

Test Booklet No. _____

This booklet consists of 100 questions and 16 printed pages.

RGUCET/2024/___/___

Series

NIL

**RGUCET 2024
Common Entrance Test, 2024**

MASTER OF SCIENCE (BOTANY)

Full Marks: 100

Time: 2 Hours

Roll No.

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Day and Date of Examination: _____

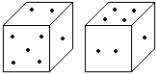
Signature of Invigilator(s) _____

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	What is the probability of getting a sum of at least 9 from two throws of a dice?				Answer option (a,b,c or d)																											
	a) 1/8	b) 1/9	c) 1/12	d) 5/18	d) 5/18																											
2	The angle of elevation of a ladder leaning against a wall is 60° and the foot of the ladder is 8m away from the wall. The length of the ladder is:				Answer option (a,b,c or d)																											
	a) 12m	b) 16m	c) 4m	d) 14m	b																											
3	The total surface area of a cylinder whose radius is $1/2$ of its height is																															
	a) $\pi h^2/2$	b) $2\pi h^2/2$	c) $3\pi h^2/2$	d) $4\pi h^2/2$	c																											
4	If x, y are two positive real number and $x^{1/2} = y^{1/5}$, then which of the following relations is true?				Answer option (a,b,c or d)																											
	a) $x^3 = y$	b) $y^3 = x$	c) $x^{20} = y^8$	d) $x^{25} = y^{15}$	c																											
5	If the arithmetic mean of $x, x+3, x+6, x+9$ and $x+12$ is 10, then x is				Answer option (a,b,c or d)																											
	a) 1	b) 2	c) 6	d) 4	(d)																											
6	If ABC is an equilateral triangle and P, Q, R respectively, denote the middle points of AB, BC, CA then, which of the following statements is/are true. A. PQR must be an equilateral triangle B. $PQ+QR+PR=AB$ C. $PQ+QR+PR=2AB$ D. PQR must be a right-angled triangle				Answer option (a,b,c or d)																											
	a) Only A	b) A & B	c) B & C	d) Only D	(a)																											
7	<table border="1" style="display: inline-table; margin-right: 20px;"> <tbody> <tr><td>6</td><td>9</td><td>10</td></tr> <tr><td>4</td><td>7</td><td>15</td></tr> <tr><td>5</td><td>8</td><td>14</td></tr> </tbody> </table> <table border="1" style="display: inline-table; margin-right: 20px;"> <tbody> <tr><td>5</td><td>9</td><td>12</td></tr> <tr><td>10</td><td>11</td><td>8</td></tr> <tr><td>2</td><td>3</td><td>20</td></tr> </tbody> </table> <table border="1" style="display: inline-table;"> <tbody> <tr><td>4</td><td>12</td><td>13</td></tr> <tr><td>5</td><td>11</td><td>18</td></tr> <tr><td>6</td><td>10</td><td>?</td></tr> </tbody> </table> <p>Find the missing number.</p>				6	9	10	4	7	15	5	8	14	5	9	12	10	11	8	2	3	20	4	12	13	5	11	18	6	10	?	Answer option (a,b,c or d)
6	9	10																														
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10	11	8																														
2	3	20																														
4	12	13																														
5	11	18																														
6	10	?																														
	a) 17	b) 27	c) 31	d) 16	(a)																											
8	The profit earned after selling an article for Rs. 625 is the same as the loss incurred after selling the article for Rs. 435. What is the cost of the article?				Answer option (a,b,c or d)																											
	a) Rs. 540	b) Rs. 550	c) Rs. 530	d) Rs. 520	(c)																											
9	Two positions of dice are shown below. How many points will appear on the opposite to the face containing 4 points? 																															
	a) 1	b) 2	c) 5	d) None of these	c																											

10	If A is the brother of B; B is the sister of C; and C is the father of D, how D is related to A?				Answer option (a,b,c or d)
	a) Niece	b) Sister	c) Nephew	d) Cannot be determined	(d)
11	In which Indian state is the Flamingo festival celebrated?				Answer option (b)
	a) Assam	b) Andhra Pradesh	c) Manipur	d) Rajasthan	b) Andhra Pradesh
12	National Income estimates in India are prepared by:				Answer option (a)
	a) Central Statistical Organization	b) Indian Statistical Institute	c) Planning Commission	d) Reserve Bank of India	a) Central Statistical Organization
13	Which of the following newspaper was founded by Raja Ram Mohan Roy?				Answer option (c)
	a) Bombay Times	b) Bengal Gazette	c) Banga-Duta	d) None of the Above	c) Banga-Duta
14	DRDL stands for:				Answer option (b)
	a) Department of Research and Development Laboratory	b) Defence Research and Development Laboratory	c) Differential Research and Documentation Laboratory	d) Development of Research and Departmental Laboratory	b) Defence Research and Development Laboratory
15	What color does Yellow and Green make:				Answer option (b)
	a) Ocean Mist	b) Lime	c) Dark Green	d) Tangerine	b) Lime
16	Match each word with its part of speech:				Answer option d)
	A. verb		i. large		
	B. noun		ii. at		
	C. adjective		iii. teach		
	D. preposition		iv. dog		
	a) A-i, B-ii, C-iii, D-iv	b) A-ii, B-iv, C-i, D-iii	c) A-iii, B-i, C-ii, D-iii	d) A-iii, B-iv, C-i, D-ii	d) A-iii, B-iv, C-i, D-ii
17	The verb "to think" is never used in continuous tenses.				B. False

	a) True	b) False	c) Neither True nor False	d) Both A. and B.	b)
18	What is the most appropriate antonym of the word? Hiltherto				Answer option (b)
	a) Previous	b) Henceforth	c) Theretofore	d) retrospectively	b) Henceforth
19	The words in the given pairs, except one, bear a certain relationship. Choose the pair in which the words are differently related				Answer option c)
	a) Wood: Furniture	b) Wool: Pullover	c) Shoes: Socks	d) None of the above	c)Shoes: Socks
20	Choose the correct option and rearrange the following words or phrases to make meaningful sentences you/would/when/meet/her/she/know/did not				Answer option a)
	a) She did not know when you would meet her.	b) You did not know when she would meet her.	c) You did not know when she would meet her.	d) She did not know when you would meet her.	a) She did not know when you would meet her.
21	Which of the following is correct?				Answer option (a,b,c or d)
	a) Torus is related to Legume	b) Torus is related to central cone of Magnoliaceae	c)Torus is related Poaceae	d)None of the statements a-c is true	b
22	Match the following pairs:				Answer option (a,b,c or d)
	A. L.f.		i. JD Hooker		
	B. Hook.f		ii. Son of Carolus Linneaus		
	C. Robert Brown		iii. Carolus Linnaeus		
	D. L.		iv. R.Br		
	a). A=ii; B=i; C=iv; D=iii	b). A=iii; B=iv; C=ii; D=i	c). A=iii; B=iv; C=I; D=ii	d). A=iv; B=ii; C=iii; D=iv	a
23	Which of the following statement is true? A. <i>Pisum sativum</i> is belonging to Leguminosae family B. <i>Oryza sativa</i> is belonging to Fabaceae family C. <i>Oryza sativa</i> is belonging to Cyperaceae family D. <i>Oryza sativa</i> is belonging to Rubiaceae family				Answer option (a,b,c or d)
	a)A only	b) B only	c) Both A & B	d) Only C& D	a
24	Which of the following assertion and justification is correct? A: Assertion: Flora of British India is a global flora. B: Justification: Flora of British India was written JD Hooker				Answer option (a,b,c or d)

	a) Both A & B is correct	b) Only A is correct	c) Only B is correct	d) None of the above is correct	c
25	Which of the following statement is correct?				Answer option (a,b,c or d)
	a) Ginger belonging to Zingiberaceae	b) Ginger belonging to Musaceae	c) Ginger belonging to Commelinacea e	d) Ginger belonging to Orchidaceae	a
26	Which of the following is correct?				Answer option (a,b,c or d)
	a) Orchidaceae has labellum	b) Orchidaceae has no labellum	b) Orchidaceae has many stamens	d) None of the statements a-c is true	a
27	Match the following pairs:				Answer option (a,b,c or d)
	A. Tamarind		i. <i>Magnolia champaca</i>		
	B. Tita Champaca		ii. <i>Tamarindus indica</i>		
	C. Sal		iii. <i>Tectona grandis</i>		
	D. Teak		iv. <i>Shorea robusta</i>		
	a).A=iii; B=iv; C=ii; D=i	b). A=ii; B=i; C=iv; D=iii	c). A=iii; B=iv; C=I; D=ii	d). A=iv; B=ii; C=iii; D=iv	b
28	Which of the following statement is true:				Answer option (a,b,c or d)
	<p>A. ICN stand for international code of nomenclature of algae, fungi and plants</p> <p>B. ICN stand for international code of nomenclature</p> <p>C. ICN stand for international code of nomenclaturefor algae</p> <p>D. ICN stand for international code of nomenclature for fungi</p>				
	a) A only	b) B only	c) Both A & B	d) Only C& D	a
29	Which of the following assertion and justification is correct?				Answer option (a,b,c or d)
	<p>A: Assertion: Field and Herbarium Method was written by Jain & Rao (1976)</p> <p>B: Justification: It was published in year 1948</p>				
	a) Both A & B is correct	b) Only A is correct	c) Only B is correct	d) None of the above is correct	b
30	Which of the following statement is correct?				Answer option (a,b,c or d)
	a) Leguminosae is called Fabaceae	b) Leguminosae is called Poaceae	c) Leguminosae is Rutaceae	d) Leguminosae is called Clusiaceae	a
31	Which of the following assertion and justification is correct?				Answer option (a,b,c or d)
	A: Assertion: Liliaceae has hard petals				

	B: Justification: Liliaceae has soft and fleshy petals				
	a) Both A & B is correct	b) Only A is correct	c) Only B is correct	d) None of the above is correct	c
32	Orchid is				Answer option (a,b,c or d)
	a) advanced	b) primitive	c) Moderate	d) None	a
33	The lower group of plants have thallophytic plant bodies, autotrophic mode of nutrition with mostly starch as reserve food and water as an essential medium for fertilization.				b
	a) <i>Marchantia</i> and <i>Aspergillus</i>	b) <i>Spirogyra</i> and <i>Anthoceros</i>	c) <i>Zygnema</i> and <i>Agaricus</i>	d) <i>Polytrichum</i> and <i>Selaginella</i>	<i>Spirogyra</i> and <i>Anthoceros</i>
34	Which is the correct match:				c
	1. Citric acids		A. <i>Acidomonas</i>		
	2. Lactic acids		B. <i>Corynebacterium</i>		
	3. Acetic acids		C. <i>Aspergillus</i>		
	4. Glutamic acids		D. <i>Lactobacillus</i>		
	a) 1-A,2-B,3-C, 4-D	b)1-B, 2-C, 3-D, 4-1	c)1-C, 2-D, 3-A, 4-B	d)1-D, 2-A, 3-B, 4-C	1-C, 2-D, 3-A, 4-B
35	Choose the wrong answer from the given matches:				c
	A. <i>Lactobacillus acidophilus</i> – Use to treat bacterial infections B. <i>Lactobacillus salivarius</i> – Use to prevent lactose intolerance C. <i>Lactobacillus plantarum</i> – Use in delivery to support childbirth D. <i>Lactobacillus rhamnosus</i> – Use to treat traveler’s diarrhea				
	a) A	b) B	c) C	d) D	c
36	Assertion (A): Cyanobacteria are photosynthetic blue-green algae with prokaryotic structures. Justification (B): They are specifically blue-green due to the presence of photosynthetic pigments like chlorophyll a and b.				c
	a) Both A and B are correct and B is the correct explanation for A	b) Both A and B are correct but B is not the correct explanation for A	c) A is correct but B is incorrect	d) Both A and B are incorrect	
37	The members of different divisions of algae have no cell wall but the food reserve is mostly starch -				d
	a) Chlorophyta	b) Phaeophyta	c) Rhodophyta	d) Cryptophyta	Cryptophyta
38	Processed fruit juices in bottles are clearer than homemade fruit juice. The turbidity of homemade juice can be lower in the presence of enzymes given in the option-				b

	a) Cellulase and protease	b) Pectinase and protease	c) Hemicellulase and protease	d) Chitinase and protease	Pectinase and protease
39	Choose the correct pairing from the options given below:				c
	A. <i>Oedogonium</i> sp.		i. Stellate		
	B. <i>Vaucheria</i> sp.		i. Girdle		
	C. <i>Zygnema</i> sp.		i. Reticulate		
	D. <i>Ulothrix</i> sp.		i. Discoidal		
	a) A-i, B-ii, C-iii, D-iv	b) A-ii, B-iii, C-iv, D-i	c) A-iii, B-iv, C-i, D-ii	d) A-iv, B-i, C-ii, D-iii	A-iii, B-iv, C-i, D-ii
40	Type Questions here for True False statements: Select the correct genus among red algae showing triphasic and isomorphic alternation of generation in their life cycle-				c
	a) <i>Lemanea</i> sp.	b) <i>Batrachospermum</i> sp.	c) <i>Polysiphonia</i> sp.	d) <i>Nemalion</i> sp.	<i>Polysiphonia</i> sp.
41	Assertion (A): <i>Chara</i> sp. is a stonewort alga, the basal node of the branches of limited growth develops short, oval, pointed single-cell outgrowths called stipulodes. Justification (B): Sexual reproduction in <i>Chara</i> is mostly oogamous where gametes produced are dissimilar.				b
	a) Both A and B are correct and B is the correct explanation for A	b) Both A and B are correct but B is not the correct explanation for A	c) A is correct but B is incorrect	d) Both A and B are incorrect	Both A and B are correct but B is not the correct explanation for A
42	Which mechanism is strategically used to maximize light harvesting efficiency in fluctuating light environments, especially in the members of cyanobacteria and red algae having biliproteins as one of their photosynthetic pigment constituents-				a
	a) Chromatic adaptation	b) Photosynthesis mechanism	c) Eyespot and function	d) Heterocyst development	Chromatic adaptation
43	Fill in the blank with the appropriate word from the option given below: The wet heat sterilization technique is done in an autoclave at a specific temperature, and pressure -				b
	a) 120°C at 15 lb	b) 121°C at 15 lb	c) 120°C at 20 lb	d) 121°C at 20 lb	121°C at 15 lb
44	Germplasm can be stored at different temperatures. Accordingly, match the following storage temperature:				b
	A. Over solid carbon dioxide		i. -196°C		
	B. In the vapor phase nitrogen		i. -79°C		

	C. Low-temperature freezers	deep	-150°C		
	D. In liquid nitrogen		-80°C		
	a) A-i, B-ii, C-iii, D-iv	b) A-ii, B-iii, C-iv, D-i	c) A-iii, B-iv, C-i, D-ii	d) A-iv, B-i, C-ii, D-iii	A-ii, B-iii, C-iv, D-i
45	Match the correct information given in the table and choose the correct option:				
	A. Melchers (1978)		i. Auxin:cytokinin ratio		c
	B. Maheswari & Guha (1970)		ii. Father of Plant tissue culture		
	C. Skoog and Miller (1957)		iii. Pomato		
	D. Gottlieb Haberlandt (1902)		iv. Anther culture		
	a) A-i, B-ii, C-iii, D-iv	b) A-ii, B-iii, C-iv, D-i	c) A-iii, B-iv, C-i, D-ii	d) A-iv, B-i, C-ii, D-iii	A-iii, B-iv, C-i, D-ii
46	Following is the information related to cryopreservation. Find the incorrect statement from the given option:				
	<p>A. Permeating cryoprotectants can move across the cellular membrane and provide intercellular protection by reducing ice crystal formation.</p> <p>B. Glycerol- is an example of a non-permeating cryoprotectant.</p> <p>C. Recalcitrant seeds cannot be maintained for a longer period.</p> <p>D. Thawing is the last stage in cryopreservation</p>				b
	a) A and B only	b) B and C only	c) C and D only	d) D and A only	B and C only
47	The synangia in <i>Psilotum nudum</i> are formed at				Answer option (a,b,c or d)
	a) terminal position of dichotomous branch	b) lateral position of dichotomous branch	c) junction of branches	d) any of the above	a
48	Which one is correct regarding the evolutionary significance of Heterospory in Pteridophytes				
	<p>A. Microspore and Megaspores germinate inside the sporangium to form a male and female gametophytes.</p> <p>B. Egg fertilization and development of zygote into embryo takes place within the female gametophyte.</p> <p>C. The female gametophyte derives its nutrients from the sporophyte.</p> <p>D. It ensures better developmental conditions and greater chances of survival of zygotes and embryos</p>				Answer option (a,b,c or d)
	a) A and C	b) B and C	c) B and D	d) All	d

49	Which one of the following is an aromatic amino acid				Answer option (a,b,c or d)
	a) Alanin	b) Histidine	c) Proline	d) Tryptophane	d
50	Which one of the following proteins possess Disulfide bridge formation				Answer option (a,b,c or d)
	a) <i>Primary proteins</i>	b) <i>Primary and Secondary proteins</i>	c) <i>Tertiary proteins</i>	d) <i>Tertiary and Quaternary proteins</i>	d
51	Which one of the following is a disaccharide				
	a) Cellobiose	b) Raffinose	c) Stachyose	d) Verbascose	a
52	Which one of the following is a reducing sugar				Answer option (a,b,c or d)
	a) Sucrose	b) Stachyose	c) Lactose	d) Trehalose	c
53	Why DNA are soluble in water				
	a) because of highly charged phosphate-sugar backbone	b) because of the nitrogenous bases	c) because of the absence of a Hydrogen atom in the pentose sugar	d) none	a
54	Which one of the following bond is most polar?				Answer option (a,b,c or d)
	a) O-F	b) N-F	c) C-F	d) C-O	c
55	Which one will be correct regarding the efficiency of an enzyme when compared with another enzyme				Answer option (a,b,c or d)
	a) Higher the value of K_m higher will be the efficiency	b) Higher the value of K_m lower will be the efficiency	c) Lower the value of K_m higher will be the efficiency	d) Lower the value of K_m lower will be the efficiency	c
56	Which one of the following statements best describes the rate of an enzyme catalyze reaction where the substrate concentration is manifold higher than the K_m .				
	a) the rate of reaction will be directly proportional to the substrate concentration.	b) the rate of reaction will decrease sharply as the enzyme becomes saturated with substrate	c) the rate of reaction will independent of the substrate concentration and approximate V_{max} will be achieved	d) the rate of reaction will increase exponentially as more substrate is added.	c

57	Which one of the following affect enzyme activity?				Answer option (a,b,c or d)
	a) Temperature	b) Substrate concentration	c) Acidity (pH)	d) All of them	d
58	Which of these is not a cofactor?				
	a) Coenzyme A	b) Biotin	c) Nickel	d) Folic acid	c
59	Which one of the enzyme is responsible for conversion from fatty acyl CoA to Trans Δ^2 Enoyl CoA				Answer option (a,b,c or d)
	a) Acyl CoA dehydrogenase	b) Enoyl CoA dehydrogenase	c) Hydroxyacyl-CoA dehydrogenase	d) Thiolase	a
60	Which one of the following is an omega fatty acid				
	a) Palmtic acid	b) Stearic acid	c) linoleic acid	d) myristic acid	c
61	Which of the following is essential for Nitrogen fixation?				Answer option (a,b,c or d)
	a) Anthocyanin	b) Flavonoid	c) Leghaemoglobin	d) All of them	c
62	In plants, NO_3^{2-} is reduced to NO_2^- and further to NH_4^+ before absorption, the enzymes involved are present in				Answer option (a,b,c or d)
	a) Cytosol	b) Chloroplast	c) Plastids	d) All of these	d
63	Consider the following algal genera. A. <i>Nostoc</i> B. <i>Chlamydomonas</i> C. <i>Volvox</i> D. <i>Cladophora</i> Now, identify those algal genera that have filamentous thallus.				a,b,c,d
	(a) A, B and D	(b) A and B only	(c) A and D only	(d) D only	c
64	Consider the process of reproduction in the following algal genera. A. <i>Nostoc</i> B. <i>Chlamydomonas</i> C. <i>Volvox</i> D. <i>Chladophora</i> Now, identify those algal genera that do not produce zoospores for asexual reproduction.				a,b,c,d
	(a) A only	(b) A and C only	(c) B and C only	(d) C and D only	a
65	Consider the following organisms. A. <i>Ectocarpus</i> B. <i>Chaladophora</i> C. <i>Albugo</i> D. <i>Agaricus</i> Now, identify only those organisms that contain cellulosic cell wall.				a,b,c,d

	(a) A and B only	(b) A, B and C	(c) B and C only	(d) C and D only	b
66	Consider the following fungi. A. <i>Agaricus</i> B. <i>Alternaria</i> C. <i>Rhizopus</i> Now, identify those fungi that do not form distinct male and female gametangia.				a,b,c,d
	(a) B only	(b) B and C only	(c) A and B only	(d) All of the above	d
67	Consider the following statements. A. Both Gram positive and Gram negative bacteria have peptidoglycan. B. Gram positive bacteria have thick layer of peptidoglycan. C. Trichoic acid is found in Gram positive bacteria but not in Gram negative bacteria. D. Gram positive bacteria have more complicated cell wall structure than Gram negative bacteria. Which of the above statements is FALSE?				a,b,c,d
	(a) A	(b) B	(c) C	(d) D	d
68	Consider the following statements made about retroviruses. A. Retroviruses have oncogenic properties. B. Retroviruses have envelope. C. Retroviruses carry their own reverse transcriptase enzyme. D. Retroviruses can be used for gene therapy to insert corrective genes Choose the combination with all correct statements.				a,b,c,d
	(a) C only	(b) B and C only	(c) A, B and C only	(d) All the above statements are correct.	d
69	The three major divisions (domains) of the living world based on ribosomal DNA sequence are:				a,b,c,d
	(a) Bacteria, Fungi and Eukarya	(b) Archaea, Bacteria and Eukarya	(c) Viruses, Bacteria and Eukarya	(d) Viruses, Prokaryota and Eukaryota	b
70	Consider the following statements about Prokaryotic and Eukaryotic cells. A. Both have plasma membrane of similar construction. B. Both decode genetic information present in their DNA using identical genetic code. C. Both have similar apparatus for conservation of chemical energy as ATP. D. Both have microtubule-containing mitotic spindle that separates chromosomes during cell division. Which of the above statements about their common features are correct?				a,b,c,d
	(a) A and B only	(b) A, B and C	(c) A, B and D	(d) B, C and D	b
71	In female mammals, oocytes remain arrested at which stage until just prior to ovulation?				a,b,c,d

	(a) Prophase I	(b) Metaphase I	(c) Metaphase II	(d) Telophase II	a
72	Consider the following statements. A. Prokaryotic chromosome lack centromere. B. Astral microtubules are not present in the mitotic spindle a typical plant cell. C. In plant cells, the mitotic spindle originates from centrosomes. D. Motor proteins help in dragging chromosomes towards opposite poles during anaphase. Which of the above statements is INCORRECT?				a,b,c,d
	(a) A and B only	(b) B only	(c) C only	(d) D only	c
73	Nucleolus disappears during prophase because:				a,b,c,d
	(a) Chromatin becomes condensed.	(b) Cell has completed its DNA replication.	(c) Protein synthesis stops completely.	(d) Transcription of t-RNA genes stops.	a
74	Parasexual reproduction in fungi involves the exchange of genetic material between:				Answer option (a,b,c or d)
	a) Genetically identical haploid cells	b) Genetically identical diploid cells	c) Genetically distinct haploid cells	d) Genetically distinct diploid cells	c
75	Which of the following assertion and justification is correct? A: Assertion: Secondary wood is tough B: Justification: Secondary wood is soft				Answer option (a,b,c or d)
	a) Both A & B is correct	b) Only A is correct	c) Only B is correct	d) None of the above is correct	c
76	Match the following pairs:				Answer option (a,b,c or d)
	A. Phloem		i. Mineral and water transportation		
	B. Xylem		ii. Transportation of carbohydrate		
	C. Pith		iii. Araliaceae		
	D. Secondary wood		iv. Tree		
	a). A=ii; B=i; C=iv; D=iii	b). A=iii; B=iv; C=ii; D=i	c). A=iii; B=iv; C=I; D=ii	d). A=iv; B=ii; C=iii; D=iv	a
77	Which of the following statement is true: A. Secondary wood is found in higher plant B. Secondary wood is found in Thallophytes C. Secondary wood is found in bryophytes D. Secondary wood is found Pteridophytes				Answer option (a,b,c or d)
	a) A only	b) B only	c) Both A & B	d) Only C& D	a

78	Which of the following best defines an ecosystem?				Answer option (a,b,c or d)
	a) A community of organisms interacting with their physical environment	b) A group of organisms of the same species living in the same area	c) A community of organisms interacting solely through predation	d) A collection of unrelated organisms in a given habitat	a
79	What is the primary source of energy in most ecosystems?				Answer option (a,b,c or d)
	a) Wind	b) Sunlight	c) Geothermal heat	d) Chemical energy from the Earth's core	b
80	Which of the following statements about ecosystems is true?				Answer option (a,b,c or d)
	a) Ecosystems are static and unchanging over time	b) Human activities have no impact on ecosystems	c) Ecosystems can vary greatly in size and complexity	d) Ecosystems only exist on land, not in aquatic environments	c
81	Which term refers to the interconnected network of food chains in an ecosystem?				Answer option (a,b,c or d)
	a) Habitat	b) Trophic level	c) Food web	d) Biome	c
82	Which of the following is an example of a density-dependent factor regulating population growth?				Answer option (a,b,c or d)
	a) Weather fluctuations	b) Predation	c) Competition for resources	d) Natural disasters	c
83	Which of the following statements about genetic drift is true?				Answer option (a,b,c or d)
	a) It is more pronounced in large populations	b) It leads to an increase in genetic diversity	c) It is a deterministic process	d) It has a greater impact on small populations	d
84	Allopatric speciation occurs when:				Answer option (a,b,c or d)
	a) Two populations occupy the same	b) Geographic barriers isolate populations, leading to	c) Two populations interbreed extensively,	d) Environmental conditions favor the	b

	geographic area but do not interbreed	reproductive isolation and speciation	producing hybrid offspring	survival of individuals with certain traits	
85	Which of the following factors is NOT typically considered a mechanism of population differentiation?				Answer option (a,b,c or d)
	a) Gene flow	b) Mutation	c) Genetic drift	d) Uniform selection	d
86	Which of the following factors is most likely to contribute to the formation of ecotypes?				Answer option (a,b,c or d)
	a) High levels of gene flow between populations	b) Uniform environmental conditions	c) Intense competition within populations	d) Variation in environmental factors such as temperature, humidity, and soil composition	d
87	ECADs are primarily characterized by:				Answer option (a,b,c or d)
	a) Variation in reproductive behaviors within a population	b) Variation in physical traits among individuals within a population	c) Variation in ecological traits along an environmental gradient	d) Variation in genetic mutations across different populations	c
88	Which of the following terms describes the process by which species with similar ecological niches compete for limited resources?				Answer option (a,b,c or d)
	a) Competitive exclusion	b) Mutualism	c) Character displacement	d) Resource partitioning	d
89	Which of the following best describes a climax community?				Answer option (a,b,c or d)
	a) A community that has reached its maximum biodiversity	b) A stable, mature community that undergoes little change over time	c) A community in the early stages of succession	d) A community experiencing a rapid influx of invasive species	b
90	The region of India characterized by alpine vegetation and high-altitude grasslands is primarily found in the:				Answer option (a,b,c or d)
	a) Western Ghats	b) Eastern Himalayas	c) Deccan Plateau	d) Indo-Gangetic Plains	b
91	Eutrophication of water bodies is often caused by an excess of which nutrient?				Answer option

					(a,b,c or d)
	a) Nitrogen	b) Oxygen	c) Phosphorus	d) Carbon	c
92	Which of the following is a major contributor to plastic pollution in the oceans?				Answer option (a,b,c or d)
	a) Biodegradable plastics	b) Microplastics from synthetic textiles	c) Recycling programs	d) Reusable shopping bags	b
93	Logistic population growth occurs when:				Answer option (a,b,c or d)
	a) Resources are unlimited, and the population grows exponentially	b) The population size remains constant over time	c) The growth rate of the population decreases as it approaches its carrying capacity	d) The birth rate exceeds the death rate, leading to exponential growth	c
94	Which of the following patterns of population growth is characterized by exponential growth followed by a leveling off near the carrying capacity?				Answer option (a,b,c or d)
	a) Logistic growth	b) Exponential growth	c) Boom-and-bust growth	d) Irregular growth	a
95	Which of the following is a type of survivorship curve where mortality rates are highest in the early and middle life stages?				Answer option (a,b,c or d)
	a) Type I	b) Type II	c) Type III	d) Type IV	c
96	Keystone species play a crucial role in maintaining community structure. Which of the following best describes a keystone species?				Answer option (a,b,c or d)
	a) A species that occupies the highest trophic level in a food web	b) A species that has a disproportionately large effect on its environment relative to its abundance	c) A species that is highly abundant and dominant in its ecosystem	d) A species that has no impact on its community structure	b
97	Which of the following is NOT a measure of dispersion?				Answer option (a,b,c or d)
	a) Mean	b) Range	c) Variance	d) Standard deviation	a
98	Which measure of dispersion is commonly used to describe the spread of normally distributed data?				Answer option

					(a,b,c or d)
	a) Range	b) Variance	c) Interquartile range	d) Standard deviation	d
99	Which type of graph is most suitable for showing changes over time?				Answer option (a,b,c or d)
	a) Line graph	b) Bar graph	c) Pie chart	d) Histogram	a
100	Which of the following factors is NOT considered a density-dependent factor affecting population growth?				Answer option (a,b,c or d)
	a) Predation	b) Competition for resources	c) Weather fluctuations	d) Disease	c