

PREVIEW QUESTION BANK

Module Name : SCPH22 Operational Research - 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	988001	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	988002	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	988003	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	988004	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	988005	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	988006	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	988007		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	988008	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	988009	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	988010	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	988011	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	988012	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	988013		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	988014	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
Objective Question				
15	988015	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
Objective Question				
16	988016		4.0	0.0

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	988017	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	988018	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	988019		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	988020	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	988021	Which among the following 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	988022		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 988023 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 988024 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 988025 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 988026

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 988027

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 988028

4.0 0.0

(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.

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

29 988029

4.0 0.0

(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.

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

30 988030

4.0 0.0

- (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 988031

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 988032

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 988033

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 988034

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 988035

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

988036

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

4.0

0.0

Objective Question

37

988037

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 988038

- (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	988039		4.0	0.0
		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		

Objective Question

40	988040		4.0	0.0
		(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		

Objective Question

41	988041		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 988042

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 988043

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	988044	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	988045		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 988046

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 988047

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	988048	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	988049		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	988050	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	988051		4.0	0.0
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A researcher aims to find the shortest route for a delivery truck to minimize travel time. Which research method is applicable?

1. Simulation
2. Decision trees
3. Queuing theory
4. Linear Programming

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

52 988052

4.0 0.0

_____ models are used for analyzing a system which changes over a period of time among various possible outcomes or states as well as these models describe transitions in terms of transition probabilities of various states.

1. Network
2. Replacement
3. Dynamic programming
4. Markov-chain

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

53 988053

4.0 0.0

What enables us to determine the earliest and latest times for each of the events and activities and thereby helps in the identification of the critical path?

- (A).Programme Evaluation
- (B).Review Technique
- (C).Deployment of resources
- (D).Waiting Line

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

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

54	988054	Promotional-pricing strategies are often a _____ game . 1. non zero-sum 2. zero-sum 3. mixed strategy 4. pure strategy A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.0
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Objective Question

55	988055	_____ is also known as periodic review policy or fixed-interval policy. 1. (s, Q) policy 2. (T, S) policy 3. (T, s, S) policy 4. (s, S) policy A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.0
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Objective Question

56	988056		4.0	0.0
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Match **List-I** with **List-II**

List-I	List-II
(A).Linear Programming	(I). This method is utilized to analyze waiting lines and predict system performance, often applied in service systems.
(B).Queuing Theory	(II).A graphical approach that helps in making decisions based on different possible outcomes and their associated probabilities.
(C).Monte Carlo Simulation	(III). A mathematical optimization technique used to find the best possible outcome in a linear mathematical model.
(D).Decision Trees	(IV).This method is used to model situations involving uncertainty by generating random samples to estimate outcomes.

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

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

57 988057

4.0 0.0

_____ states that the probability of service of a customer is completed at a particular time t is independent of time of service.

1. Poisson distribution
2. Markovian property of interarrival times
3. Steady-State
4. Transient-State

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

58 988058

4.0 0.0

The marginal analysis approach is also useful in describing the inventory policy for seasonal goods, also referred as _____.

1. Round-robin problem
2. Newsboy problem.
3. Baking problem.
4. Assignment problem

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

59	988059	A producer has to supply 12,000 units of a product per year to his customer. The demand is fixed and known and backlogs are not allowed. The inventory holding cost is Rs.0.20 per unit per month and the set up cost per run is Rs. 350/- per run. What will be the optimal lot size. 1. 374 units 2. 1800 units per batch 3. 1870 units per batch 4. 1000 units A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.0
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Objective Question

60	988060	A random process is defined as $X(T) = A \cos(wt + \theta)$, where w and θ are constants and A is a random variable. Then, $X(t)$ is stationary if 1. $F(A) = 2$ 2. $F(A) = 0$ 3. A is Gaussian with non-zero mean 4. A is Reyleigh with non-zero mean A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.0
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Objective Question

61	988061		4.0	0.0
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What does the graph of 'bathtub curve' represent?

1. Failure rate v/s Mean
2. Failure rate v/s Time
3. Failure rate v/s Distance
4. Failure rate v/s Velocity

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

62	988062	A dealer supplies you the following information with regard to a product that he deals in: Annual demand = 10,000 units; Ordering cost = Rs 10 per order; Price = Rs 20 per unit; Inventory carrying cost = 20 percent of the value of inventory per year. The dealer is considering the possibility of allowing some backorder (stockout) to occur. He has estimated that the annual cost of backordering will be 25 per cent of the value of inventory. What would be the maximum quantity of inventory at any time of the year? 1. 300 units 2. 133 units 3. 167 units 4. 330 units A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.0
----	--------	--	-----	-----

Objective Question

63	988063	Selling the same product at different prices is known as_____. 1. Price lining. 2. Dual pricing. 3. Geographical pricing. 4. Monopoly pricing A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.0
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Objective Question

64	988064		4.0	0.0
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Match **List-I** with **List-II**

List-I	List-II
(A).Fixed interval system	(I).Control chart is used to monitor the number of defects per unit.
(B).Simulation	(II).Probability of acceptance for every possible true percentage of defectives.
(C).Operating characteristic	(III).A trial-and-error approach to problem-solving.
(D).c-chart	(IV).Suitable for joint replenishment items.

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

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

65 988065

Minimum-cost flow models are most applicable when a problem has which of the following characteristics?

- (A).A number of locations where demand occurs
- (B).Sources of supply with limited capacities
- (C).Unknown demand at one or more locations
- (D).Shipping resources with limited capacities

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

66 988066

If there is no non-negative replacement ratio in a solution which is sought to be improved, then the solution is _____.

1. bounded
2. unbounded
3. no solution
4. alternative solution

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

67 988067

4.0 0.0

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

List-I	List-II
(A).Product Specialization	(I).preliminary stage of production planning
(B).Diversification	(II).helps in establishing the interchangeability of products
(C).Standardization	(III).ultimate objective of variety reduction
(D).Product development and design	(IV).manufacturing cost may go up

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

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

68 988068

4.0 0.0

During an iteration while moving from one solution to the next, degeneracy may occur when

1. The closed path indicates a diagonal move
2. Two or more occupied cells are on the closed path but neither of them represents a corner of the path.
3. Two or more occupied cells on the closed path with minus sign are tied for lowest circled value
4. Two or more occupied cells on the closed path with plus sign are tied for highest circled value

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

69 988069

4.0 0.0

A company manufactures two products x and y. Profit contribution is Rs 3 and Rs. 4 per unit respectively. They require 4 machines A,B,C and D. Following table explains the constraints of q facilities.

Machines	Time in Hours		Total Available Hours
	X	Y	
A	5	4	200
B	3	5	150
C	5	4	100
D	8	4	80

Quantities of x and y produced for maximum profit are?

1. (10,0)
2. (32, 10)
3. (30,10)
4. (0,20)

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

70 988070

4.0 0.0

If there are m sources and n destinations in a transportation matrix, the total number of basic feasible solution is _____.

1. $m + n$
2. $m + n + 1$
3. $m + n - 1$
4. m

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

71	988071	On an average, 5 customers reach a barbers's shop every hour. Determine the probability that exactly 2 customers will reach in a 30- minute period, assuming that the arrivals follow Poisson distribution. Formula would be: 1. $e^{-m} * m^n / n !$ 2. $e^m * m^n * n !$ 3. $1 - e$ 4. $e^{-m} * m / n !$ A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.0
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Objective Question

72	988072	There is a single doctor in a primary health centre. Patients arrive at the rate of 32 per hour. The time required to provide service is exponentially distributed with mean of 90 seconds. The mean waiting time of a patient, needing medical checkup facility in the queue, is _____. 1. 6 minutes 2. 8 minutes 3. 8.5 minutes 4. 5 minutes A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.0
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Objective Question

73	988073		4.0	0.0
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Match **List-I** with **List-II**

List-I	List-II
(A).Jockeying	(I). Customers does not join the queue and leaves the system as the queue is very long
(B).Balking	(II).When a customer keeps changing the queue just in hope to get fast service
(C).Reneging	(III).Customers takes illegal means like bribing, fighting etc. just in hope to get service faster.
(D).Cheaters	(IV).Customers joins the queue for a short period then leave the system as the queue is moving very slowly

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

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

74 988074

4.0 0.0

Financial Derivatives does not include _____.

1. Stocks
2. Forward Contracts
3. Futures
4. Options

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

75 988075

4.0 0.0

Gain of an investor on securities purchased will be determined by:

1. Macro Economic Indicator
2. Stock Market Movement
3. Realised Gain on the date of sale of securities
4. Price movement in the stock derivative

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

76 988076

4.0 0.0

Consider the following statements. Which of the statements is / are true?

- (A). Reliability of the system is always lower than that of individual components in case of series connection.
- (B). Reliability of the system is always greater than the reliability of individual components in case of parallel connection.
- (C). The phases in the "Bathtub curve" of hardware reliability consist of:- Useful Life, Burn-in and Wear-out.
- (D). Reliability and failure intensity are inversely related to each other.

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

77 988077

4.0 0.0

If C_1 = carrying cost, C_3 = ordering cost, r = demand for the product, then the optimal period for placing an order is given by:

1. $(2 C_3 / C_1 r)^{1/2}$
2. $(2 C_1 C_3 / r)^{1/2}$
3. $(2 C_3 r / C_1)^{1/2}$
4. $(2 C_1 C_3 r)^{1/2}$

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

78 988078

4.0 0.0

A producer purchases parts from the supplier at Rs. 100 each. The ordinary cost is Rs. 18 per order and the annual demand of producer is 125 parts. The supplier has a discount system which is explained below.

for 50 parts => 6% discount

for ≥ 100 parts => 8% discount

If the carrying cost per unit per year is Rs. 20, then the economical amount to be ordered at a time is _____.

1. 50
2. 55
3. 60
4. 40

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

79 988079

In a PERT/CPM network, computing the critical path requires _____.

1. determining the total project duration
2. assigning the earliest finish time for an activity as the earliest start time for the next
3. that the latest finishing time for an activity not delay the overall project beyond initial expectation
4. a sophisticated and complex computer program

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0 0.0

Objective Question

80 988080

Moving from the aggregate plan to a master production schedule requires _____.

1. rough cut capacity planning
2. sub-optimization
3. disaggregation
4. strategy formulation

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0 0.0

Objective Question

81 988081

4.0 0.0

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

List-I	List-II
(A). $\rho / (1 - \rho)^2$ represents	(I). Arrival Pattern
(B). (M/M/1) , $\lambda = \rho / \mu$ represents	(II). the waiting time in the simple queuing model
(C). $(L_q / \lambda) + (1/\mu)$ represents	(III). Traffic intensity
(D). (A/B/S : (d/f), S represents	(IV). Variance of queue

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

82

988082

4.0

0.0

A small project has 7 activities and the time in days for each activity is given below:

Activity Duration in days

Activity	Duration in days
A	6
B	8
C	3
D	4
E	6
F	10
G	3

Given that activities A and B can start at the beginning of the project. When A is completed C and D can start. E can start only when B and D are finished. F can start when B, C and D are completed and is the final activity. G can start when E is finished and is the final activity. What will be the critical path of this project

1. A - D - F

2. A - C- F

3. A- B - E - G

4. A- D- E- G

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

83 988083

4.0 0.0

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

List-I	List-II
(A). Total float (FT)	(I). Excess of maximum available time over the activity time $(T_{Lj} - T_{Ej}) - t_{Ej}$
(B). Free float (FF)	(II). Excess of available time over the activity time when all jobs start as early as possible. $(T_{Ej} - T_{Ei}) - t_{Ej}$
(C). Independent float F_{ID}	(III). Excess of maximum available time over the activity time. $(T_{Ej} - T_{Lj}) - t_{Ej}$
(D). Interfering float (F_{IT})	(IV). Difference between total float and free float. $F_T - F_F$

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) - (I), (D) - (II)

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

84 988084

4.0 0.0

In graphical solution of solving Linear Programming problem to convert inequalities into equations, we_____.

1. Use Slack variables
2. Use Surplus variables
3. Use Artificial surplus variables,
4. Simply assume them to be equations.

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

85	988085	One of the differences between the Resource allocation model and Transportation Model is that _____. 1. the coefficients of problem variables in Resource allocation model may be any number and in Transportation model it must be either zeros or ones 2. the coefficients of problem variable in Resource allocation model must be either zeros or ones and in Transportation model they may be any number 3. in both models they must be either zeros or ones only 4. in both models they may be any number A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.0
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Objective Question

86	988086	If the objective function or all constraints cannot be expressed as a system of linear equalities or inequalities, the allocation problem is classified as a _____. 1. zero-one programming problem 2. non-linear programming problem 3. integer programming problem 4. linear equalities allocation problem A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.0
----	--------	--	-----	-----

Objective Question

87	988087	Which of the following replacement policies is considered to be dynamic in nature? 1. Time is continuous variable and the money value does not change with time 2. When money value does not change with time and time is a discrete variable 3. When money value changes with time 4. When money value remains constant for some time and then goes on changing with time A1 : 1 A2 : 2 A3 : 3	4.0	0.0
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A4 : 4

Objective Question

88	988088	When load is the annual demand for the material, p = unit price of the material in Rs., C_3 is the ordering cost, q = order quantity, then the total cost including the martial cost is given by: 1. $(q/2) ip + \lambda /q C_3 + \lambda p$ 2. $2C_3 \lambda ip + \lambda p$ 3. $(q/2) ip + \lambda p$ 4. $(2C_3 q \lambda ip)^{1/2}$ A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.0
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Objective Question

89	988089	The ordering cost per order and average unit carrying cost are constant, and demand suddenly falls by 75% then EOQ will: 1. Decrease by 50% 2. Not change 3. Increase by 50% 4. Decrease by 40% A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.0
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Objective Question

90	988090	In $(M/M/1) : (\infty / \text{FIFO})$ model, $1/(\mu - \lambda)$ represents: 1. L_s , Length of the system 2. L_q length of the queue 3. W_q Waiting time in queue 4. W_s Waiting time in system A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.0
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Objective Question

91	988091		4.0	0.0
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If the number of arrivals during a given time period is independent of the number of arrivals that have already occurred prior to the beginning of time interval, then the new arrivals follow _____ distribution.

1. Erlang
2. Poisson
3. Exponential
4. Normal

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

92 988092

4.0 0.0

By hedging Portfolio, a bank manager _____.

1. reduces interest rate risk
2. increases exchange rate risk
3. increases reinvestment risk
4. increase the probability of gains

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

93 988093

4.0 0.0

The chance failure that occurs on a machine is commonly found on a graph of time Vs failure rate on X and Y axes respectively as

1. Parabolic
2. Hyperbolic
3. Line nearly parallel to X-axis
4. Line nearly parallel to Y-axis

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

94 988094

4.0 0.0

The variability in demand orders among supply chain participants:

1. cannot be controlled
2. refers to the bullwhip effect
3. can be controlled with electronic order placement
4. is more pronounced in relational

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

95 988095

To test whether allocations can be made or not (in assignment problem), minimum number of horizontal and vertical lines are drawn. In case the lines drawn is not equal to the number of rows (or columns), to get additional zeros, the following operation is done:

1. Add smallest element of the uncovered cells to the elements to the line
2. Subtract smallest element of uncovered rows from all other elements of uncovered cells
3. Subtract the smallest element from the next highest number in the element
4. Subtract the smallest element from the element at the intersection of horizontal and vertical lines

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0 0.0

Objective Question

96 988096

A firm uses every year 12000 units of a raw material costing Rs. 1.25 per units. Ordering cost is Rs. 15/- per order and the holding cost is 5 % per year of average inventory. The firm follows EOQ purchasing policy. It operates for 300 days per year. Procurement time is 14 days and safety stock is 400 units.

Find the re-order level, the maximum inventory and the average inventory.

1. Re-order level = 940 units, Maximum inventory = 2600 units, Average inventory = 1400 units.
2. Re-order level = 960 units, Maximum inventory = 2800 units, Average inventory = 1600 units.
3. Re-order level = 900 units, Maximum inventory = 2000 units, Average inventory = 1000 units.
4. Re-order level = 800 units, Maximum inventory = 2200 units, Average inventory = 1600 units.

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0 0.0

Objective Question

97 988097

4.0 0.0

Stochastic Models has the following characteristics:-

- (A). The values of variables, the pay offs of a certain course of action cannot be predicted accurately because of element of probability.
- (B). It takes element of risk into consideration.
- (C). Sale of insurance policies by Life Insurance Companies to its customers can be one of the example of this model.
- (D). Pattern of events are compiled in the form of probability distributions.

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

98 988098

4.0 0.0

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

List-I	List-II
(A). Structuring problems with sequential choices and uncertain outcomes	(I). Decision tree
(B). Sensitivity analysis	(II). Objective of decision theory
(C). Maximizing subjective preferences	(III). Minimizing the potential for regret in decision-making
(D). Minimax Regret Criterion	(IV). Evaluating the uncertainty associated with outcomes

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

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

99	988099	A Supply chain process is viewed as _____ 1. Birds eye view 2. Technical view 3. Strategic view 4. Cyclic and push/pull view A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.0
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Objective Question

100	988100	The option contract which gives the seller the obligation to buy is known as _____. 1. Put option 2. Call option 3. American option 4. European option A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.0
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