

17/29/22

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT
TEST -1 EXAMINATION- 2026

B.Tech-VI Semester (CSE- AI & DS)

COURSE CODE (CREDITS): 25B1WCI643 (3) MAX. MARKS: 15

COURSE NAME: STATISTICAL ANALYSIS AND COMPUTING

COURSE INSTRUCTOR: PROF. PARDEEP KUMAR MAX. TIME: 1 Hour

- Note: (a) All questions are compulsory.
(b) The candidate is allowed to make Suitable numeric assumptions wherever required for solving problems
(c) Use of calculators is allowed*

Q.No	Question	CO	Marks												
Q1	(i) A survey was conducted to find the number of hours teenagers spend on social media per week. The data is presented below:	CO1	1+1+1+1+1												
	<table border="1"> <thead> <tr> <th>Hours</th> <th>Frequency</th> </tr> </thead> <tbody> <tr> <td>0-10</td> <td>8</td> </tr> <tr> <td>10-20</td> <td>16</td> </tr> <tr> <td>20-30</td> <td>36</td> </tr> <tr> <td>30-40</td> <td>34</td> </tr> <tr> <td>40-50</td> <td>6</td> </tr> </tbody> </table>			Hours	Frequency	0-10	8	10-20	16	20-30	36	30-40	34	40-50	6
	Hours			Frequency											
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Determine the mean number of hours spent on social media using all measure of central tendencies. Show the type of distribution on the basis of your average's calculation.															
(ii) Why median is preferred over other measure of central tendencies by companies to show their average packages?															
Q2	An unbiased coin is tossed 10 times. Find the probability for getting (i) exact 6 times heads (ii) at least 6 heads (iii) at most 6 heads. Which probability distribution function is used to do above calculations?	CO2	1+1+1												
Q3	If the probability of choosing incorrect answer in an examination is 0.01. Determine the chance that out of 500 students, more than one student will choose the correct answer. Which probability distribution function is used to do above calculations?	CO2	2+1												
Q4	Consider the continuous random variable X with value r and write the expression for exponential distribution. Convert your exponential expression into cumulative distribution function for random variable in between $0 < X < a$.	CO2	1+1												
Q5	A doctor is required to visit a patient. From the past experience, it is known that the probabilities that he will come by train, bus, scooter or by other means of transport are respectively $\frac{3}{10}$, $\frac{1}{5}$, $\frac{1}{10}$ and $\frac{2}{5}$. The probabilities that he will be late are $\frac{1}{4}$, $\frac{1}{3}$ and $\frac{1}{2}$ if he come by train, bus or scooter but if he will come by other means of transport then he will not be late. When he arrives, he is late. What is the probability that he come by train?	CO1	2												

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