

PREVIEW QUESTION BANK

Module Name : SCPH02 Computer Science and Engineering - ENG
Exam Date : 30-Oct-2023 Batch : 09:30-12:30

Sr. No.	Client Question ID	Question Body and Alternatives	Marks	Negativ Marks
Objective Question				
1	968001	Which step of the research process involves systematically reviewing existing literature on a specific topic? 1. Data collection 2. Hypothesis formulation 3. Literature review 4. Conclusion drawing A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.00
Objective Question				
2	968002	What is primary purpose of research? 1. To prove hypothesis 2. To explore new ideas 3. To establish personal opinions 4. To promote subject beliefs A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.00
Objective Question				
3	968003	Which of the following is a reference management software? 1. End note 2. Turnitin 3. Copyscape 4. Wipe A1 : 1 A2 : 2 A3 : 3	4.0	0.00

		A4 : 4		
Objective Question				
4	968004	Which type of theory starts with general principles and predicts specific observations? 1. Impiricism 2. Deductive theory 3. Inductive theory 4. Research A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.00
Objective Question				
5	968005	Experimental research design deals with: 1. Testing of hypothesis 2. Formulating the research problem 3. Study of human behaviour 4. Clinical studies A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.00
Objective Question				
6	968006	An experimental design which is devoid of any randomization process is known as: 1. Systematic design 2. Non-randomized design 3. Purposive design 4. Unsystematic design A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.00
Objective Question				
7	968007		4.0	0.00

		A sample of 16 items from an infinite population having standard deviation 4, yielded total scores as 160. The standard error of sampling distribution of mean is: 1. 1 2. 10 3. 16 4. 64 A1 : 1 A2 : 2 A3 : 3 A4 : 4		
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Objective Question

8	968008	Probability of including a specified unit in a sample of size n selected out of N units is: 1. $1/n$ 2. $1/N$ 3. n/N 4. N/n A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.00
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Objective Question

9	968009	If the observation recorded of five sampled items are 3, 4, 5, 6, 7, the sample variance is: 1. 0 2. 1.5 3. 2 4. 2.5 A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.00
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Objective Question

10	968010		4.0	0.00
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		The number of all possible samples of size 2 drawn with replacement from a population of 4 units is: 1. 2 2. 4 3. 8 4. 16 A1 : 1 A2 : 2 A3 : 3 A4 : 4		
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Objective Question

11	968011	An estimate based on the fixed set of values of a sample always possess: 1. A single value 2. Any half value 3. Multiple values 4. A value equal to one A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.00
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Objective Question

12	968012	When an investigator wants a sample containing m units which possess a rare attribute, the appropriate sampling procedure is: 1. SRSWOR 2. SRSWR 3. Stratified sampling 4. Inverse sampling A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.00
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Objective Question

13	968013		4.0	0.00
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		Principle of optimization in sampling methods is related to: 1. Cost and efficiency of sampling designs 2. Validity of estimates 3. Asymptotic properties of estimates 4. Proportional properties of estimates A1 : 1 A2 : 2 A3 : 3 A4 : 4		
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Objective Question

14	968014	The mean of 11 numbers is 7. One of the numbers is deleted. What is the mean of the remaining numbers? 1. 7.7 2. 6.4 3. 6.0 4. 5.8 A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.00
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Objective Question

15	968015	For symmetrical distribution, which of the following is true? 1. Median - Q1 = Q3 - Median 2. Mode - Q1 = Q3 - Mode 3. Mean - Q1 = Q3 - Mean 4. Q3 - Q1 = Q3 - Q2 A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.00
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Objective Question

16	968016		4.0	0.00
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		The arithmetic mean of 10 items is 4 and the arithmetic mean of 5 items is 10. The combined arithmetic mean is: 1. 4 2. 5 3. 6 4. 14 A1 : 1 A2 : 2 A3 : 3 A4 : 4		
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Objective Question

17	968017	The values of mean and median are 40 and 48 respectively. Find out the most probable value of mode: 1. 61 2. 62 3. 63 4. 64 A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.00
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Objective Question

18	968018	Which of the following scale of measurements represent the actual amount of variables? 1. Nominal 2. Ordinal 3. Interval 4. Ratio A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.00
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Objective Question

19	968019		4.0	0.00
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		In an aquaculture study, the following variables were measured on each fish: sex, initial weight, body temperature, weight gain. The scale of these four variables (in order) are: 1. Nominal, Ratio, Ratio, Ratio 2. Nominal, Ratio, Interval, Interval 3. Ordinal, Ratio, Interval, Ratio 4. Nominal, Ratio, Interval, Ratio A1 : 1 A2 : 2 A3 : 3 A4 : 4		
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Objective Question

20	968020	Histogram can be drawn only for: 1. Discrete frequency distribution 2. Continuous frequency distribution 3. Cumulative frequency distribution 4. Relative frequency distribution A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.00
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Objective Question

21	968021	Which of the following measures satisfies a linear relationship between two variables? 1. Mean and Median Only 2. Median and Mode Only 3. Mode and Mean Only 4. Mean, Median, and Mode A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.00
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Objective Question

22	968022		4.0	0.00
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		The A.M of two numbers is 9 and their G.M. is 6. The H.M. of these two numbers is: 1. 4 2. 6 3. 9 4. 18 A1 : 1 A2 : 2 A3 : 3 A4 : 4		
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Objective Question

23	968023	For a group of 100 candidates, the mean was found to be 40. Later on it was discovered that a value 45 was missread as 54. The correct mean is: 1. 39.50 2. 39.60 3. 39.81 4. 39.91 A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.00
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Objective Question

24	968024	A train covered first 5 Km of its journey at a speed of 30 Km/H and next 15 Km at a speed of 45 Km/H. The average speed of the train was: 1. 35 Km/H 2. 40 Km/H 3. 32 Km/H 4. 42 Km/H A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.00
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Objective Question

25	968025		4.0	0.00
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Extreme values have no effect on:

1. Average
2. Median
3. Geometric Mean
4. Harmonic Mean

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

26	968026	In case of positively skewed distribution, the extreme values lie in the: 1. Left tail 2. Right tail 3. Middle 4. Two tails A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.00
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Objective Question

27	968027	Variance of the following frequency distribution, <table><tr><td><i>Class</i></td><td><i>Frequency</i></td></tr><tr><td>2-4</td><td>2</td></tr><tr><td>4-6</td><td>5</td></tr><tr><td>6-8</td><td>4</td></tr><tr><td>8-10</td><td>1</td></tr></table> is approximately equal to: 1. 2.5 2. 2.9 3. 5.0 4. 10.0 A1 : 1 A2 : 2 A3 : 3	<i>Class</i>	<i>Frequency</i>	2-4	2	4-6	5	6-8	4	8-10	1	4.0	0.00
<i>Class</i>	<i>Frequency</i>													
2-4	2													
4-6	5													
6-8	4													
8-10	1													

		A4 : 4		
Objective Question				
28	968028	The range of set of values 15, 12, 27, 6, 9, 18, 21 is: 1. 27 2. 21 3. 17 4. 3 A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.00
Objective Question				
29	968029	The variance of first n natural numbers is: 1. $(n^2 + 1) / 12$ 2. $(n^2 - 1) / 12$ 3. $(2n^2 - 1) / 12$ 4. $(1 - n^2) / 12$ A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.00
Objective Question				
30	968030	If each value of a series is divided by 5, its coefficient of variation is reduced by: 1. 0 percent 2. 5 percent 3. 10 percent 4. 20 percent A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.00
Objective Question				
31	968031		4.0	0.00

		A set of values is said to be relatively uniform, if it has: 1. High dispersion 2. Zero dispersion 3. Small dispersion 4. Negative dispersion A1 : 1 A2 : 2 A3 : 3 A4 : 4		
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Objective Question

32	968032	The values of a set are measured in cm, the unit of variance will be: 1. Unit free 2. cm 3. cm^2 4. cm^3 A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.00
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Objective Question

33	968033	In a grouped data, the number of classes preferred are: 1. Minimum possible 2. Adequate 3. Maximum possible 4. Any arbitrarily chosen number A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.00
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Objective Question

34	968034		4.0	0.00
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		Pie chart represents the components of factor by: 1. Percentages 2. Angles 3. Sectors 4. Circles A1 : 1 A2 : 2 A3 : 3 A4 : 4		
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Objective Question

35	968035	A semi logarithmic graph of a series increasing by a constant amount will be a: 1. A concave upward curve 2. A convex upward curve 3. A concave downward curve 4. A convex downward curve A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.00
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Objective Question

36	968036	Which of the following sampling methods is based on probability? 1. Convenience sampling 2. Quota sampling 3. Judgement sampling 4. Cluster sampling A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.00
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Objective Question

37	968037		4.0	0.00
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		Which type of hypothesis is based on deductive reasoning and is used in quantitative research? 1. Research hypothesis 2. Investigative hypothesis 3. Null hypothesis 4. Alternative hypothesis A1 : 1 A2 : 2 A3 : 3 A4 : 4		
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Objective Question

38	968038	Why is hypothesis testing important in research? 1. To provide a framework for data collection 2. To ensure objectivity in research findings 3. To eliminate bias in research 4. To make informed decisions on evidence A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.00
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Objective Question

39	968039	In 1933, the theory of testing of hypothesis was propounded by: 1. R.A. Fisher 2. J. Neynam 3. E.L. Lehman 4. Karl Pearson A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.00
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Objective Question

40	968040		4.0	0.00
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		Test of hypothesis $H_0: \mu=70$ vs. $H_1: \mu >70$ leads to: 1. One sided left tailed test 2. One sided right tailed test 3. Two tailed test 4. One sided right tailed and One sided left tailed test A1 : 1 A2 : 2 A3 : 3 A4 : 4		
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Objective Question

41	968041	A manufacturer claims that the lifetime of its product is more than 250 hours. Verify its claim based on 24 randomly observed lifetimes, which one of the following tests can be used? 1. Sign test 2. Mann-Whitney U test 3. Median test 4. Kolmogorov-Smirnov test A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.00
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Objective Question

42	968042	Most of the non-parametric methods utilize measurements on: 1. Interval scale 2. Ratio scale 3. Ordinal scale 4. Nominal scale A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.00
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Objective Question

43	968043		4.0	0.00
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		In which theory of probability, the outcomes of a random experiment are assumed to be equally likely? 1. Statistical 2. Classical 3. Subjective 4. Axiomatic A1 : 1 A2 : 2 A3 : 3 A4 : 4		
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Objective Question

44	968044	For two events A and B, let $P(A) = 3/8$, $P(B) = 2/3$ and $P(A \cap B) = 1/4$, then A and B are: 1. Mutually exclusive but not independent 2. Independent but not mutually exclusive 3. Both mutually exclusive and independent 4. Can not be said definitely A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.00
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Objective Question

45	968045	Two unbiased dice are thrown simultaneously. The probability to get a sum more than 8 is: 1. $2/9$ 2. $5/12$ 3. $5/18$ 4. $5/36$ A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.00
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Objective Question

46	968046		4.0	0.00
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		Which probability is obtained through the Bayes theorem? 1. Prior probability 2. Posterior probability 3. minimum probability 4. maximum probability A1 : 1 A2 : 2 A3 : 3 A4 : 4		
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Objective Question

47	968047	The probability that in a family of four children, there will be atleast one boy is: 1. $\frac{3}{4}$ 2. $\frac{5}{6}$ 3. $\frac{7}{8}$ 4. $\frac{15}{16}$ A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.00
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Objective Question

48	968048	In which distribution, mean and variance are equal? 1. Bernaulli 2. Binomial 3. Poisson 4. Normal A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.00
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Objective Question

49	968049		4.0	0.00
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		If A is an event, the conditional probability of A given A is equal to: 0 1 $1/2$ $1/4$ A1 : 1 A2 : 2 A3 : 3 A4 : 4		
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Objective Question

50	968050	For a Poisson variate X, if $P(X=2) = 3P(X=3)$, then the mean of X is: $1/4$ $1/3$ $1/2$ 1 A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.00
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Objective Question

51	968051	Consider a 2.5 Mbps token ring LAN and frame size of 180 bytes. If the ring latency is $210\mu s$ then, what will be the effective data rate of the LAN? 1.84 Mbps 1.76 Mbps 1.56 Mbps 1.40 Mbps A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.00
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Objective Question

52	968052		4.0	0.00
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		In IP4 network addressing format, the number of the network allowed in class C addresses is: 1. 2^{21} 2. 2^{22} 3. 2^{23} 4. 2^{24} A1 : 1 A2 : 2 A3 : 3 A4 : 4		
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Objective Question

53	968053	What are the disadvantages of NAT? I. NAT forms link between sender and receiver and then link can be broken irreparably during a connection. II. NAT violates architectural model of IP. III. NAT hacks source port field of TCP header which is of limited size. IV. NAT alleviates IP shortage 1. I, II, and III 2. II, III, and IV 3. I, III, and IV 4. I, II, and IV A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.00
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Objective Question

54	968054	Which of the following best describes the decryption in Triple DES ? 1. Plain Text = $D_{k1}(E_{k2}(D_{k1}(\text{cipher text})))$ 2. Plain Text = $D_{k1}(E_{k2}(D_{k3}(\text{cipher text})))$ 3. Plain Text = $E_{k1}(D_{k2}(E_{k1}(\text{cipher text})))$ 4. Plain Text = $E_{k1}(D_{k2}(E_{k3}(\text{cipher text})))$ A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.00
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Objective Question

55	968055	Which of the following is not an active attack? 1. Denial of Service attack 2. Traffic Analysis attack 3. Replay attack 4. Masquerade attack A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.00
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Objective Question

56	968056	Consider the scheme $R = (S\ T\ U\ V)$ and the dependencies $S \rightarrow T$, $T \rightarrow U$, $U \rightarrow V$ and $V \rightarrow S$. Let $R = (R_1 \text{ and } R_2)$ be a decomposition such that $R_1 \cap R_2 = \emptyset$. The decomposition is: 1. Not in 2NF 2. in 2NF but not in 3NF 3. in 3NF but not in 2NF 4. in both 2NF and 3NF A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.00
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Objective Question

57	968057	The ER model of a database include: I. Different entity types II. Attributes for each entity types. III. Relational among entity types IV. Semantic integrity constraints are not defined. Which of the statement/ statements written above is/are correct? 1. I, II, III and IV 2. I, II, and III only 3. III and IV only 4. II and III only A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.00
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Objective Question				
58	968058	An edge between an entity set and a binary relationship set can have an associated minimum and maximum cardinality, shown in the form $l....h$. Where, l is the minimum and h is the maximum cardinality. A minimum value 1 indicates: 1. no participation 2. partial participation 3. double participation 4. total participation A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.00

Objective Question				
59	968059	Which of the following concurrency control protocols ensure both conflict serializability and freedom from deadlock? I. Two - phase locking II. Timestamp ordering 1. I only 2. II only 3. Both I and II 4. Neither I nor II A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.00

Objective Question				
60	968060	Let $R(a,b,c)$ and $S(d,e,f)$ be two relations in which d is the foreign key of S that refers to the primary key of R. Consider the following four operations on R and S: I. Insert into R II. Insert into S III. Delete from R IV. Delete from S Which of the following is/are true about the referential integrity constraint above? 1. None of I, II and IV can cause its violation 2. All of I, II, III and IV can cause its violation, 3. Both I and IV can cause its violation 4. Both II and III can cause its violation A1 : 1 A2 : 2	4.0	0.00

A3 : 3

A4 : 4

Objective Question

61	968061	Assume that the following jobs are to be executed on a uniprocessor system: <table><tr><th>Job id</th><th>CPU Burst Time</th></tr><tr><td>P</td><td>4</td></tr><tr><td>Q</td><td>1</td></tr><tr><td>R</td><td>8</td></tr><tr><td>S</td><td>1</td></tr><tr><td>T</td><td>2</td></tr></table> The jobs are assumed to have arrived at 0, and in the order P, Q, R, S and T. Find the departure with time slice (completion time) for job P if scheduling is Round Robin with time slice of 1 unit (slice). 1. 4 2. 10 3. 11 4. 12 A1 : 1 A2 : 2 A3 : 3 A4 : 4	Job id	CPU Burst Time	P	4	Q	1	R	8	S	1	T	2	4.0	0.00
Job id	CPU Burst Time															
P	4															
Q	1															
R	8															
S	1															
T	2															

Objective Question

62	968062	Consider the following page trace: 4, 3, 2, 1, 4, 3, 5, 4, 3, 2, 1, 5 Number of frames for the Job M = 4. Then the page fault ratio using FIFO technique will be : 1. 94% 2. 83% 3. 75% 4. 63% A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.00
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Objective Question

63	968063		4.0	0.00
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		A disk is formatted into 40 sectors and 20 tracks. The disk rotates at 200ms in one revolution. The time taken by the head to moves from the center to the rim is 10ms. There are three different file stored in disk: File P : Sector 2, Track 4 File Q : Sector 5, Track 1 File R : Sector 6, Track 2 Calculate the average latency time required for the three files. 1. 32.66ms 2. 25.55ms 3. 22.55ms 4. 21.66ms A1 : 1 A2 : 2 A3 : 3 A4 : 4		
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Objective Question

64	968064	Which of the following scheduling policy is most suitable for timeshared operating systems? 1. Shortest Job First algorithm 2. Round Robin algorithm 3. First Come First Serve algorithm 4. Elevator algorithm A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.00
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Objective Question

65	968065	Machine independent code optimization can be applied to which of the following: 1. Source Code 2. Intermediate representation 3. Runtime output 4. Object code A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.00
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Objective Question

66	968066	Match the following:	4.0	0.00										
<table><tr><th>Group I</th><th>Group II</th></tr><tr><td>A. Lexical Analysis</td><td>P. Directed Acyclic Graphs</td></tr><tr><td>B. Code Optimization</td><td>Q. Syntax Trees</td></tr><tr><td>C. Code Generation</td><td>R. PDA</td></tr><tr><td>D. Abelian groups</td><td>S. Finite automation</td></tr></table>					Group I	Group II	A. Lexical Analysis	P. Directed Acyclic Graphs	B. Code Optimization	Q. Syntax Trees	C. Code Generation	R. PDA	D. Abelian groups	S. Finite automation
Group I	Group II													
A. Lexical Analysis	P. Directed Acyclic Graphs													
B. Code Optimization	Q. Syntax Trees													
C. Code Generation	R. PDA													
D. Abelian groups	S. Finite automation													
1. A-S, B-P, C-R, D-Q 2. A-Q, B-R, C-S, D-P 3. A-S, B-Q, C-R, D-P 4. A-P, B-S, C-R, D-Q														
A1 : 1														
A2 : 2														
A3 : 3														
A4 : 4														

Objective Question

67	968067	Let us suppose, in a programming language an identifier is permitted to be a letter followed by any number of letter or digits. If L and D denote the sets of letters and digits, respectively, which of the following expressions defines an identifier? 1. $(L.D)^*$ 2. $L(L+D)$ 3. $L+(L.D)^*$ 4. $L(L.D)^*$ A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.00
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Objective Question

68	968068	The lexical analysis for a modern computer language such as Java needs the power of which one of the following machine models in a necessary and sufficient sense? 1. Turing Machine 2. Finite State Automata 3. Deterministic Pushdown Automata 4. Non-Deterministic Pushdown Automata A1 : 1 A2 : 2 A3 : 3	4.0	0.00
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		A4 : 4		
Objective Question				
69	968069	The number of tokens in the following C statements: <pre>printf (" a = % d, b = % d ", a, b);</pre> 1. 11 2. 10 3. 9 4. 8 A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.00
Objective Question				
70	968070	In a compiler the module that checks every character of the source text is known as: 1. the machine dependant optimizer 2. the code checker 3. the lexical analyzer 4. the syntax analyzer A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.00
Objective Question				
71	968071	A one dimensional array A has indices 1.....75. Each element is a string and takes up three memory words. The array is stored at location 1120 decimal. What will be the starting address of $A(49)$? 1. 1267 2. 1164 3. 1264 4. 1169 A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.00
Objective Question				

72	968072	You are making a Max-Heap and you are inserting the following items in following order: 89 19 40 17 12 10 2 5 7 11 6 9 30 How many times swap between the parent and the children will be done? 1. 1 2. 2 3. 3 4. 4 A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.00
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Objective Question

73	968073	If an array of size 100 is declared as integer and no values are assigned into it. Till such time no value is assigned into it, it is supposed to contain what of the following ? 1. all zeros 2. all ones 3. garbage 4. all value are set to the maximum possible integer A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.00
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Objective Question

74	968074	Convert the following infix expression into equivalent postfix expression: $(A + B) * C / D$ 1. $AB + C * D /$ 2. $AB + CD * /$ 3. $ABCD + * /$ 4. $ABC * D /$ A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.00
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Objective Question

75	968075	Linked lists are not suitable for which type of the following applications? 1. Insertion Sort 2. Binary Search 3. Radix Sort 4. Polynomial Manipulations A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.00
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Objective Question

76	968076	Match List I with List II	4.0	0.00																				
<table><tr><th colspan="2">LIST I Algorithm</th><th colspan="2">LIST II Problem Solved</th></tr><tr><td>A.</td><td>Prims</td><td>I.</td><td>Single source shortest path which may have negative edges.</td></tr><tr><td>B.</td><td>Dijkstra</td><td>II.</td><td>Minimum Spanning Tree.</td></tr><tr><td>C.</td><td>Floyd Warshall</td><td>III.</td><td>Single source shortest path with positive edges.</td></tr><tr><td>D.</td><td>Bellman-Ford</td><td>IV.</td><td>All Pair Shortest Path.</td></tr></table>					LIST I Algorithm		LIST II Problem Solved		A.	Prims	I.	Single source shortest path which may have negative edges.	B.	Dijkstra	II.	Minimum Spanning Tree.	C.	Floyd Warshall	III.	Single source shortest path with positive edges.	D.	Bellman-Ford	IV.	All Pair Shortest Path.
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Choose the correct answer from the options given below:																								
1. A-I, B-II, C-III, D-IV																								
2. A-II, B-III, C-I, D-IV																								
3. A-IV, B-III, C-II, D-I																								
4. A-II, B-III, C-IV, D-I																								
A1 : 1																								
A2 : 2																								
A3 : 3																								
A4 : 4																								

Objective Question

77	968077	Consider the matrices P, Q and R which are 10×20, 20×30 and 30×40 dimensions respectively. What is the minimum number of multiplications required to multiply these three matrices? 1. 12000 2. 18000 3. 24000 4. 32000 A1 : 1 A2 : 2 A3 : 3	4.0	0.00
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A4 : 4

Objective Question

78	968078	A 3-CNF satisfiability problem belong to which of the following Class? 1. NP Class 2. NP Non Complete Class 3. NP Complete Class 4. NP Hard Class A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.00
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Objective Question

79

968079

Match List I with List II

4.0

0.00

LIST I Algorithm		LIST II Paradigm	
A.	Merge Sort	I.	Dynamic Programming
B.	Huffman Coding	II.	Greedy Programming
C.	Optimal Paranthesization	III.	Divide and Conquer
D.	Sum Subset Problem	IV.	Back Tracking

Choose the correct answer from the options given below:

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

80	968080	Which of the following gives Guaranteed optimal solution? A. Dynamic Programming B. Greedy Programming 1. Both (A) and (B) 2. Only (A) 3. Only (B) 4. Neither (A) nor (B) A1 : 1	4.0	0.00
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A2 : 2

A3 : 3

A4 : 4

Objective Question

81

968081

Apply the Kruskal Algorithm on the following graph to find minimum spanning tree and find the minimum cost:

4.0

0.00

Vertex	a	b	c	d	e	f
a	--	6	2	--	--	--
b	6	--	--	--	--	2
c	2	--	--	7	--	4
d	--	--	7	--	7	4
e	--	--	--	7	--	10
f	--	2	4	4	10	--

1. 24

2. 23

3. 19

4. 15

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

82	968082	How many minimum number of states are required in a DFA over the alphabet (a,b) accepting all the strings with the number of a's divisible by 4 and number of b's divisible by 5? 1. 97 2. 20 3. 15 4. 7 A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.00
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Objective Question

83	968083		4.0	0.00
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Which of the following will generate the string as the multiple of three?

1. $[(a+b)(a+b)(a+b)]^*$
2. $(a+b)^*(a+b)^*(a+b)^*$
3. $[(a+b)^*(a+b)(a+b)]^*$
4. $[(a+b)(a+b)(a+b)]^*$ and $(a+b)^*(a+b)^*(a+b)^*$

A1 : 1

A2 : 2

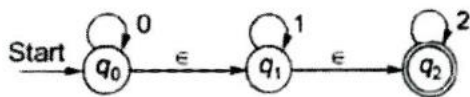
A3 : 3

A4 : 4

Objective Question

84 968084

Give the regular expression described by the following NFA :



1. $(012)^*$
2. $(0+1+2)^*$
3. $0^*1^*2^*$
4. $(01)^*2$

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

85 968085

Which of the following statements are true?

- A. The complement of a language is always regular
- B. The intersection of a regular language is always regular
- C. The complement of a regular language is regular

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

86	968086	If language 1 is regular and language 2 is CFL over Σ^* then which of the following statement is incorrect? 1. Union of Language 1 and language 2 is CFL. 2. Intersection of language 1 and language 2 is regular. 3. Language L_1^* is regular. 4. Language L_2^* is not regular. A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.00
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Objective Question

87	968087	The distance between the BCD digits 0110 and 0111 is: 1. 4 2. 3 3. 2 4. 1 A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.00
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Objective Question

88	968088	A RAM chip has a capacity of 1024 words of 8 bits each ($1K \times 8$). The number of 2×4 decoders with enabled line needed to construct a $16K \times 16$ RAM from $1K \times 8$ RAM is: 1. 4 2. 5 3. 6 4. 7 A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.00
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Objective Question

89	968089		4.0	0.00
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		The hexadecimal representation of $(657)_8$ as: 1AF - D78 - D71 32F A1 : 1 A2 : 2 A3 : 3 A4 : 4		
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Objective Question

90	968090	In an SR latch made by cross - coupling two NAND gates, if both S and R inputs are set to 0, then it will result as: $Q = 0, Q' = 1$ $Q = 1, Q' = 0$ $Q = 1, Q' = 1$ - Indeterminate states A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.00
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Objective Question

91	968091	Which of the following logic families has the least propagation delay? 54LYY - BiCMOS - ECL 74SXX A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.00
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Objective Question

92	968092		4.0	0.00
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		The total size of address space in a virtual memory system is limited by: 1. The length of MAR 2. the available Secondary Storage 3. the available Main Memory 4. the available Latches A1 : 1 A2 : 2 A3 : 3 A4 : 4		
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Objective Question

93	968093	For transferring data from a hard disc to the attached computer on a page fault, which one of the following would be preferred mode of transfer? 1. Programmed I/O 2. Hardware Interrupt-Driven I/O 3. Software Interrupt-Driven I/O 4. Direct Memory Access (DMA) A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.00
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Objective Question

94	968094	Considering only shortest routes, in a hypercube of dimension n, how many nodes are two distance away from a given node? 1. $2 \times n$ 2. n 3. $n \times (n-1)/2$ 4. 2^{n-1} A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.00
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Objective Question

95	968095		4.0	0.00
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		When a recursive function is called, all its automatic variables are: 1. maintained in stack 2. retained from last execution 3. Initialized during each call of function 4. act randomly A1 : 1 A2 : 2 A3 : 3 A4 : 4		
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Objective Question

96	968096	If $A = \{2, 4, 5, 6, 7\}$, $B = \{3, 4, 6, 7, 8\}$ and $C = \{2, 3, 4, 5, 6\}$, then $(A \cup B) \cap C$: 1. $\{2, 4, 5, 6, 7\}$ 2. $\{1, 2, 3, 4, 5\}$ 3. $\{3, 4, 5, 6, 7\}$ 4. $\{2, 3, 4, 5, 6\}$ A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.00
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Objective Question

97	968097	The minimum number of spanning trees in a graph G of 42 nodes is/are: 1. 1 2. 2 3. 14 4. 21 A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.00
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Objective Question

98	968098		4.0	0.00
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		A circuit with k ($k \geq 3$) vertices is _____ chromatic, if k is even. 1 2 3 4 A1 : 1 A2 : 2 A3 : 3 A4 : 4		
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Objective Question

99	968099	If A is square matrix then $A - A^T$ is: 1. Symmetric 2. Skew Symmetric 3. Singular Symmetric 4. Null Matrix A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.00
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Objective Question

100	968100	The dual of $a \vee (a \wedge a^1) = a$ is : 1. $a \wedge (a \vee a^1) = a$ 2. $a \vee (a \vee a^1) \vee a$ 3. $a \wedge (a \wedge a^1) = a$ 4. $a \vee (a \vee a^1) \wedge a$ A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.00
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