Course outline

course work?

Week 1

Week 2

Week 3

Week 4

(Lec09)

(Lec10)

Week 5

Week 6

Week 7

Week 8

Week 9

Week 10

Week 11

Week 12

Download Videos

Assignment Solution



NPTEL » Advanced Probability Theory



Announcements

About the Course

Ask a Question

Mentor **Progress**

Unit 5 - Week 4

How does an NPTEL online

Advanced Probability Theory

Advanced Probability Theory

Ouiz: Assignment 4

Week 4 Feedback Form

Assignment 4 The due date for submitting this assignment has passed.	Due on 2020-02-26, 23:59
As per our records you have not submitted this assignment.	
Select all the distributions which have their pdfs symmetric about mean?	
U[-1,1] Exp(λ)	
Normal	
Gamma	
No, the answer is incorrect. Score: 0	
Accepted Answers: U[-1,1]	
Normal	
2) Which of the following distribution can be used for modelling the distribution of "probability of any event" i	in an experiment?
O Beta2	
Caussian Exponential	
O Beta1	
No, the answer is incorrect.	
Score: 0 Accepted Answers:	
Beta1	
3) What of the following distributions is generally used for modelling the inter-event delay?	
○ Normal	
Uniform	
Exponential Beta1	
No, the answer is incorrect.	
Score: 0 Accepted Answers:	
Exponential	
4) Which of the following distribution will be obtained on summing five Exp (λ) distributions?	
Gamma(λ, 5)	
O Poisson(λ)	
$N(5/\lambda, 25/\lambda^2)$ None of the above	
No, the answer is incorrect.	
Score: 0 Accepted Answers:	
○ 48% ○ 60% ○ 68%	
○ 60% ○ 68% ○ 56%	
60% 68% 56% No, the answer is incorrect. Score: 0	
60% 68% 56% No, the answer is incorrect. Score: 0 Accepted Answers:	
60% 68% 56% No, the answer is incorrect. Score: 0 Accepted Answers:	
 60% 68% 56% No, the answer is incorrect. Score: 0 Accepted Answers: 68% 68 69 Let X be a random variable distributed as Exp(1). What is the value of P (X > (s + t) X > t)?	
○ 60% ○ 68%	
60% 68% 56% No, the answer is incorrect. Score: 0 Accepted Answers: 68% 6) Let X be a random variable distributed as Exp(1). What is the value of P (X > (s + t) X > t)? P(X > t) P(X > s) P(X > s + t)	
60% 68% 56% No, the answer is incorrect. Score: 0 Accepted Answers: 68% 6) Let X be a random variable distributed as Exp(1). What is the value of P (X > (s + t) X > t)? P(X > t) P(X > s) P(X > s + t) None of the above	
60% 68% 56% No, the answer is incorrect. Score: 0 Accepted Answers: 68% 6) Let X be a random variable distributed as Exp(1). What is the value of P (X > (s + t) X > t)? P(X > t) P(X > s) P(X > s + t) None of the above No, the answer is incorrect. Score: 0	
60% 68% 56% No, the answer is incorrect. Score: 0 Accepted Answers: 68% 5) Let X be a random variable distributed as Exp(1). What is the value of P (X > (s + t) X > t)? P(X > t) P(X > s) P(X > s + t) None of the above No, the answer is incorrect. Score: 0 Accepted Answers:	
60% 68% 56% No, the answer is incorrect. Score: 0 Accepted Answers: 68% 6) Let X be a random variable distributed as Exp(1). What is the value of P (X > (s + t) X > t)? P(X > t) P(X > s) P(X > s + t) None of the above No, the answer is incorrect. Score: 0 Accepted Answers: P(X > s)	
60% 68% 56% No, the answer is incorrect. Score: 0 Accepted Answers: 68% 5) Let X be a random variable distributed as Exp(1). What is the value of P (X > (s + t) X > t)? P(X > t) P(X > s) P(X > s + t) None of the above No, the answer is incorrect. Score: 0 Accepted Answers: P(X > s) P(X > s) Select all the statements which are true for two given density functions f and g.	
60% 68% 56% No, the answer is incorrect. Score: 0 Accepted Answers: 68% 6) Let X be a random variable distributed as Exp(1). What is the value of P (X > (s + t) X > t)? P(X > t) P(X > s) P(X > s + t) None of the above No, the answer is incorrect. Score: 0 Accepted Answers: P(X > s)	
60% 68% 56% No, the answer is incorrect. Score: 0 Accepted Answers: 68% 5) Let <i>X</i> be a random variable distributed as Exp(1). What is the value of P (<i>X</i> > (<i>s</i> + <i>t</i>) <i>X</i> > <i>t</i>)? P(<i>X</i> > <i>t</i>) P(<i>X</i> > <i>s</i>) P(<i>X</i> > <i>s</i> + <i>t</i>) None of the above No, the answer is incorrect. Score: 0 Accepted Answers: P(<i>X</i> > <i>s</i>) 7) Select all the statements which are true for two given density functions <i>f</i> and <i>g</i> . Convex combination of <i>f</i> and <i>g</i> is a valid density function f g is a valid density function f g is not necessarily a valid density function	
60% 68% 56% No, the answer is incorrect. Score: 0 Accepted Answers: 68% 6) Let <i>X</i> be a random variable distributed as Exp(1). What is the value of P (<i>X</i> > (<i>s</i> + <i>t</i>) <i>X</i> > <i>t</i>)? P(<i>X</i> > <i>t</i>) P(<i>X</i> > <i>s</i>) P(<i>X</i> > <i>s</i>) P(<i>X</i> > <i>s</i>) None of the above No, the answer is incorrect. Score: 0 Accepted Answers: P(<i>X</i> > <i>s</i>) 7) Select all the statements which are true for two given density functions <i>f</i> and <i>g</i> . Convex combination of <i>f</i> and <i>g</i> is a valid density function f g is a valid density function f g is not necessarily a valid density function Convex combination of <i>f</i> and <i>g</i> is not necessarily a valid density function	
60% 68% 56% No, the answer is incorrect. Score: 0 Accepted Answers: 68% 5) Let <i>X</i> be a random variable distributed as Exp(1). What is the value of P (<i>X</i> > (<i>s</i> + <i>t</i>) <i>X</i> > <i>t</i>)? P(<i>X</i> > <i>t</i>) P(<i>X</i> > <i>s</i>) P(<i>X</i> > <i>s</i> + <i>t</i>) None of the above No, the answer is incorrect. Score: 0 Accepted Answers: P(<i>X</i> > <i>s</i>) 7) Select all the statements which are true for two given density functions <i>f</i> and <i>g</i> . Convex combination of <i>f</i> and <i>g</i> is a valid density function <i>f g</i> is a valid density function <i>f g</i> is not necessarily a valid density function Convex combination of <i>f</i> and <i>g</i> is not necessarily a valid density function Convex combination of <i>f</i> and <i>g</i> is not necessarily a valid density function No, the answer is incorrect.	
60% 68% 56% No, the answer is incorrect. Score: 0 Accepted Answers: 68% 5) Let <i>X</i> be a random variable distributed as Exp(1). What is the value of P (<i>X</i> > (<i>s</i> + <i>t</i>) <i>X</i> > <i>t</i>)? P(<i>X</i> > <i>t</i>) P(<i>X</i> > <i>s</i>) P(<i>X</i> > <i>s</i> + <i>t</i>) None of the above No, the answer is incorrect. Score: 0 Accepted Answers: P(<i>X</i> > <i>s</i>) Convex combination of <i>f</i> and <i>g</i> is a valid density function f g is a valid density function f g is not necessarily a valid density function Convex combination of <i>f</i> and <i>g</i> is not necessarily a valid density function No, the answer is incorrect. Score: 0 Accepted Answers: Convex combination of <i>f</i> and <i>g</i> is a valid density function Convex combination of <i>f</i> and <i>g</i> is not necessarily a valid density function No, the answer is incorrect. Score: 0 Accepted Answers: Convex combination of <i>f</i> and <i>g</i> is a valid density function	
60% 68% 56% No, the answer is incorrect. Score: 0 Accepted Answers: 68% 5) Let <i>X</i> be a random variable distributed as Exp(1). What is the value of P (<i>X</i> > (<i>s</i> + <i>t</i>) <i>X</i> > <i>t</i>)? P(<i>X</i> > <i>t</i>) P(<i>X</i> > <i>s</i>) P(<i>X</i> > <i>s</i> + <i>t</i>) None of the above No, the answer is incorrect. Score: 0 Accepted Answers: P(<i>X</i> > <i>s</i>) Select all the statements which are true for two given density functions <i>f</i> and <i>g</i> . Convex combination of <i>f</i> and <i>g</i> is a valid density function f g is a valid density function f g is not necessarily a valid density function Convex combination of <i>f</i> and <i>g</i> is not necessarily a valid density function No, the answer is incorrect. Score: 0 Accepted Answers: Convex combination of f and g is a valid density function	
60% 68% 56% No, the answer is incorrect. Score: 0 Accepted Answers: 68% 69 Let <i>X</i> be a random variable distributed as Exp(1). What is the value of P (<i>X</i> > (<i>s</i> + <i>t</i>) <i>X</i> > <i>t</i>)? P(<i>X</i> > t) P(<i>X</i> > s) P(<i>X</i> > s + t) None of the above No, the answer is incorrect. Score: 0 Accepted Answers: P(<i>X</i> > s) 7) Select all the statements which are true for two given density functions <i>f</i> and <i>g</i> . Convex combination of <i>f</i> and <i>g</i> is a valid density function f g is a valid density function f g is not necessarily a valid density function Convex combination of <i>f</i> and <i>g</i> is not necessarily a valid density function Ro, the answer is incorrect. Score: 0 Accepted Answers: Convex combination of <i>f</i> and <i>g</i> is a valid density function g is not necessarily a valid density function Tonvex combination of <i>f</i> and <i>g</i> is a valid density function To is not necessarily a valid density function To it is not necessarily a valid density function To it is not necessarily a valid density function To it is not necessarily a valid density function To it is not necessarily a valid density function To it is not necessarily a valid density function To it is not necessarily a valid density function To it is not necessarily a valid density function To it is not necessarily a valid density function To it is not necessarily a valid density function To it is not necessarily a valid density function	as two battery slots and we are provided
60% 68% 56% No, the answer is incorrect. Score: 0 Accepted Answers: 68% 69 Let <i>X</i> be a random variable distributed as Exp(1). What is the value of P (<i>X</i> > (<i>s</i> + <i>t</i>) <i>X</i> > <i>t</i>)? P(<i>X</i> > t) P(<i>X</i> > s) P(<i>X</i> > s + t) None of the above No, the answer is incorrect. Score: 0 Accepted Answers: P(<i>X</i> > s) 7) Select all the statements which are true for two given density functions <i>f</i> and <i>g</i> . Convex combination of <i>f</i> and <i>g</i> is a valid density function f g is a valid density function f g is not necessarily a valid density function Convex combination of <i>f</i> and <i>g</i> is not necessarily a valid density function Ro, the answer is incorrect. Score: 0 Accepted Answers: Convex combination of <i>f</i> and <i>g</i> is a valid density function g is not necessarily a valid density function Tonvex combination of <i>f</i> and <i>g</i> is a valid density function To is not necessarily a valid density function To it is not necessarily a valid density function To it is not necessarily a valid density function To it is not necessarily a valid density function To it is not necessarily a valid density function To it is not necessarily a valid density function To it is not necessarily a valid density function To it is not necessarily a valid density function To it is not necessarily a valid density function To it is not necessarily a valid density function To it is not necessarily a valid density function	as two battery slots and we are provided
60% 68% 56% No, the answer is incorrect. Score: 0 P(X > s) P(X > s) P(X > s) P(X > s) No the answer is incorrect. Score: 0 Accepted Answers: P(X > s) None of the above No, the answer is incorrect. Score: 0 Accepted Answers: P(X > s) P(X	as two battery slots and we are provided
60% 68% 56% No, the answer is incorrect. Score: 0 Accepted Answers: P(X > s) P(X > s	as two battery slots and we are provided
60% 68% 56% No, the answer is incorrect. Score: 0 Accepted Answers: 68% 65) Let X be a random variable distributed as Exp(1). What is the value of P (X > (s + t) X > t)? P(X > t) P(X > s) P(X > s + t) None of the above No, the answer is incorrect. Score: 0 Accepted Answers: P(X > s) 7) Select all the statements which are true for two given density functions f and g. Convex combination of f and g is a valid density function f g is a valid density function f g is not necessarily a valid density function Convex combination of f and g is not necessarily a valid density function No, the answer is incorrect. Score: 0 Accepted Answers: Convex combination of f and g is a valid density function To g is not necessarily a valid density function To g is not necessarily a valid density function B) Time span of an battery is given by an exponential distribution with mean survival time as 1 day. A torch h h exactly two batteries. To power the torch, we need both slots to be filled and at least one battery should be ch for two days? 2e ⁻² 2e ⁻² 2e ⁻² 2e ⁻² 2e ⁻² 2e ⁻² e ⁻⁴	as two battery slots and we are provided
60% 68% 569% No, the answer is incorrect. Score: 0 Accepted Answers: 68% 65) Let X be a random variable distributed as Exp(1). What is the value of P (X > (s + t) X > t)? P(X > t) P(X > s) P(X > s + t) No, the answer is incorrect. Score: 0 Accepted Answers: P(X > s) 7) Select all the statements which are true for two given density functions f and g. Convex combination of f and g is a valid density function f g is a valid density function g is not necessarily a valid density function Convex combination of f and g is not necessarily a valid density function No, the answer is incorrect. Score: 0 Accepted Answers: Convex combination of f and g is a valid density function g is not necessarily a valid density function To convex combination of f and g is a valid density function Score: 0 The span of an battery is given by an exponential distribution with mean survival time as 1 day. A torch in the exactly two batteries. To power the torch, we need both slots to be filled and at least one battery should be chefor two days? 2e ⁻² 2e ⁻² 2e ⁻² 2e ⁻² 2e ⁻² 2e ⁻² 2e ⁻⁴ e ⁻⁴ No, the answer is incorrect. Score: 0	as two battery slots and we are provided
60% 68% 56% No, the answer is incorrect. Score: 0 Accepted Answers: 58% 5) Let X be a random variable distributed as Exp(1). What is the value of P (X > (s + t) X > t)? P(X > t) P(X > s) P(X > s + t) None of the above No, the answer is incorrect. Score: 0 Accepted Answers: P(X > s) 7) Select all the statements which are true for two given density functions f and g. Convex combination of f and g is a valid density function f g is a valid density function Convex combination of f and g is not necessarily a valid density function Convex combination of f and g is not necessarily a valid density function in the interval of the statements which are true for two given density function f g is a valid density function in the statements which are true for two given density function in the statements which are true for two given density function f g is not necessarily a valid density function in the statements which are true for two given density function in the statements which are true for two given density function in the statements which are true for two given density function in the statements which are true for two given density function in the statements which are true for two given density function in the statements which are true for two given density function in the statements which are true for two given density function in the statements which are true for two given density function in the statements of the statements which are true for two given density function in the statements of the statemen	as two battery slots and we are provided
60% 68% 56% No, the answer is incorrect. Score: 0 Accepted Answers: 58% 5) Let X be a random variable distributed as Exp(1). What is the value of P (X > (s + t) X > t)? P(X > t) P(X > s) P(X > s > t) None of the above No, the answer is incorrect. Score: 0 Convex combination of f and g is a valid density function f g is a valid density function f g is not necessarily a valid density function Convex combination of f and g is not necessarily a valid density function f g is not necessarily a valid density function Score: 0 Accepted Answers: Convex combination of f and g is a valid density function g is not necessarily a valid density function f g is not necessarily a valid density function f g is not necessarily a valid density function f and g is a valid density function f of some of an battery is given by an exponential distribution with mean survival time as 1 day. A torch h he exactly two batteries. To power the torch, we need both slots to be filled and at least one battery should be chefor two days? 2e ⁻² 2e ⁻² -e ⁻⁴ -e ⁻⁴ -e ⁻⁴ -e ⁻⁴ -e ⁻⁴ -e ⁻⁴ -e ⁻	as two battery slots and we are provided working. What is the probability that we can
60% 68% 566% No, the answer is incorrect. Score: 0 Accepted Answers: 87 Accepted Answers: 88 Accepted Answers: 97 Accepted Answers: 98 Accepted Answers: 98 Accepted Answers: Convex combination of f and g is a valid density function 98 G is not necessarily a valid density function Convex combination of f and g is a valid density function 99 Convex combination of f and g is a valid density function 90 Convex combination of f and g is a valid density function 90 Convex combination of f and g is a valid density function 91 Store: 0 Accepted Answers: Convex combination of f and g is a valid density function 93 Time span of an battery is given by an exponential distribution with mean survival time as 1 day. A torch in h exactly two batteries. To power the torch, we need both slots to be filled and at least one battery should be chefor two days? 2e ² 30 Which distribution perfectly describes the total time span of the torch in the description of above question 93 Which distribution perfectly describes the total time span of the torch in the description of above question	as two battery slots and we are provided working. What is the probability that we can
60% 68% 56% No, the answer is incorrect. Score: 0 Accepted Answers: 68% 5) Let X be a random variable distributed as Exp(1). What is the value of P (X > (s + t) X > t)? P(X > t) P(X > s) P(X > s > t) P(X > s > t) None of the above No, the answer is incorrect. Score: 0 Convex combination of f and g is a valid density function f g is a valid density function f g is a valid density function Convex combination of f and g is not necessarily a valid density function Score: 0 Accepted Answers: Convex combination of f and g is a valid density function f g is not necessarily a valid density function Score: 0 Accepted Answers: Convex combination of f and g is a valid density function f g is not necessarily a valid density function he hexactly two batteries. To power the torch, we need both slots to be filled and at least one battery should be the for two days? 2e ⁻² 2e ⁻² -e ⁻⁴ -e ⁻²	as two battery slots and we are provided working. What is the probability that we can
60% 68% 56% No, the answer is incorrect. Score: 0 67% No, the answer is incorrect. Score: 0 67% 68% 68% 68% 68% 68% 68% 68% 68% 68% 68	as two battery slots and we are provided working. What is the probability that we can
60% 68% 56% No, the answer is incorrect. Score: 0 Accepted Answers: 88% 5) Let X be a random variable distributed as Exp(1). What is the value of P (X > (s + t) X > t)? P(X > t) P(X > t) P(X > s) P(X > s > P(X > s + t) None of the above No, the answer is incorrect. Score: 0 Accepted Answers: P(X > s) 7) Select all the statements which are true for two given density functions f and g. Convex combination of f and g is a valid density function f g is a valid density function f g is a valid density a valid density function Convex combination of f and g is not necessarily a valid density function Convex combination of f and g is a valid density function g is not necessarily a valid density function To is not necessarily a valid density function Socre: 0 To is not necessarily a valid density function g is not necessarily a valid density function f g is not necessarily a valid density function f is not necessarily a valid density function f or in two combination of f and g is a valid density function f is not necessarily a valid density function and the state of the valid density function f is not necessarily a va	as two battery slots and we are provided working. What is the probability that we can

10) We have three devices D1, D2 and D3 having lifespans distributed as N(45,16), N(45,4) and N(45,9) respectively. We need a device which can be used 1 point

for 45 hours, which one should we choose?

Any of the three devices

No, the answer is incorrect. Score: 0

Accepted Answers: Any of the three devices

O D2

□ D3

O D1