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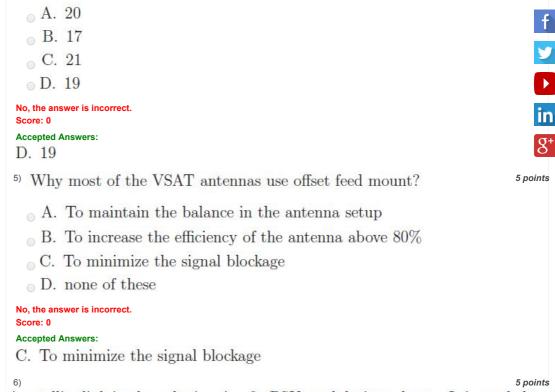
Courses » Satellite Communication Announcements Course Ask a Question Progress Unit 6 - Week 5 Course outline **Assignment-5** Due on 2017-09-27, 23:59 I The due date for submitting this assignment has passed. How to access the As per our records you have not submitted this assignment. portal? Week 1 An earth station receiving at 20 GHz from a satellite at 20<sup>o</sup> elevation, has link Week 2 ability of 99.9% and it experiences 11.31 dB attenuation during rain. What w Week 3 the diversity gain in dB when a diversity station is added at a distance of 10 Km baseline orientation angle of 85<sup>0</sup> to satellite. Week 4 Week 5 A. 3.69 O Quiz : Assignment-5 B. 5.84 O Lecture 21: Propagation C. 8.53 Lecture 22: Ground D. 9.63 Segment - 1 No, the answer is incorrect. Lecture 23: Ground Segment - 2 Score: 0 **Accepted Answers:** Lecture 24: Ground Segment - 3 B. 5.84 Lecture 25: Ground Segment - 4 5 points What is meant by F in direct method of G/T measurement using Y factor, wh Solution of Assignment-5 (Text) expressed as  $\frac{G}{T_o} = \frac{(Y-1)8\pi k}{F\lambda^2}$ ? Week 5: Assignment Solution A. noise figure Week 6 B. flux density of radio star Week 7 C. failure rate Week 8 D. none of these No, the answer is incorrect. Score: 0 B. flux density of radio star 5 points For a given earth station  $\frac{D}{\lambda} = 75$ , as per ITU mask for earth station reference an radiation, the gain  $G(\theta)$  in dB at  $\theta$  degree away from peak gain in dB will be. A. 29 B. 30 C. 31 D. 32 No, the answer is incorrect. Score: 0

Accepted Answers: D. 32

4)

5 points

A VSAT network is allotted 42 dBw in a linearized transponder. The network operate with two carriers from Hub to support many VSAT carriers. The two carrier need 36dBw each. And each VSAT carrier need 26 dBw. How many V carriers can be accommodated in the transponder?



A satellite link in clear sky is using 8—PSK modulation scheme. It is needed to cl the modulation scheme to counter the rain fade. Find out the suitable modul scheme amongst the following

- A. BPSKB. 16-PSK
- C. 32-PSK
- D. 64-PSK

No, the answer is incorrect.

Score: 0

Accepted Answers:

A. BPSK

') 5 points

To improve the single site attenuation of 10.31 dB at annual link availability of 9 a second site is added to get diversity gain of 5.84 dB. What is the joint site attenuation for the same link availability?

- A. 3.56 dB
- B. 4.47 dB
- C. 5.78 dB
- D. 9.40 dB

No, the answer is incorrect. Score: 0

Score: 0

8)

Accepted Answers: B. 4.47 dB

5 points

Using radio star based G/T measurement, where, F is radio star flux density, the antenna effective aperture and f is the frequency. The noise power ratio Y is as

A. 
$$Y = \frac{FA_e}{2kT_s}$$

B.  $Y = 1 + \frac{FA_e}{2kT_s}$ 



$$_{\odot}$$
 C.  $Y=1-\frac{FA_{c}}{2kT_{s}}$ 



D. 
$$Y = 1 + \frac{2FA_e}{3kT_s}$$



No, the answer is incorrect. Score: 0

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Accepted Answers:

B.  $Y = 1 + \frac{FA_e}{2kT_s}$ 



5 points

Earth station transmit power amplifier output is monitored through a 20 dB cou When a power meter shows 1 watt power at the coupler output, what was the pamplifier output in dBw?

- A. 19
- B. 20
- C. 21
- D. 22

No, the answer is incorrect.

Score: 0

Accepted Answers:

B. 20

5 points

ITU recommends that ground station antenna Side lobes (for  $\theta = 1^0$  to  $20^0$  ar  $\frac{D}{\lambda} \geq 50$ ) should be restricted such that 90% of Side lobe peak should not exceed relation

A. 
$$G(\theta) = 32 - 25 \log \theta$$

B. 
$$G(\theta) = 31 - 25 \log \theta$$

$$G(\theta) = 30 - 25 \log \theta$$

$$_{\odot}$$
 D.  $G(\theta) = 29 - 25 \log \theta$ 

No, the answer is incorrect.

Score: 0

Accepted Answers:

D. 
$$G(\theta) = 29 - 25 \log \theta$$

You were allowed to submit this assignment only once

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