

PREVIEW QUESTION BANK

Module Name : SCPH12 Genetics - ENG
Exam Date : 27-Oct-2023 Batch : 09:30-12:30

Sr. No.	Client Question ID	Question Body and Alternatives	Marks	Negativ Marks
Objective Question				
1	978001	A good lab experiment report should be organized into 1. introduction, results and discussion/conclusions 2. introduction, methodology, results and discussion/conclusions 3. methodology, results, discussion and conclusions 4. methodology, results and conclusions A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.0
Objective Question				
2	978002	Which among the following is correct phrase to write in the methodology section of research paper? 1. Add one gram of NaOH 2. We added one gram of NaOH 3. One gram of NaOH was added 4. Then add one gram of NaOH A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.0
Objective Question				
3	978003	Which of the following is not a reference management tool? 1. Paperpile 2. Mendley 3. Zotero 4. Prism A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.0

Objective Question

4	978004	Which of the following is a unit to represent amount? 1. Molar 2. Mole 3. Litre 4. Atom A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.0
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Objective Question

5	978005	Which among the following is not a statistical package? 1. SPSS 2. R 3. Metlab 4. MS Excel A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.0
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Objective Question

6	978006	Among the following enzyme activities of an enzyme which one represent the most accurate and precise value 1. 12.4 ± 0.6 2. 12.1 ± 0.1 3. 12.0 ± 0.6 4. 12.2 ± 0.4 A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.0
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Objective Question

7	978007		4.0	0.0
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ENTREZ is a

1. search engine
2. database
3. tool to compare keywords
4. ontology assignment tool

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

8	978008	4.0	0.0
Which among the following is a plagiarism detection software?			
1. Turnitin 2. Grammerly 3. Quilbot 4. Mendley			
A1 : 1			
A2 : 2			
A3 : 3			
A4 : 4			

Objective Question

9	978009	4.0	0.0
Which of the following doesn't constitute plagiarism?			
1. forgetting to include a source in bibliography 2. paraphrasing without attribution 3. using someone else's work to build hypothesis 4. using someone's idea/work without giving proper credit			
A1 : 1			
A2 : 2			
A3 : 3			
A4 : 4			

Objective Question

10	978010	4.0	0.0

Describing somebody else's work by changing the words and restructuring the sentences is called as

1. paraphrasing
2. moderation
3. plagiarism
4. remodification

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

11	978011	A value that can be counted, measured or categorized is called as 1. variable 2. random sample 3. population 4. sample A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.0
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Objective Question

12	978012	Which of the following will follow binomial distribution? 1. Height of students in a class 2. Number of people in which disease is cured by taking a drug 3. Number of accidents on a road 4. Rolling a dice A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.0
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Objective Question

13	978013		4.0	0.0
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Mode is

1. Most frequently occurring term
2. value in the middle when numbers have been listed in a rank order
3. value in the middle when numbers have been listed in ascending order only
4. value in the middle when numbers have been listed in descending order only

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

14	978014	Protein estimation using a standard curve is an example of 1. regression analysis 2. correlation analysis 3. cause and effect assertion 4. precision and accuracy A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.0
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Objective Question

15	978015	What are the condition in which Type-1 error occurs? 1. The null hypothesis get accepted even if it is false 2. The null hypothesis get rejected even if it is true 3. Both the null and alternative hypothesis are rejected 4. Both the null and alternative hypothesis are accepted A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.0
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Objective Question

16	978016		4.0	0.0
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Which among the following can't be used to find related work of a research paper?

1. references mentioned in the paper
2. papers that have been cited the research paper
3. by H-index of authors
4. using MeSH term

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

17	978017	Online journals are considered better than the print only journals because 1. most online journals are open access 2. online journals are easy to access 3. content of online journals can be searched more easily 4. low cost of publication A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.0
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Objective Question

18	978018	What is the difference between a barplot and histogram? 1. Barplot is for catagorical data while histogram is for continuous data 2. Barplot is for continuous data while histogram is for catagorical data 3. Barplot is for continuous data while histogram is for discrete data 4. Barplot is for catagorical data while histogram is for discrete data A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.0
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Objective Question

19	978019		4.0	0.0
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Which of the following option is wrong in context of the following statement?

To reject the null hypothesis at 95% confidence limit the calculated probability that the two samples belong to the same population must fall below

1. 1 in 20
2. 5%
3. $p < 0.05$
4. $p < 0.5$

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

20	978020	Which of the following is not a part of research	4.0	0.0
		1. Defining and redefining problem 2. Hypothesis formulation 3. Making deduction 4. Writing report		
		A1 : 1		
		A2 : 2		
		A3 : 3		
		A4 : 4		

Objective Question

21	978021	Which among the followng is FALSE in context of qualitative research?	4.0	0.0
		1. It is highly replicable 2. The outcome is based on subjective experiences 3. The conclusion is difficult to generalize in a large population 4. The outcome is prone to misrepresentation		
		A1 : 1		
		A2 : 2		
		A3 : 3		
		A4 : 4		

Objective Question

22	978022		4.0	0.0
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Development of COVAXIN (covid vaccine) is an example of

1. Exploratory research
2. Experimental research
3. Applied research
4. Qualitative research

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

23 978023

4.0 0.0

Experiments on which of the following doesn't require ethical approval

1. Human
2. All vertebrate Animals
3. Bacteria
4. Monkeys

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

24 978024

4.0 0.0

Which of the following doesn't require literature review?

1. Title
2. Introduction
3. Discussion
4. Conclusion

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

25 978025

4.0 0.0

Which of the following is not a citation style?

1. MLA
2. PLA
3. APG
4. CMS

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

26 978026

4.0 0.0

- (A). The main purpose of descriptive research is to report the state of affair as it exists today.
- (B). The main purpose of analytical research is to use facts or information already available and analyze them to make critical evaluation of the situation.
- (C). Conceptual research is data-based research, whose conclusion can be verified by experimentation.
- (D). Emperical research is data-based research, whose conclusion can be verified by experimentation.

Choose the **correct** answer from the options given below:

1. (A), (B) and (D) only.
2. (A), (C) and (D) only.
3. (A), (B), (C) and (D).
4. (B), (C) and (D) only.

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

27 978027

4.0 0.0

- (A). In random sampling each item has equal chance of being selected.
- (B). In systematic sampling each n th item is selected.
- (C). Cluster sampling involves grouping the data into cluster and selecting an individual from the cluster
- (D). Stratified sampling is used for homogenous data.

Choose the **correct** answer from the options given below:

1. (A), (B) and (C) only.
2. (A), (B) and (D) only.
3. (A), (B), (C) and (D).
4. (B), (C) and (D) only.

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

28	978028	(A). When a sample is exposed to usual condition, it is called as control group. (B). When a sample is exposed to some treatment, it is called as experimental group (C). The main purpose of exploratory research is to formulate a problem for more precise investigation. (D). The main purpose of experimental research is to check the validity of a hypothesis. Choose the correct answer from the options given below: 1. (A), (B) and (C) only. 2. (A), (B) and (D) only. 3. (A), (B), (C) and (D). 4. (B), (C) and (D) only.	4.0	0.0
		A1 : 1		
		A2 : 2		
		A3 : 3		
		A4 : 4		

Objective Question

29	978029	(A). Number mentioned at the jersey of football player is an example of nominal scale (B). Nominal scale is random. (C). In the nominal scale no relationship can be derived among the items. (D). Ranking of students on the basis of marks obtained by them is an example of ordinal scale. Choose the correct answer from the options given below: 1. (A), (B) and (D) only. 2. (A), (B) and (C) only. 3. (A), (B), (C) and (D). 4. (B), (C) and (D) only.	4.0	0.0
		A1 : 1		
		A2 : 2		
		A3 : 3		
		A4 : 4		

Objective Question

30	978030		4.0	0.0
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- (A). The data that we want to ideally analyze is called as population.
- (B). The data on which we work and assume it to be a representative of the complete data is called as sample.
- (C). The larger is the sample size greater is the variability
- (D). All samples must have identical mean, median and mode.
- Choose the **correct** answer from the options given below:

1. (A) and (B) only.
2. (A), (B) and (D) only.
3. (A), (B), (C) and (D).
4. (C) and (D) only.

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

31 978031

4.0 0.0

- (A). A frequency distribution is said to be positively skewed if the frequency curve has a longer tail towards the higher values.
- (B). A frequency distribution is said to be negatively skewed if the frequency curve has a longer tail towards the lower values.
- (C). For positively skewed distribution Mean>median>mode
- (D). Negatively skewed distribution has no effect
- Choose the **correct** answer from the options given below:

1. (A), (B) and (D) only.
2. (A), (C) and (D) only.
3. (A), (B), and (C).
4. (B), (C) and (D) only.

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

32 978032

4.0 0.0

- (A). Information collected for the first time is called as primary data.
- (B). Information that is already available is called as secondary data.
- (C). Observation, interview, questionnaire and feedback forms are tools to collect primary data.
- (D). Observation, interview, questionnaire and feedback forms are tools to collect secondary data.

Choose the **correct** answer from the options given below:

1. (A), (B) and (C) only.
2. (A), (B) and (D) only.
3. (A), (B), (C) and (D).
4. (B), (C) and (D) only.

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

33 978033

4.0 0.0

Match List-I with List-II

List-I	List-II
Process	Meaning
(A). Processing of data	(I). Simplification of recording answers
(B). Editing	(II). Grouping the data on the basis of some common characteristics
(C). Coding	(III). Accuracy, completeness, uniformity and consistency of gathered information is examined
(D). Classification	(IV). Process to eliminate any error or mistake

Choose the **correct** answer from the options given below:

1. (A) - (I), (B) - (II), (C) - (III), (D) - (IV)
2. (A) - (I), (B) - (IV), (C) - (III), (D) - (II)
3. (A) - (I), (B) - (II), (C) - (IV), (D) - (III)
4. (A) - (III), (B) - (IV), (C) - (I), (D) - (II)

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

34 978034

4.0 0.0

Match List-I with List-II

List-I	List-II
Type	Attribute
(A). Linear correlation	(I). relationship between three or more variables are determined
(B). Multiple correlation	(II). relationship between two variables
(C). Correlation coefficient	(III). Strength of association
(D). Scatter diagram	(IV). change in one variable is equal to the change in another variable

Choose the **correct** answer from the options given below:

1. (A) - (IV), (B) - (I), (C) - (III), (D) - (II)
2. (A) - (I), (B) - (II), (C) - (III), (D) - (IV)
3. (A) - (I), (B) - (II), (C) - (IV), (D) - (III)
4. (A) - (III), (B) - (IV), (C) - (I), (D) - (II)

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

35 978035

4.0 0.0

Match List-I with List-II

Type of test	Used for
(A). Z-test	(I). Comparison of variance of two independent samples
(B). T-test	(II). Significance for mean
(C). Chi-square	(III). Significance of difference between the means of two samples
(D). F-test	(IV). Comparison of sample variance to a theoretical population variance

Choose the **correct** answer from the options given below:

1. (A) - (II), (B) - (III), (C) - (IV), (D) - (I)
2. (A) - (I), (B) - (II), (C) - (III), (D) - (IV)
3. (A) - (I), (B) - (II), (C) - (IV), (D) - (III)
4. (A) - (III), (B) - (IV), (C) - (I), (D) - (II)

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

36 978036

4.0 0.0

Match **List-I** with **List-II**

List-I	List-II
Type of plagiarism	Definition
(A). Mosaic Plagiarism	(I). the writer tacks on a new opening part of the first sentence in the hope that the reader won't notice that the rest of the paragraph is simply copied from the source.
(B). Paraphrase	(II). verbatim copying of sentence(s)
(C). Word-for-Word	(III). phrases and terms are lifted from the source and sprinkled in among your own prose
(D). Exact	(IV) substituting your own words and sentences for those of the original

Choose the **correct** answer from the options given below:

1. (A) - (III), (B) - (IV), (C) - (I), (D) - (II)
2. (A) - (I), (B) - (II), (C) - (III), (D) - (IV)
3. (A) - (I), (B) - (II), (C) - (IV), (D) - (III)
4. (A) - (III), (B) - (II), (C) - (I), (D) - (IV)

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

37 978037

4.0 0.0

Match List-I with List-II

List-I	List-II
Type of intellectual property right	Description
(A). patent	(I). Ornamental or aesthetic aspect of a useful article, which must appeal to the sense of sight and may consist of the shape and/or pattern and/or colour of article.
(B). trade mark	(II). Right given by the law to creators of literary, dramatic, musical and artistic works and producers of cinematograph films and sound recordings.
(C). Copyright	(III). Visual symbol/word that indicate the source of the goods, a signature, name, device, label, numerals, or combination of colours used, or services, or other articles of commerce to distinguish it from other similar goods or services originating from another
(D). Industrial design	(IV). scientific inventions having potential for industrial application are being protected

Choose the **correct** answer from the options given below:

1. (A) - (IV), (B) - (III), (C) - (II), (D) - (I)
2. (A) - (I), (B) - (II), (C) - (III), (D) - (IV)
3. (A) - (I), (B) - (II), (C) - (IV), (D) - (III)
4. (A) - (III), (B) - (IV), (C) - (I), (D) - (II)

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

38 978038

- (A). Patenting is done to keep the invention secret
- (B). Patent is supposed to promote research
- (C). Only a very few patents can make money
- (D). Each country has their own patent rule

Choose the **correct** answer from the options given below:

1. (A), (B) and (D) only.
2. (A), (C) and (D) only.
3. (A), (B), (C) and (D).
4. (B), (C) and (D) only.

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0 0.0

Objective Question

39	978039	Arrange the steps in order (A). Grant of patent (B). Registration of patent application (C). Filing a patent (D). Patent search process Choose the correct answer from the options given below: 1. (C), (D), (B), (A). 2. (A), (B), (C), (D). 3. (B), (A), (D), (C). 4. (C), (B), (D), (A). A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.0
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Objective Question

40	978040	(A). Impact factor of a journal for year x of a journal = A/B. A = number of times articles published in years $x - 1$ and $x - 2$ were cited by indexed journals in year x. B = total number of 'citable items' published by that journal in years $x - 1$ and $x - 2$. (B). An individual has H-index h if h of N papers have at least h citations each, and remaining $(N - h)$ papers have less than h citations each. (C). G-index: Given a set of articles ranked in decreasing order of the number of citations that they received, the G-index is the (unique) largest number g such that the top g articles together received at least g^2 citations (D). An individual has H-index h if $(N - h)$ papers have at least h citations each, and the remaining h of N papers have less than h citations each. Choose the correct answer from the options given below: 1. (A), (B) and (D) only. 2. (A), (B) and (C) only. 3. (A), (B), (C) and (D). 4. (B), (C) and (D) only. A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.0
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Objective Question

41	978041		4.0	0.0
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Which of the following are methods of Dissemination of Research findings?

- A. Research Paper publishing
- B. Poster presentation in a conference
- C. Discussion among family/friends
- D. Oral presentation in Conference

1. (A), (B) and (D) only.
2. (A), (B) and (C) only.
3. (A), (B), (C) and (D).
4. (B) and (D) only.

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

42 978042

4.0 0.0

Arrange the following in increasing order.

- (A). micro Litre
- (B). milli Litre
- (C). Litre
- (D). Nano Litre

Choose the **correct** answer from the options given below:

1. (D), (A), (B), (C).
2. (A), (B), (C), (D).
3. (B), (A), (D), (C).
4. (C), (B), (D), (A).

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

43 978043

4.0 0.0

Which of the following are part of the current trend termed a Onehealth approach?

- (A). human diseases
- (B). environmental health
- (C). veterinary health
- (D). antibiotic resistance

Choose the **correct** answer from the options given below:

1. (A), (B), (C) and (D) only.
2. (A), (B) and (C) only.
3. (A), (B), and (D) only
4. (B), (C) and (D) only.

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

44 978044 4.0 0.0

Which of the following is NOT part of Bibliography?

- (A). Footnotes
- (B). Personal communication
- (C). References
- (D). Webpage

Choose the **correct** answer from the options given below:

1. (A), (B) and (D) only.
2. (B) and (D) only.
3. (A) and (D) only.
4. (B) only.

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

45 978045 4.0 0.0

Which of the following institutions is NOT involved in formulating guidelines related to human/animal ethics and Biosafety?

- (A). CSIR (Council of Scientific and Industrial Research)
- (B). DBT (Department of Biotechnology)
- (C). ICMR (Indian Council of Medical Research)
- (D). ICSSR (Indian Council of Social Science Research)

Choose the **correct** answer from the options given below:

1. (A) and (D) only.
2. (A), (B) and (D) only.
3. (A), (C) and (D).
4. (B), (C) and (D) only.

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

46	978046	The main functions of Data Analysis are: (A).Researcher can analyse data for thinking about the problem (B).Researcher study the original records of data before analysis (C). Researcher analyze available data for examining statement of problem (D).Researcher can not explore new facts about problem Choose the correct answer from the options given below: 1. (A), (B) and (D) only. 2. (A), (B) and (C) only. 3. (A), (B), (C) and (D). 4. (B), (C) and (D) only. A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.0
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Objective Question

47	978047		4.0	0.0
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Which among the following countries have been successful in sending probe to the South pole of the moon?

- (A). America
- (B). France
- (C). Russia
- (D). India

Choose the **correct** answer from the options given below:

1. (D) only.
2. (A), (B) and (D) only.
3. (A), (B), (C) and (D).
4. (B), (C) and (D) only.

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

48	978048	STEM cell research holds great potential to cure degenerative diseases. Which of the following sources can be used as a source of STEM cells for an individual? (A). Placenta (B). Milk tooth pulp (C). Nails (D). Hair Choose the correct answer from the options given below: 1. (A) and (B). 2. (A), (B) and (D) only. 3. (A), (B) and (C) only. 4. (B), (C) and (D) only. A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.0
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Objective Question

49	978049		4.0	0.0
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A reseracher received a paper for review, which he rejected citing lack of experimenal clarity. He however submitted the same data for publication under his own name. This will be considered an act of

- (A). Plagiarism
- (B). Data Fabrication
- (C). Ethical misconduct
- (D). Data Falsification

Choose the **correct** answer from the options given below:

- 1. (C) only.
- 2. (A) and (C) only.
- 3. (A), (B), (C) and (D).
- 4. (B), (C) and (D) only.

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

50	978050	Correlation coeficient was calculated for two variables in an experiment. Which of the following can be a valid value? (A). -1 (B). + 1 (C). + 2.5 (D). - 2.5 Choose the correct answer from the options given below: 1. (A) and (B) only. 2. (A) and (D) only. 3. (A), (B), (C) and (D). 4. (B) and (C) only. A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.0
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Objective Question

51	978051		4.0	0.0
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In a population that adheres to the Hardy-Weinberg equilibrium, consisting of 250 individuals with allele frequencies of 0.7 for allele B and 0.3 for allele b, how many individuals are expected to be heterozygous (Bb)?

1. 52
2. 105
3. 21
4. 42

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

52 978052

4.0 0.0

Which of the following is a somaclonal variety of Khesari daal (*Lathyrus sativus*) that contains a low neurotoxin called β -N-oxalylamino-L-Alanine (BOAA):

1. Pusa 24
2. Pusa Jaikisan
3. Ratan
4. Shakti

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

53 978053

4.0 0.0

The term 'somaclonal variation' was coined by -

1. Smith *et al.* (1993)
2. G. Haberlandt (1902)
3. Morel and Martin (1952)
4. Larkin and Scowcroft (1981)

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

54 978054

4.0 0.0

In Bt cotton, the Bt toxin is present in plant tissue as a pro-toxin. Which of the following factor is responsible for converting the pro-toxin into an active toxin in the insect midgut?

1. Alkaline pH of the insect midgut
2. Acidic pH of the insect midgut
3. Action of midgut microorganisms
4. Presence of conversion factors in midgut

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

55	978055	In India, which organization is responsible for assessing the safety of introducing genetically modified organisms for public use? 1. Research Committee on Genetic Manipulation (RCGM) 2. Council for Scientific and Industrial Research (CSIR) 3. Indian Council of Medical Research (ICMR) 4. Genetic Engineering Appraisal Committee (GEAC) A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.0
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Objective Question

56	978056	In which cellular compartment does post-translational modification take place? 1. Nucleus 2. Lysosomes 3. Ribosomes 4. Endoplasmic reticulum A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.0
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Objective Question

57	978057		4.0	0.0
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If the two wheat varieties differ by only five genes *i.e.* segregating for five genes are crossed, then how many genotypes can be produced in the F_2 generation?

1. 32
2. 243
3. 256
4. 1024

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

58 978058 4.0 0.0

Which law states that a particular variation observed in a crop species is also expected to be available in its related species?

1. Law of homologous series in variation
2. Law of orthologous series in variation
3. Law of paralogous series in variation
4. Law of heterologous series in variation

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

59 978059 4.0 0.0

Which one of the following was the first cotton hybrid that was released from Cotton Research Station, Surat of Gujarat Agricultural University in 1970?

1. Pusa Kapas 4
2. Varalaxmi
3. H4
4. Suguna

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

60 978060 4.0 0.0

Which breeding method would you like to use to eliminate a particular defect of a popular high yielding variety of wheat?

1. Pedigree method
2. Back cross method
3. Bulk method
4. Mass selection

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

61	978061	The outcome of intercrossing a number of genotypes are known to have superior hybrid performance, when crossed in all possible combinations, it is referred as - 1. Hybrid variety 2. Synthetic variety 3. Composite variety 4. Pure line variety A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.0
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Objective Question

62	978062	North Carolina Design I analysis provides an estimate of: 1. Additive and dominance variance 2. Dominance and epistatic variance 3. Additive variance 4. Dominance variance A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.0
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Objective Question

63	978063		4.0	0.0
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What is the basis of genotypic correlation ?

1. Linkage
2. Pleiotropy
3. Both the linkage and pleiotropy
4. Epistasis

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

64 978064 4.0 0.0

When a 6 cm plant was crossed with a 36 cm plant, all the F_1 plants were 21 cm. In the F_2 generation, a continuous range of heights was observed. Most were around 21 cm, and 3 of 200 were as short as the 6 cm parent. Find out how many gene(s) are controlling this trait?

1. 3
2. 4
3. 5
4. 6

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

65 978065 4.0 0.0

Vertifolia effect is associated with

1. Horizontal resistance
2. Vertical resistance
3. Non-specific resistance
4. Minor gene resistance

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

66 978066 4.0 0.0

Isogenic lines are -

1. the lines identical in phenotype but different in genotype.
2. homozygous lines developed through inbreeding.
3. the lines identical in genotype except for one gene.
4. genotypically and phenotypically identical lines.

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

67 978067

4.0 0.0

Association mapping is also called as -

1. Linkage mapping
2. Physical mapping
3. Linkage disequilibrium mapping
4. Interval mapping

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

68 978068

4.0 0.0

Who discovered a recessive mutant maize gene, *opaque-2* ?

1. Mertz and his coworkers
2. S. K. Vasal
3. Moll and his coworkers
4. N. E. Borlaug

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

69 978069

4.0 0.0

Ideotype of wheat for dryland agriculture was proposed by -

1. R. S. Parodha
2. S. K. Sinha
3. R. D. Asana
4. M. S. Swaminathan

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

70 978070 4.0 0.0

RFLP is a/an

-

1. Dominant marker
2. Protein marker
3. Codominant marker
4. Over dominant marker

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

71 978071 4.0 0.0

What was the method scientists did at IARI, New Delhi to apply the change of color of wheat variety 'Sonora 64' from red to amber and created a new variety 'Sharbati Sonora'?

1. Croos breeding
2. Pure line breeding
3. Mult-line Breeding
4. Mutation breeding

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

72 978072 4.0 0.0

Which method is also known as evolutionary method of breeding?

1. Pedigree method
2. Bilk method
3. Pure line method
4. Recurrent method

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

73 978073 4.0 0.0

Which is the most widely used technique for rapid isolation of homozygous lines?

1. SSD
2. Cisgenesis
3. Double haploid
4. Gynogenesis

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

74 978074 4.0 0.0

Which one of the following is NOT a site for *in-situ* method of conservation of flora?

1. Biosphere reserve
2. Botanical garden
3. National park
4. Wildlife sanctuary

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

75 978075 4.0 0.0

How does the *Ph1* gene located on the long arm of chromosome 5B to regulate the chromosome pairing in the polyploid wheat?

1. It allows only homologous chromosome to pair and recombine
2. It allows only homoeologous chromosome to pair and recombine
3. It allows both homologous and homoeologous chromosomes to pair and recombine
4. It has no effect on chromosome pairing and recombination

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

76 978076 4.0 0.0

Which of the following trait is conferred by wheat super domestication gene Q, which is largely responsible for the widespraed cultivation of wheat?

1. Dwarfness
2. Rust resistance
3. Free-threshing
4. Elimination of dormancy

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

77 978077 4.0 0.0

Which term describes the negative impact of a host plant on the growth of an insect pest that feeds on it?

1. Antibiosis
2. Antixenosis
3. Non-preference
4. Tolerance

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

78 978078 4.0 0.0

In a soybean flower, five petals are arranged in a specialised manner with one posterior, two lateral and two anterior. These are named as, respectively.

1. wing, keel and standard
2. vexillum, keel and standard
3. keel, standard and wing
4. standard, wing and keel

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

79 978079

4.0 0.0

Which of the following statements about CRISPR/Cas are true?

- (A) It is a method that allows scientists to edit the DNA of plants only
- (B) CRISPR/Cas is a unique technology that enables scientists to edit the genome by removing, adding or altering DNA sequence
- (C) CRISPR stands for Clustered Randomly Interspaced Short Palindromic Repeats
- (D) CRISPR/Cas is an adaptive immune system in prokaryotes

Choose the **correct** answer from the options given below:

1. (A), (B) and (D) only
2. (B) and (D) only
3. (C) and (D) only
4. (A) and (D) only

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

80 978080

4.0 0.0

Consider the following statements about RNA interference (RNAi) technology-

- (A) Andrew Fire and Craig Mello were awarded the Nobel prize in Physiology or medicine in 2006 for their research on RNAi.
 (B) It is used in the investigation of gene function.
 (C) It causes transcriptional gene silencing.
 (D) It can be used to produce crop plants that are resistant to viral pathogens.

Choose the **correct** answer from the options given below:

1. (A), (B) and (C) only
2. (A), (B) and (D) only
3. (A), (B), (C) and (D)
4. (B), (C) and (D) only

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

81	978081	Consider the following statements regarding 'transcriptome': (A) A range of enzymes used in genome editing. (B) An array of mRNA molecules expressed by a particular cell or tissue types. (C) In contrast with the genome, which is characterized by its stability, the transcriptome actively changes. (D) A set of DNA-binding proteins Choose the correct answer from the options given below: 1. (A), (B) and (C) only 2. (A), (B) and (D) only 3. (A) and (D) only 4. (B) and (C) only A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.0
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Objective Question

82	978082		4.0	0.0
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Match the **List I** with **List II**

List I	List II
(Scientist)	(Contribution)
(A) Karpechenko	(I) RFLP
(B) Carlson and co-worker	(II) Colchicine
(C) Blakeslee and Nebel	(III) Raphanobrassica
(D) Botstein and co-worker	(IV) Somatic hybrid

Choose the **correct** answer from the options given below:

1. (A) - (I), (B) - (II), (C) - (III), (D) - (IV)
2. (A) - (I), (B) - (II), (C) - (IV), (D) - (III)
3. (A) - (I), (B) - (III), (C) - (IV), (D) - (II)
4. (A) - (III), (B) - (IV), (C) - (II), (D) - (I)

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

83 978083

4.0 0.0

Which of the following statements about pleiotropy is / are correct?

- (A) Pleiotropy is a phenomenon in which a single gene affects multiple traits.
- (B) Pleiotropy can occur when a gene product serves multiple functions.
- (C) Pleiotropy and epistasis are of rare occurrence in genetics.
- (D) The wheat super domestication gene Q is a pleiotropic gene.

Choose the **correct** answer from the options given below:

1. (A), (B) and (C) only
2. (A), (B) and (D) only
3. (C) and (D) only
4. (B), (C) and (D) only

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

84	978084	Consider the following statements: (A) Genetic markers are tags for genes. (B) Markers should not be discrete and heritable. (C) RFLP is a co-dominant marker. (D) The substitution of large insertions or deletions in a haplotype is known as SNP. Choose the correct answer from the options given below: 1. (A), (B) and (D) only. 2. (A) and (C) only. 3. (A) (C) and (D). 4. (B), (C) and (D) only. A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.0
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Objective Question

85	978085	Consider the following statements about PGR: (A) The gradual reduction in the number of variant strains being cultivated by farmers and also from wild habitats due to disturbance, in any crop is termed as genetic wipeout. (B) K65 is the obsolete cultivar of Wheat. (C) Sir Otto Frankel coined the term 'Genetic resources'. (D) A plant variety that is no longer grown commercially is known as land race. Choose the correct answer from the options given below: 1. (A), (B) and (D) only. 2. (B) and (D) only. 3. (B) and (C) only. 4. (B), (C) and (D) only. A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.0
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Objective Question

86	978086		4.0	0.0
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Match the **List I** with **List II**

List I	List II
(Line / variety)	(Gene / QTL/ translocation)
(A) Wheat	(I) <i>Sub1</i>
(B) Pusa Basmati 1	(II) <i>o₂</i>
(C) Sambha Mashuri	(III) 1BL.1RS
(D) Viek QPM9	(IV) <i>Xa21</i>

Choose the **correct** answer from the options given below:

1. (A) - (I), (B) - (II), (C) - (III), (D) - (IV)
2. (A) - (III), (B) - (II), (C) - (IV), (D) - (I)
3. (A) - (II), (B) - (I), (C) - (IV), (D) - (III)
4. (A) - (III), (B) - (IV), (C) - (I), (D) - (II)

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

87 978087

4.0 0.0

Consider the following statements about the top cross test:

- (A) In top cross test, an inbreed line is crossed with an open pollinated variety.
- (B) It is used to evaluate the SCA of an line.
- (C) It was proposed by Davis (1927) to know how well an inbreed line combines with other lines to produce an improved synthetic variety.
- (D) Line X tester is a modified form of top cross test.

Choose the **correct** answer from the options given below:

1. (A), (C) and (D) only.
2. (A), (B) and (D) only.
3. (A), (B), (C) and (D).
4. (B), (C) and (D) only.

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

889780884.00.0

Match the **List I** with **List II**

List I	List II
(Crop)	(Isolation distance in meters)
(A) Rice	(I) 200
(B) Tomato	(II) 30
(C) Cotton	(III) 3
(D) Maize	(IV) 25

Choose the **correct** answer from the options given below:

1. (A) - (I), (B) - (II), (C) - (III), (D) - (IV)

2. (A) - (II), (B) - (I), (C) - (III), (D) - (IV)

3. (A) - (I), (B) - (II), (C) - (IV), (D) - (III)

4. (A) - (III), (B) - (IV), (C) - (II), (D) - (I)

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

89978089

4.00.0

Match the **List I** with **List II**

List I	List II
(Scientist)	(Discovery for which Nobel prize was awarded)
(A) T. H. Morgan	(I) DNA polymerase
(B) Kornberg	(II) Restriction endonucleases
(C) Nathan and Smith	(III) Sex- linked inheritance
(D) Paul Berg	(IV) r DNA

Choose the **correct** answer from the options given below:

- (A) - (I), (B) - (II), (C) - (III), (D) - (IV)
- (A) - (III), (B) - (I), (C) - (II), (D) - (IV)
- (A) - (I), (B) - (III), (C) - (IV), (D) - (I)
- (A) - (III), (B) - (IV), (C) - (I), (D) - (II)

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

90 978090

4.0 0.0

Match the **List I** with **List II**

List I	List II
(Crop)	(Genome size in Mb)
(A) Rice	(I) 13
(B) <i>Arabidopsis thaliana</i>	(II) 415
(C) Human	(III) 220
(D) Yeast	(IV) 3200

Choose the **correct** answer from the options given below:

1. (A) - (I), (B) - (IV), (C) - (III), (D) - (II)
2. (A) - (II), (B) - (III), (C) - (I), (D) - (IV)
3. (A) - (II), (B) - (III), (C) - (IV), (D) - (I)
4. (A) - (III), (B) - (IV), (C) - (I), (D) - (II)

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

91 978091

4.0 0.0

The first commercially approved and grown genetically modified crop for human consumption was :

1. Bt Corn
2. Roundup Ready
3. Bt Cotton
4. Flavr Savr

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

92	978092	A researcher wants to develop mixed homopolymers and used only A and C for synthesizing the mRNA, in a ratio of 1A : 5C. The final frequency of triplet with 2A:1C will be : 1. 2.3% 2. 6.9% 3. 57.9% 4. 34.8% A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.0
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Objective Question

93978093

4.00.0

The mean and variance of corolla length in two highly inbred strains of *Arabidopsis* and their progeny are shown in the following table. One parent (P_1) has a short corolla, and the other parent (P_2) has a long corolla. Calculate the broad sense heritability (H^2) of corolla length in this plant.

Strain	Mean (mm)	Variance (mm)
P_1 short	40.47	3.12
P_2 long	93.75	3.87
$F_1 (P_1 \times P_2)$	63.90	4.74
$F_2 (F_1 \times F_1)$	68.72	47.70

1. 0.0412

2. 0.436

3. 0.689

4. 0.91

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

94	978094	Ratio of X chromosomes to autosomes in <i>Drosophila</i> is 4X: 3A. The phenotype of the said individual will be : 1. Male 2. Female 3. Intersex 4. Metafemale A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.0
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Objective Question

95	978095	Which of the following are the essential requirements for marker assisted selection in a plant breeding program? (A). Markers should cosegregate with the desired trait (B). It should be economical to use and be user friendly (C). It should be highly reproducible (D). The distance between the marker and the desired trait gene should be 10cM or less Choose the correct answer from the options given below: 1. (A), (B) and (D) only. 2. (B) and (D) only. 3. (A), (B), (C) and (D). 4. (A), (B) and (C) only. A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.0
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Objective Question

96	978096	Near-isogenic lines (NILs) can be produced by : 1. Repeated selfing of selections from the F2 population until these lines are homozygous and propagated without segregation. 2. Repeated backcrossing of the F1 to recurrent parents or by repeated selfing of the F1. 3. Repeated backcrossing of the F2 to recurrent parents or by repeated selfing of the F2. 4. Repeated selfing of selections from the F1 population until these lines are homozygous and propagated without segregation. A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.0
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Objective Question

97	978097	Germplasm materials which are stored at 0°C and about 8% moisture content, remain viable for about 10–15 years and available for distribution to plant breeders upon request are categorised as : 1. Base collections 2. Backup collections 3. Active collections 4. Working collections A1 : 1 A2 : 2 A3 : 3	4.0	0.0
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A4 : 4

Objective Question

98	978098	Each of the following lists has an average of 50. For each one the spread of the numbers around the average, the biggest and smallest are respectively given in following option. i. 0, 20, 40, 50, 60, 80, 100 ii. 0, 48, 49, 50, 51, 52, 100 iii. 0, 1, 2, 50, 98, 99, 100 (A). Smallest (i); biggest (ii) (B). Smallest (iii); biggest (ii) (C). Smallest (ii); biggest (iii) (D). Smallest (iii); biggest (i) Choose the correct answer from the options given below: 1. (A) only. 2. (B) only. 3. (C) only 4. (D) only. A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.0
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Objective Question

99	978099	In some experiments, a first-generation hybrid pea is "back crossed" with one parent. If a y/g plant is crossed with a g/g, about what percentage of seeds will be yellow ? Of 1600 such seeds, what is the chance that over 650 will be yellow? 1. 25% 2. 50% 3. 66.5% 4. 75% A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.0
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Objective Question

100	978100		4.0	0.0
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The International Rice Research Institute in the Philippines developed the hybrid rice IR 8, setting off "the green revolution" in tropical agriculture. Among other things, they made a thorough study of the effects of fertilizer on rice yields. These experiments involved a number of experimental plots (of about 20 square yards in size). Each plot was planted with IR 8, and fertilized with some amount of nitrogen chosen by the investigators. (The amount ranged from 0 to that of a **lb**). When the rice was harvested, the yield was measured and related to the amount of nitrogen applied. In one such experiment, the correlation between rice yield and nitrogen was 0.95, and the regression equation was

$$\text{predicted rice yield} = (20 \text{ oz rice per oz nitrogen}) \times (\text{nitrogen}) + 240 \text{ oz}$$

(Suppose 1 **lb**= 16 **oz**)

Each extra ounce of nitrogen fertilizer can be expected to increase the rice yield by

1. 15 lb
2. 20 oz
3. 16 oz
4. 21 oz

A1 : 1

A2 : 2

A3 : 3

A4 : 4