أساسيات رياضيات
9:11
الخميس 1/4/2021
أ.د. طارق محمد عبد اللطيف

Faculty of Computers & Information, Assiut University
1st Level
Final Exam
Duration: 2 hours

Hi Ziyad, when you submit this form, the owner will be able to see your name and email address.

* Required

1. الإسم الرباعي (بالعربي فقط) *

زياد علي محمد علي

2. رقم الجلوس *

162020252

3. المستوي *

- (●) الاول

- ○ الثاني
- ○ الثالث
- ○ الرابع

4. البرنامج *

- ◉ عام
- ○ بايو
- ○ هندسة

5. رقم المعمل *

ج٣

6. رقم الكمبيوتر *

19

7. كود المراقب *

DE14

8. إسم الملف بالمسار (تملي بمعرفة المراقب) *

Enter your answer

9. The coefficient of x^4 of the expansion (x+3/x)^10 equals 1080 *
(1 Point)

- ◯ True
- ◉ False

10. The summation of the series -1/6+1/6+1/2+⋯ equals *
(2 Points)

- ◉ 2√
- ◯ 3√
- ◯ 32
- ◯ another answer

11. For the equation z^4=2+2i , the roots take the form *
(2 Points)

- ◯ (z_j=2√2 cis(π/16
- ◯ (z_j=(2√2)^4 cis((π+j)/16
- ◯ (z_j=(2√2)^(1/4) cis((π/4+πj)/4
- ◉ another answer

12. (The polar form of the following complex number √3 - i is 2(cos π/6 -isin π/6 *
(1 Point)

- ◯ True

- (●) False

13. For the expansion (4x+32)^(1/5) , n equals 5 *
(1 Point)

- ( ) True
- (●) False

14. The fifth term of the series 100+100(2)+100(2)^2+... is 1500 *
(1 Point)

- ( ) True
- (●) False

15. The value of any determent may be negative *
(1 Point)

- ( ) True
- (●) False

16. The number of terms of the expansion (x+3/x)^10 is 10 *
(1 Point)

- ( ) True
- (●) False

17. The 10^th term of the series 100+100(2)+100(2)^2+... is 100 (3)^10 *
(1 Point)

- ( ) True

- [x] False

18. For the series 300(1/3)^2+300(1/3)^3+300(1/3)^4+...+300(1/3)^7, the first term equals *
(2 Points)

- [ ] 300
- [ ] 100
- [x] 100/3
- [ ] another answer

19. The summation of infinite terms of the series 300(1/3)^2+300(1/3)^3+300(1/3)^4+... equals *
(2 Points)

- [x] 50
- [ ] 150
- [ ] 450
- [ ] another answer

20. Using De Moivre's theorem, cos3θ is *
(2 Points)

- [ ] cos^3 θ-sin^3 θ
- [x] cos^3 θ-3cosθsin^2 θ
- [ ] 3sinθ cos^2 θ-sin^3 θ
- [ ] another answer

21. For $z=(1+i)^{10}$, then $\arg(z)=\pi$ *
(1 Point)

- ○ True
- ◉ False

22. The summation of series $-1/6+1/6+1/2+\cdots$ equals approximately -0.25 *
(1 Point)

- ○ True
- ◉ False

23. The summation of the series $100+100(2)+100(2)^2+\ldots$ equals -50 *
(1 Point)

- ○ True
- ◉ False

24. The coefficient of x^3 in the expansion $(x-2/x)^7$ equals *
(2 Points)

- ◉ -280
- ○ 448
- ○ 84
- ○ another answer

25. If $z=((2+i)/(i-1))^3$, then $\bar{z}=13/4-9/4\ i$ *
(1 Point)

- ○ True

- (●) False

26. If A={x∈N:x^2-4x-5=0}, then A has one element only *
(1 Point)

- (●) True
- ( ) False

27. By truth table, if A=0 and B=1, then A/B is *
(2 Points)

- ( ) -1
- (●) 0
- ( ) 1
- ( ) another answer

28. This series 100+100(2)+100(2)^2+... is convergence *
(1 Point)

- (●) True
- ( ) False

29. For the expansion (4x+32)^(1/5), x corresponding to x/8 *
(1 Point)

- (●) True
- ( ) False

30. This series -1/6+1/6+1/2+⋯ is arithmetic *
(1 Point)

- (●) True
- ( ) False

31. For the complex number z=(2+2i)/i, arg(z) equals *
(2 Points)

- ( ) 7π/4
- ( ) 3π/4
- (●) π/4
- ( ) another answer

32. For the system: ax+3y+5 z=8+b,-3 z-3y+4x=-14, y+ax+z=b , if x=-1, y=0 and z=2 by Cramer's rule , the value of b equals *
(2 Points)

- ( ) 1
- ( ) 2
- ( ) 3
- (●) another answer

33. If z=(2+2i)/i , then $\bar{z}$ is *
(2 Points)

- (●) 2i-2
- ( ) 2i+2
- ( ) 2i+2-

- ○ another answer

34. If we calculate 35^(1/5) by binomial theorem, x equals 2/3 *
(1 Point)

- ○ True
- ◉ False

35. {N={1, 2, 3, ...} ∧ Z={a/b: a,b∈N,b≠0 *
(1 Point)

- ○ True
- ◉ False

36. If A={1, 2} and U={1, 2, 3, 5}, Then ((A)^c)^c equivalent *
(2 Points)

- ◉ A
- ○ {3,5}
- ○ ∅
- ○ another answer

37. The coefficient of 1/x^5 of the expansion (x-2/x)^7 is *
(2 Points)

- ○ -280
- ○ 448
- ○ 84
- ◉ another answer

38. The summation of the series 300(1/3)^2+300(1/3)^3+300(1/3)^4+...+300(1/3)^7 is *
(2 Points)

- (●) 49.93
- ( ) 149.3
- ( ) 444.8
- ( ) another answer

39. [The convergence interval, for the expansion (4x+32)^(1/5), is x∈[-8,8 *
(1 Point)

- ( ) True
- (●) False

40. By De Moivre's theorem, sin4θ equivalent *
(2 Points)

- ( ) 4cos^3 θ-4sin^3 θ
- (●) (4cosθsinθ(cos^2 θ-sin^2 θ
- ( ) 4sin^2 θ cos^2 θ-4sin^4 θ
- ( ) another answer

41. For the system: ax+3y+5 z=8+b,-3 z-3y+4x=-14, y+ax+z=b , if x=-1, y=0 and z=2 by Cramer's rule , the value of a equals *
(2 Points)

- ( ) 1
- ( ) 2

- ○ 3
- ◉ another answer

42. The series 1+1/4+(1.3)/(4.8)+... is a binomial series *
(1 Point)

- ◉ True
- ○ Flase

43. The necessary condition for existing a solution for a linear system is $\Delta \neq 0$ *
(1 Point)

- ◉ True
- ○ False

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