the following type of erosion A. Gully erosion B. Splash Erosion C. Rill Erosion D. Sheet Erosion The correct sequence in terms of the increasing order of soil loss from the field due to this type of erosion is				
	a) B, D, C, A	b) B, A, C, D	c) A, B, C, D	d) D, B, C, A	a
100	What is the optimum pH for the availability of most of plant nutrients?				
	a) 5.0-6.0	b) 6.5-7.5	c) 4-5	d) 8-9	b