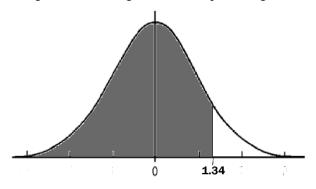
UPES

UNIVERSITY OF PETROLEUM AND ENERGY STUDIES

End Semester Examination, May 2018		
Programme: BBA E-Commerce Marketing	Semester –	IV
Course Name: Research Methodology & Report Writing	Max. Marks	: 100
Course Code: BBC 123	Duration	: 3 Hrs
No. of page/s: 3		
1. Write briefly on the following –	(<u>6</u> *5=30)	

- a. Mode
- b. Median
- c. Degree of Freedom
- d. Null Hypothesis
- e. Two Tailed Test
- Which measure of Central Tendency would be applicable in the below cases and Why? (<u>5</u>*2=10)
 a. To find the average income of a village of 1500 people. Two millionaires live in the village; remaining are poor farmers.
 - b. To find the winning party in an election
- 3. Using the Z-table, figure out what percentage of area under the curve is greyed? (10)



4. Twenty five high school students complete a preparation program for taking the SAT test. Here are the SAT scores from the 25 students who completed the SAT prep program:

434 694 457 534 720 400 484 478 610 641 425 636 454 514 563 370 499 640 501 625 612 471 598 509 531

We know that the population average for SAT scores is 500 with a standard deviation of 100. The question is, are these students' SAT scores significantly greater than the said population. Test at **5%** level of significance. (15)

In a population, the average IQ is 100 with a standard deviation of 15. A team of scientists wants to test a new medication to see if it has either a positive or negative effect on intelligence, or no effect at all. A sample of 30 participants who have taken the medication has a mean of 140. Did the medication affect intelligence, Test at 5%? (10)

6. The specimen of copper wires drawn from a large lot have the following breaking strength (in Kg. Weight):

578 572 570 568 572 578 570 572 596 544

Test whether the mean breaking strength of the lot may be taken to be 578 Kg. Weight. Test at **5%**. (15)

7. Calculate the standard deviation for the following population of scores:
8 5 3 7 5 6 4 7 2 6 5 3 6 4 5 7 8 6 5 6 (10)
