

PREVIEW QUESTION BANK

Module Name : SCPH05 Biotechnology - 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	971001	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	971002	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	971003	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	971004	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	971005	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	971006	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	971007		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	971008	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	971009	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	971010	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	971011	A value that can be counted, measured or categorized is called as 1. variable 2. random sample 3. population 4. sample	4.0	0.0
		A1 : 1 A2 : 2 A3 : 3 A4 : 4		

Objective Question

12	971012	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	4.0	0.0
		A1 : 1 A2 : 2 A3 : 3 A4 : 4		

Objective Question

13	971013		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	971014	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	971015	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	971016		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	971017	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	971018	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	971019		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	971020	Which of the following is not a part of research 1. Defining and redefining problem 2. Hypothesis formulation 3. Making deduction 4. Writing report A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.0
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Objective Question

21	971021	Which among the following is FALSE in context of qualitative research? 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	4.0	0.0
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Objective Question

22	971022		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 971023 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 971024 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 971025 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 971026

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 971027

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	971028	(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	971029	(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	971030		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 971031 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 971032 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 971033

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 971034

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 971035

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 971036

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 971037

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 971038

- (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	971039	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	971040	(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	971041		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 971042

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 971043

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	971044	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	4.0	0.0
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Objective Question

45	971045		4.0	0.0
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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 971046

4.0 0.0

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

Objective Question

47 971047

4.0 0.0

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	971048	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	971049		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	971050	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	971051	The complementary sequence of the given DNA sequence 5'-ATACGTGGTA-3' is 1. 5'-TATCCAGCAT-3' 2. 5'-TATGCACCAT-3' 3. 5'-TACCACGTAT-3' 4. 5'-TAGCACCTAT-3'	4.0	0.0
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A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

52	971052	How much amount of insert is needed to carry out a ligation reaction between a vector (size=3000 bp) and an insert (size=500 bp) for a molar ratio of 3:1 (Insert:Vector) with taking 50 ng of vector for the ligation reaction? 1. 9 ng 2. 15 ng 3. 20 ng 4. 25 ng A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.0
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Objective Question

53	971053	Non-template dependent nucleotide addition is carried out by 1. Taq Polymerase 2. Pfu Polymerase 3. Klenow enzyme 4. Terminal deoxynucleotidyl transferase (TdT) A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.0
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Objective Question

54	971054	Which enzyme has both the DNA-dependent DNA polymerisation and RNA-Dependent DNA polymerisation properties? 1. AccuTaq Polymerase 2. Tth Polymerase 3. Pfu Polymerase 4. Deep Vent Polymerase A1 : 1 A2 : 2	4.0	0.0
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A3 : 3

A4 : 4

Objective Question

55	971055	Examples of genome-editing tools are ? (A). ZFN (B). TALEN (C). SOS (D). CRISPR-Cas9 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

56	971056	Multiple transcripts of BRCA1 gene may arise in cancer tissues due to the following mechanism 1. Alternative start sites 2. Alternative splicing 3. Alternative promoters 4. Alternative stop sites A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.0
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Objective Question

57	971057		4.0	0.0
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Marker-free transgenics can be developed with the help of

- (A). Cre Recombinase
- (B). R Recombinase
- (C). CRISPR-Cas9
- (D). Two different T-DNAs

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

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

58 971058

Which type of fermentation process is employed when the substrate is inhibitory to the growth and survival of cells and cannot be used at higher concentrations.

- 1. Fed-batch process
- 2. Turbidostat process
- 3. Continuous process
- 4. Batch process

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0 0.0

Objective Question

59 971059

Who Discovered catalytic RNA molecule for the first time in *Tetrahymena* sp. ?

- 1. Jack Szostak
- 2. Thomas Cech
- 3. Girolamo Fracastoro
- 4. Francesco Stelluti

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0 0.0

Objective Question

60	971060	Stromatolites are made up of 1. Algae 2. Bacteria 3. Cyanobacteria 4. Fungi A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.0
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Objective Question

61	971061	Archaea reproduce asexually, therefore, they increase their genetic diversity by 1. Horizontal gene transfer 2. Vertical gene transfer 3. Mutations 4. Both 1 and 3 A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.0
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Objective Question

62	971062	Siderophores help in the uptake of 1. Fe³⁺ ions 2. Fe²⁺ ions 3. Ca²⁺ ions 4. Mn²⁺ ions A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.0
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Objective Question

63	971063		4.0	0.0
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Clathrin-dependent endocytosis is responsible for

1. Entry of bacteria in host cells
2. Transport of folic acid
3. Signal transduction
4. Entry of hormones and growth factors

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

64 971064

4.0 0.0

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

List-I	List-II
Proteins	Functions/Location
(A). FtsZ	(I). Z-ring
(B). TubZ	(II). Plasmid partitioning
(C). MamK	(III). Spindle like apparatus
(D). ParA	(IV). Magnetosomes

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

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

65 971065

4.0 0.0

Which of the following are horizons of soil.

- (A). A horizon
- (B). R horizon
- (C). O horizon
- (D). D horizon

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

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

66 971066

4.0 0.0

Which codon among the following ones encodes Methionine

- 1. AUA
- 2. AAA
- 3. AUG
- 4. AAG

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

67 971067

4.0 0.0

Match List-I with List-II

List-I	List-II
Human pathogen	Disease
(A). <i>Candida albicans</i>	(I). Lyme disease
(B). <i>Bordetella pertussis</i>	(II). Small pox
(C). <i>Borrelia burgdorferi</i>	(III). Candidiasis
(D). Variola Virus	(IV). Whooping cough

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

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

68	971068	While screening the recombinant colonies of a gene cloned in pUC18 vector through Blue-white screening, we received few blue colonies containing the insert. What could be the reason for this result? - The gene is cloned <i>in-frame</i> with the <i>lacZ</i> gene. - The gene is cloned <i>out-of-frame</i> with the <i>lacZ</i> gene. - Due to deletion in the promoter region of <i>lacZ</i> gene. - Due to deletion in the operator region of <i>lacZ</i> gene. A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.0
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Objective Question

69	971069		4.0	0.0
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While screening a total of 50 different T₀ stage transgenic plants, we received 38 plants which were PCR-positive for the antibiotic marker gene while only 30 plants were PCR-positive for both the transgene and antibiotic marker gene. What could be the reason for some plants being positive for antibiotic marker but negative for the transgene in PCR-based screening?

1. Due to silencing of transgene after T-DNA transfer.
2. Due to loss of transgene during T-DNA transfer.
3. Due to epistatic suppression of transgene after T-DNA transfer.
4. Due to deletion of promoter of the transgene.

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

70	971070	The genomic DNA from a plant sample is isolated using CTAB method. The nanodrop reading of the sample shows 260/280 ratio of 2.8 and 260/230 ratio of 0.3. Which statement is more accurate about the isolated DNA sample? 1. The DNA is contaminated with RNA. 2. The DNA is contaminated with RNA and proteins. 3. The DNA is contaminated with RNA and solvents. 4. The DNA is contaminated with RNA, protein and solvents. A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.0
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Objective Question

71	971071	A metagenomic study led to the discovery of three new viruses. The virus-I is having circular dsDNA genome, virus-II is having linear dsRNA genome while virus-III is having linear ssRNA genome. Which of the viruses may have a high (A+T) content as compared to its (G+C) content? 1. Virus-I 2. Virus-II 3. Virus-III 4. All the three viruses. A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.0
----	--------	--	-----	-----

Objective Question

72	971072		4.0	0.0
----	--------	--	-----	-----

The BT-genes (Cry genes) used for the generation of BT-transgenic crops were isolated from ??

1. *Bacillus labotorium*
2. *Bacillus cereus*
3. *Bacillus thuringiensis*
4. *Bacillus anthracis*

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

73	971073	The name golden rice is given due to accumulation of 1. Beta-carotene 2. Vitamin-C 3. Vitamin-D 4. Vitamin-K A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.0
----	--------	--	-----	-----

Objective Question

74	971074	Which of the following is not a systemic autoimmune disease 1. Multiple sclerosis 2. Rheumatoid arthritis 3. Graves disease 4. Scleroderma pigmentosa A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.0
----	--------	---	-----	-----

Objective Question

75	971075		4.0	0.0
----	--------	--	-----	-----

Type II hypersensitivity reactions are mediated by

1. IgA
2. IgG
3. IgD
4. T cells

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

76	971076	Which one of the following contains a J chain 1. IgG 2. IgA 3. IgE 4. IgD A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.0
----	--------	--	-----	-----

Objective Question

77	971077	The CD2 receptor is absent in which of the following cells 1. T cells 2. NK cells 3. B cells 4. Thymocytes A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.0
----	--------	---	-----	-----

Objective Question

78	971078		4.0	0.0
----	--------	--	-----	-----

Which type of cells constitute the majority of circulating leukocytes?

1. Eosinophils
2. Acidophils
3. Basophils
4. Neutrophils

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

79 971079 4.0 0.0

Which of the following cells are front lines of attack during an immune response and are part of the innate immune system.

1. Acidophils
2. Granulocytes
3. Mast cells
4. Neutrophils

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

80 971080 4.0 0.0

Which enzyme is used for the manufacturing of fructose syrup.

1. Lactase
2. Glucose oxidase
3. Glucose isomerase
4. Invertase

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

81 971081 4.0 0.0

The degeneracy at the 3'-end of a pair of PCR primer sequences will result in

1. Specific amplification
2. Non-specific amplification
3. No amplification
4. Fusion of PCR products

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

82 971082 4.0 0.0

Non-specificity in a PCR reaction can be reduced by

- (A). Increasing the annealing temperature
- (B). Decreasing the annealing temperature
- (C). Increasing the Mg²⁺ conc.
- (D). Decreasing the Mg²⁺ conc.

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

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

83 971083 4.0 0.0

Which PCR reactions can be used to incorporate any modifications in the PCR products?

- (A). Site-directed PCR
- (B). Mega-primer PCR
- (C). Recombination PCR
- (D). Touchdown PCR

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

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

84 971084

4.0 0.0

Which of the following marker detection does not require any substrate addition?

- (A). Peroxidase
- (B). GFP
- (C). Anthocyanin
- (D). Gus Assay

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

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

85 971085

4.0 0.0

Which of the following are PCR-based marker techniques?

- (A). SNP
- (B). RAPD
- (C). AFLP
- (D). SCAR

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

86 971086

4.0 0.0

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

List-I	List-II
Secondary metabolite	Function
(A).Methotrexate	(I). Antiparasite agent
(B).Lovastatin	(II).Immunosupressant
(C). Cyclosporine A	(III). Anticancer agent
(D). Avermectin	(IV).Cholestrol lowering agent

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

87 971087

4.0 0.0

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

List-I	List-II
Microorganism	Secondary metabolite
(A).Bacitracin	(I). Streptomyces fradiae
(B).Puromycin	(II).Bacillus licheniformis
(C). Cephamycin C	(III). Streptomyces alboniger
(D). Neomycin	(IV). Streptomyces clavuligerus

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

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

88 971088

4.0 0.0

Agrobacterium-mediated transformation is aided with the help of multiple *vir* gene operon products. Order the operons in correct sequence of their use in the T-DNA transfer process:

(A). *virA*(B). *virD*(C). *virG*(D). *virE*

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

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

89 971089

4.0 0.0

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

List-I	List-II
(Gene Transfer methods)	(Components used)
(A). Gene-gun	(I). Silicon carbide
(B). <i>Agrobacterium</i> -mediated	(II). PEG
(C). Electroporation	(III). Tungsten particle
(D). Fibre-mediated	(IV). Ti Plasmid

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

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

90 971090

4.0 0.0

Match List-I with List-II

List-I	List-II
(Marker gene name)	(Substrate for the marker gene product)
(A). <i>uidA</i>	(I). Luminol
(B). <i>luc</i>	(II). Chloramphenicol
(C). <i>cat</i>	(III). H ₂ O ₂
(D). <i>hrp</i>	(IV). X-Gal

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

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

91 971091

4.0 0.0

(A). A positively skewed distribution is skewed to the right.

(B). A positively skewed distribution is skewed to the left.

(C). A negatively skewed distribution is skewed to the left.

(D). A negatively skewed distribution is skewed to the right.

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

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

92 971092

4.0 0.0

- (A). The range is the difference between the largest and smallest observations in a sample.
- (B). The mode is the least frequently occurring value among all the observations in a sample.
- (C). A distribution can be unimodal and bimodal only.
- (D). Skewness represents deviation from symmetry.

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

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

93 971093

4.0 0.0

Arrange the following in the order of increasing resolution of the object.

- (A). Scanning electron microscope
- (B). Compound microscope
- (C). Phase contrast microscope
- (D). Transmission electron microscope

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

1. (B), (C), (D), (A).
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

94 971094

4.0 0.0

Arrange the discoveries in order, in which they happened

- (A). Kölliker discovers mitochondria in muscle cells
- (B). Leeuwenhoek reported the discovery of protozoa
- (C). Shimomura discovers green fluorescent protein (GFP)
- (D). Robertson describes the bilayer structure of the cell membrane

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

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

95	971095	Place the events in the order they happened (A). Brown discovers nucleus, (B). Hooke uses a primitive microscope to visualise cells in sections of cork, (C). Schleiden and Schwann propose the cell theory (D). Golgi first sees and describes the Golgi apparatus 1. (A), (B), (C), (D). 2. (B), (A), (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

96	971096		4.0	0.0
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10/30/23, 10:22 AM		212_SCPH05_Live_E_V1_1-100.html	
		Place the following in the increasing order of genome size (base pairs) (A). <i>Caenorhabditis elegans</i> (B). <i>Saccharomyces cerevisiae</i> (C). <i>Drosophila melanogaster</i> (D). <i>Arabidopsis thaliana</i> 1. (A), (B), (C), (D). 2. (D), (B), (C), (A). 3. (B), (A), (D), (C). 4. (C), (B), (D), (A). A1 : 1 A2 : 2 A3 : 3 A4 : 4	
Objective Question			
97	971097	Arrange the following in the order of increasing number of protein coding genes in the genomes (A). <i>Homo sapiens</i> (B). <i>Drosophila melanogaster</i> (C). <i>Arabidopsis thaliana</i> (D). <i>Escherchia coli</i> 1. (A), (B), (C), (D). 2. (C), (B), (C), (A). 3. (B), (A), (D), (C). 4. (D), (B), (A), (C). A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0 0.0
Objective Question			
98	971098		4.0 0.0

Arrange the following in the order of increasing bond strength in the water molecules.

- (A). Hydrogen bond
- (B). Ionic bond
- (C). Covalent bond
- (D). Van der waals bond

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

99 971099 4.0 0.0

- (A). Aspartate has non polar R group
- (B). Tryptophan has aromatic R group.
- (C). Threonine has polar R group.
- (D). Serine has non polar R group.

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

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

100 971100 4.0 0.0

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

List-I	List-II
Prothetic group	Enzyme
(A). Fe	(I). Plastocyanin
(B). Mo	(II). Ferritin
(C). Cu	(III). Alcohol dehydrogenase
(D). Zn	(IV). Nitrogenase

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

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4