

OLIV TA'LIM MUASSASALARIGI

KIRUVCHILAR UCHUN

"XORAZM ILM ZIYO" NTM

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Namuna: 3482HOQI*Boltayev Anvar (Qashqadaryo)*BAADACCCAACA...	
<b>Izoh:</b> 1) Agar sizni ism familiyagizda yoki viloyatingiz nomida O',G' harflari qatnashsa ularni o'rniga U va G harflarini ishlating. 2) Harflarni faqat lotin alifbosida yozing. 3) Repetitsion testlar faqat ko'rsatilgan sanalar uchun yaroqli. <b>18.07.2019-20.07.2019</b> 4) Repetitsion testning sms javoblari soat <b>19:00</b> gacha qabul qilinadi.	
Natijalar: Har kuni @repetitsiontestuz kanalida soat <b>22:00</b> e'lon qilinadi	

SAVOLLAR KITOBII

999998

BLOKLAR:

Matematika (3.1)

Fizika (2.1)

Ingliz tili (1.1)

Test topshiruvchi:

F.I.O.

IMZO

DIQQAT!

Test topshiriqlarini yechishdan avval savollar kitobini varaqlab, unda har bir fan bo'yicha savollar soni to'liqligini tekshiring. Agar savollar soni kamligi aniqlansa yoki savollar kitobi raqami bilan javoblar varag'idagi "savollar kitobi raqami" bir xil bo'lmasa, darhol auditoriya rahbariga ma'lum qiling.

Savollar kitobida va javoblar varag'ida test topshiruvchining familiyasi, ismi, otasining ismi to'ldirilganligiga va imzosi qo'yilganligiga e'tibor qarating!

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**MATEMATIKA**


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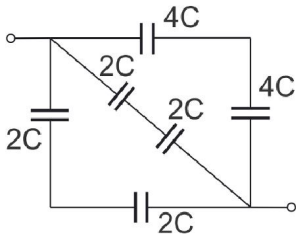
1.  $25^{64} \cdot 64^{25}$  soni  $N$  natural sonning kvadrati bo'lsa,  $N$  ning raqamlari yig'indisi qanday bo'ladi?  
A) 21 B) 28 C) 14 D) 7
2.  $1 + \frac{20}{1 + \frac{20}{1 + \frac{20}{\dots}}}$  ni hisoblang.  
A) 5 B) 8 C) 10 D) 6
3. Agar  $4 \leq x \leq y \leq z \leq t \leq 25$  bo'lsa,  $\frac{x}{y} + \frac{z}{t}$  ifodaning eng kichik qiymati qanday bo'ladi?  
A) 0,4 B) 1,6 C) 0,2 D) 0,8
4.  $m$  va  $n$  naturallar uchun  $\sqrt{2}(n-5) + n^2 - 6mn + 17,5m = 0$  o'rinli.  $n-m$  ni toping?  
A) 5 B) 6 C) 2 D) 3
5.  $4y^2 + 12\sqrt{2}y + 2x^2 + 8x + 26 = 0$  bo'lsa,  $x/4 + 4y^2$  qanday bo'ladi?  
A) 18,5 B) 19 C) 17,5 D) 2,5
6.  $\left(1 - \frac{1}{a}\right)\left(1 - \frac{1}{a-1}\right)\left(1 - \frac{1}{a-2}\right) \dots \left(1 - \frac{1}{3}\right)\left(1 - \frac{1}{2}\right) = 1/30$  bo'lsa,  $a$  ning qiymati qanday?  
A) 15 B) 10 C) 30 D) 6
7.  $ABC$  to'g'ri burchakli uchburchakning  $AC$  kateti 15 ga teng.  $BC$  gipotenuzasi  $AB$  katetdan 9 ga uzun.  $AB$  katetga o'tkazilgan mediana uzunligini toping.  
A) 16 B)  $\sqrt{209}$  C)  $\sqrt{241}$  D)  $\sqrt{134}$
8. Tomonlari 6; 7 va 11 ga teng uchburchakning eng kichik burchagini toping.  
A)  $\arccos \frac{67}{77}$  B)  $\arccos \left(-\frac{3}{7}\right)$   
C)  $\arccos \frac{67}{54}$  D)  $\arccos \frac{9}{11}$
9.  $ABCDEF$  muntazam ko'pburchakning tomoni 6 ga teng.  $C$  uchdan  $AE$  diagonalgacha bo'lgan masofani toping.  
A) 10 B) 7 C) 9 D) 8
10. Agar  $a + b + c + d + 5 = a + 1 = b + 2 = c + 3 = d + 4$  bo'lsa,  $a + b + c + d$  qanday bo'ladi?  
A)  $-7/3$  B)  $5/3$  C)  $-10/3$  D)  $-5$
11. Nechta tub son  $1 < \frac{1+2n}{3(n-4)} < 3$  tengsizlikning yechimi bo'ladi?  
A) 2 B) 7 C) 5 D) 1
12.  $\sqrt{8+2x-x^2} > 6-3x$  tengsizlik qancha butun yechimga ega?  
A) 3 B) 2 C) 5 D) 4
13.  $b_n = 3n - 10,5$  formula bilan berilgan ketma-ketlikning ( $b_n$ ) dastlabki oltmishta hadi yig'indisini toping.  
A) 5260 B) 4980 C) 4860 D) 5140
14.  $7 \cdot 2^{4x+1} = 3 \cdot 5^{2x+1} - 19$  tenglamani yeching.  
A) 1 B) 2 C)  $1/2$  D)  $3/2$

15. Agar  $\log_a b = 2$  bo'lsa,  $\log_{a\sqrt{b}} \frac{\sqrt{b}}{a^2} + \log_{b\sqrt{a}} a\sqrt{b} + 3\log_{\sqrt{b}} a$  ifodaning qiymati qanday bo'ladi?  
A) 3 B)  $10/33$  C)  $3,3$  D)  $1/3$
16.  $x + y = 1$  to'g'ri chiziqqa parallel to'g'ri chiziqni ko'rsating.  
A)  $y = x - 1$  B)  $y = x + 1$   
C)  $2x + 2y + 3 = 0$  D)  $x - y = 2$
17. Muntazam o'nikkiburchakli piramidaning apofemasi  $2\sqrt{2}$  ga teng, barcha yon yoqlari asos tekisligiga  $45^\circ$  burchak ostida og'ishgan. Uning hajmini toping.  
A)  $64 - 30\sqrt{2}$  B)  $64 - 32\sqrt{3}$   
C)  $64 - 32\sqrt{2}$  D)  $68 - 48\sqrt{2}$
18. Balandligi asosining diametriga teng bo'lgan silindrning yon sirti  $16\pi$  ga teng. Silindr asosining diametrini toping.  
A) 2 B) 1 C) 8 D) 4
19. Muntazam oltiburchak piramidaning apofemasi 5 ga teng, piramida asosiga tashqi chizilgan doiraning yuzi esa  $12\pi$  ga teng. Bu piramidaga ichki chizilgan sharning radiusini toping.  
A)  $2,5$  B) 3 C)  $3,2$  D)  $1,5$
20.  $y = 7\cos\sqrt{x}$  funksiyaning davrini toping.  
A)  $2\pi$  B)  $2\pi^2$  C) davriy emas. D)  $4\pi^2$
21. Radiusi 6 sm bo'lgan metall shardan eng katta hajmdagi silindr kesib yasaldi. Bu silindr asosining radiusini toping.  
A)  $\sqrt{6}$  B) 3 C)  $2\sqrt{6}$  D) 4
22.  $A(7; -5)$  nuqtadan o'tuvchi va abssissa o'qiga perpendikulyar bo'lgan to'g'ri chiziq tenglamasini toping.  
A)  $x = 7$  B)  $x = -7$  C)  $x = -5$  D)  $x = 5$
23.  $f(x) = \sin e^{-x}$  bo'lsa,  $f'\left(\ln \frac{3}{\pi}\right)$  qanday bo'ladi?  
A)  $3/\pi$  B)  $-\pi/6$  C)  $1/2$  D)  $\pi/3$
24. Hisoblang  $\cos\left(\arctg\sqrt{3} + \arccos\frac{\sqrt{3}}{2}\right)$ .  
A)  $\frac{1}{2}$  B) 0 C) 1 D)  $\frac{\sqrt{3}}{2}$
25.  $\sin(x/2 + \pi/5) = \sqrt{3}/2$  tenglamani yeching.  
A)  $2\pi/5 + 2\pi k, k \in Z$   
B)  $-2\pi/5 + (-1)^k 2\pi/3 + 2\pi k, k \in Z$   
C)  $-2\pi/5 + (-1)^k 2\pi/3 + \pi k, k \in Z$   
D)  $2\pi/5 + (-1)^k 2\pi/3 + 2\pi k, k \in Z$
26. Yozgi bolalar oromgohida qizlar qancha bo'lsa, o'g'il bolalar ham shuncha edi. 13 yoshgacha bo'lgan bolalar 13 yoshdan katta bolalarga qaraganda 2 marta ko'p edi. Agar 3 soniga o'ng va chap tomondan aynan bitta raqamni yozsak, oromgohdagi bolalar soni kelib chiqadi. Bu qanday raqam?  
A) 3 B) 4 C) 6 D) 2
27. Arifmetik progressiya berilgan  $a_1, a_2, \dots, a_n$ .  
 $\frac{1}{a_1 \cdot a_2} + \frac{1}{a_2 \cdot a_3} + \frac{1}{a_3 \cdot a_4} + \dots + \frac{1}{a_{n-1} \cdot a_n}$  ning yig'indisini toping.  
A)  $a_1$  B)  $\frac{n-1}{a_1 a_n}$  C)  $\frac{1}{a_n}$  D)  $a_1 a_{n+1}$
28. Quyidagi javoblardan qaysi biri bo'sh to'plam.

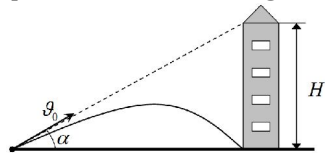
- A)  $A = \{x : \arccos x = 1, x \in R\}$   
 B)  $A = \{x : \arccos x = 3, x \in R\}$   
 C)  $A = \{x : \arccos x = 2, x \in R\}$   
 D)  $A = \{x : \arccos x = 4, x \in R\}$
29.  $A = \{1; 3; 5; 6; 8; 10\}$  va  $B = \{5; 6; 7; 8; 10\}$  to'plamlar berilan.  $A \cup B$  to'plamning ikkita kesishmaydigan qism to'plamlar sonini toping.  
 A) 71 B) 36 C) 68 D) 64
30.  $A = \{x : |x - 2| < 4, x \in N\}$  to'plamning elementlar sonini aniqlang.  
 A) 5 B) 6 C) 3 D) 4

## FIZIKA

31. Yerdan yer radiusiga teng masofada o'zgaras tezlik bilan yer atrofiga aylana trayektoriya bo'yicha harakatlanayotgan kosmik kemaning yer bilan o'zaro gravitasion ta'sir kuchi 100 kN ga teng. Kosmik kema ta'sir qiluvchi markazga intilma kuchning qiymatini toping (kN).  
 A) 0. B) 300. C) 100. D) 200.
32. Jism gorizont bilan  $\alpha$  burchak tashkil qiluvchi qiya tekislikda turibdi. Jismga ta'sir etuvchi to'la reaksiya kuchi bilan qiya tekislik sirti orasidagi burchakning kotangens qiymatini toping.  
 A) 0. B)  $ctg\alpha$ . C)  $tg\alpha$ . D)  $tg\alpha/2$ .
33. Yerning sun'iy yo'ldoshini aylanma orbitaga chiqarish uchun 8 km/s tezlik berish kerak. Kosmik kema uchun xavfsiz tezlanish 15g ga teng bo'lsa, bu tezlikka erishish uchun qancha masofa talab etiladi (km)?  
 A) 213. B) 200. C) 312. D) 113.
34. Rasmdagi sxemada umumiy elektr sig'imni aniqlang.



- A) 3C. B) 2C. C) C. D) 4C.
35. Radiusi 9 cm bo'lgan shar dastlab  $2 \mu C$  zaryadiga ega. Unga yana  $2 \mu C$  zaryad berish uchun qanday ish bajarish kerak (J)?  
 A) 1,2. B) 3. C) 0,6. D) 2,4.
36. Yerning qaysidir nuqtasining geografik koordinatalari  $0^\circ$  shimoliy kenglik,  $10^\circ$  sharqiy uzoqlikdan iborat. Mazkur nuqtaning yer o'qi atrofiga aylanma harakat tezligi (m/s) topilsin. Ekvator uzunligi 40 ming km.  $T = 86400$  s.  
 A) 232. B) 327. C) 463. D) 401.
37. Jism yerdan balandligi 60 m bo'lgan minora tomiga qarata  $60^\circ$  burchak ostida otilgan edi. Biroq u minora asosiga kelib tushdi. Jism boshlang'ich tezligini toping (m/s). Havoning qarshilik kuchini hisobga olmang.  $g = 10$  m/s<sup>2</sup>.

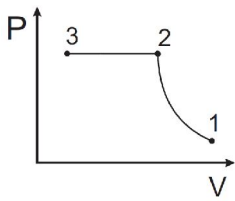


- A) 20. B) 18. C) 10. D) 15.
38. Jism koordinatasi A(1;2;3) bo'lgan nuqtadan koordinatasi B(0;0;0) bo'lgan nuqtaga 6 s davomida, undan keyin esa C

(13;5;7) nuqtaga 7 s davomida ko'chdi. Jismning o'rtacha ko'chish tezligi (m/s) qanday? (Koordinatalar sistemasida oraliqlar metrlarda).

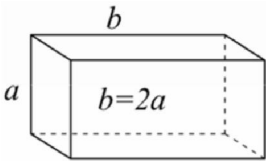
- A) 3. B) 2. C) 4. D) 1.
39. De-Broyl gipotezasiga ko'ra  $p = h/\lambda$ ,  $E = hv$  munosabatlari faqat fotonlarga emas, balki, elektronlar uchun ham o'rinlidir. Ikkinchi tenglikka asosan harakatdagi elektron tebranishlari chastotasini aniqlang (Hz). Harakatdagi elektron energiyasi  $4,64 \cdot 10^{-13}$  J.  $h = 6,63 \cdot 10^{-34}$  J s.  
 A)  $7 \cdot 10^{20}$ . B)  $7 \cdot 10^{21}$ .  
 C)  $1,5 \cdot 10^{18}$ . D)  $1,5 \cdot 10^{19}$ .
40. Metall paramagnit trubkani ichidan yog'och va magnit tashlandi. Qaysi birining tushish vaqti katta? Havoning qarshiligini hisobga olmang.  
 A) yog'och. B) bir xil.  
 C) magnit. D) aniqlab bo'lmaydi.
41. Quyidagi tasdiqlardan to'g'rlarini aniqlang.  
 1) monokristall mis issiqlikdan kengayganda uning shakli o'zgarmaydi;  
 2) monokristall mis issiqlikdan kengayganda uning shakli o'zgaradi;  
 3) polikristall temir issiqlikdan kengayganda uning shakli o'zgarmaydi;  
 4) polikristall temir issiqlikdan kengayganda uning shakli o'zgaradi;  
 5) bug'lanish bu moddaning fazaviy o'tishi.  
 A) 1, 2, 3. B) 1, 3, 5.  
 C) 2, 3, 5. D) 3, 4, 5.
42. Bir mol bir atomli ideal gaz dastlab izoxorik qizdirildi, so'ngra izotermik kengaydi. Izotermik jarayonda kengayishda 6,4 kJ issiqlik berildi. Gazning kengayishida bajarilgan ishinguniga berilgan to'liq issiqlik miqdoriga nisbatini toping.  $T_0 = 160$  K.  

 A) 0,7. B) 0,66. C) 0,62. D) 0,78.
43. Quyosh nimadan tarkib topgan?  
 A) gaz. B) plazma.  
 C) qattiq jism. D) suyuqlik.
44. Quyidagi tasdiqlardan to'g'rlarini aniqlang.  
 1) elektr kossalarning turli yo'nalishlarda turlicha bo'lishi anizotropiya deyiladi;  
 2) tashqi bosim ortgan sari qaynash harorati kamayadi;  
 3) namlik oshgan sari psixrometr termometrlari ko'rsatkichlari orasidagi farqi ortadi;  
 4) monokristall kumush issiqlikdan kengayganda uning shakli o'zgaradi.  
 A) 2, 3. B) 3, 4. C) 1, 2. D) 1, 4.
45. Bir atomli ideal gaz dastlab adiabatik so'ngra izobarik siqildi. Gazning boshlang'ich temperaturasi bilan oxirgi temperaturasi teng (rasmga qarang). Gazning to'liq siqilishda A ish bajarilsa, izobarik siqilishda gaz molekullari qancha ish bajaradi?



- A)  $0,3A$ . B)  $3A/5$ . C)  $0,2A$ . D)  $-2A/5$ .

46. Karbonat angidridning nurlanish spektri qanday?  
A) *chiziqli*. B) *yo'l-yo'l*.  
C) *TJY*. D) *tutash*.
47. Yorug'lik kuchi 20 cd bo'lgan nuqtaviy yorug'lik manbaidan  $R=10$  cm masofadagi maksimal yoritilganlikni toping (lx).  
A) 5000. B) 4000. C) 3000. D) 2000.
48. Parallelepiped shaklidagi o'tkazgich turli tomonlari orqali tok manbaiga ulanishi mumkin (rasmga qarang). Uning qarshiligi  $a^2$  yuzali qarama-qarshi yoqlari orqali ulangandagi qiymati  $ab$  yuzali qarama-qarshi yoqlari orqali ulangandagi qiymatidan necha marta katta?



- A) 3 marta. B) 4 marta.  
C) 2 marta. D) 8 marta.

49. O'zgaras tok manbaiga to'g'ridan to'g'ri ulangan ideal voltmeter nimani o'lchaydi?  
A) *tok kuchini*.  
B) *manba ichki qarshiligiga tushadigan kuchlanishni*.  
C) *qisqa tutashuv tokini*.  
D) *E.Yu.K ni*.
50. Yuqoriga  $4 \text{ m/s}^2$  tezlanish bilan tekis tezlanuvchan harakatlanayotgan liftda suvga qisman botgan kapilyar nay joylashgan. Naydagi suvning ko'tarilish balandligini toping (mm). Nay radiusi 2 mm, suvning sirt taranglik koeffitsiyenti  $73 \text{ mN/m}$ .  $g=10 \text{ m/s}^2$ .  
A) 12,16. B) 9,125. C) 5,2. D) 4,56.
51. Yer sirtidagi jism  $R/n$  balandlikka ko'tarilganda bajarilgan ishini toping.  $R$ -Yer radiusi,  $g$ -yer sirtidagi erkin tushish tezlanishi.  
A)  $nmgR$ . B)  $mgR/(n+1)$ .  
C)  $mgR/n$ . D)  $mgR/(n-1)$ .
52. Sterjen uchlariga  $m_1$  va  $m_2$  massali ikkita yuk osilgan. Sterjen markazi gorizontol o'qqa mahkamlangan. Strejenni vertikal tekislikda to'liq aylantirish uchun sharchalar massalari nisbati qanday bo'lishi kerak? Sterjen dastlab gorizontol vaziyatda turibdi.  
A) 3. B) 2. C) 1. D) 4.
53. Dastlab cho'zilmagan, bikrligi  $k=62 \text{ N/m}$  bo'lgan prujinaga  $m=62 \text{ g}$  yuk osib qo'yib yuborilganda A amplitudali garmonik tebranishlar yuzaga keldi. Prujina maksimal cho'zilganda yukning balandligi  $h=0$  deb hisoblab, sistemaning potensial energiyasi minimal bo'lgan paytda uning tezlanishi qanday bo'ladi ( $\text{m/s}^2$ )?  
A) 4,65. B) 9,3. C) 5,15. D) 0.
54. Kondensatorning sig'imi  $120 \mu\text{F}$  va g'altaging induktivligi  $30 \text{ H}$  bo'lgan tebranish konturidagi magnit maydon energiyasi o'zgarish davrini aniqlang (ms).  $\pi = 3$ .  
A) 180. B) 720. C) 129,6. D) 360.
55. Induktiv qarshiligi  $70 \Omega$  bo'lgan g'altak va sig'im qarshiligi  $50 \Omega$  bo'lgan kondensator ketma-ket ulangan. O'zgaruvchan tokning quvvat koeffitsiyentini toping.

- A) 0,8. B) 0,6. C) 0. D) 1.

56. p-tip yarimo'tkazgichli material qanday aralashma bilan hosil qilinadi?  
A) *akseptor*. B) *donor*.  
C) *oddiy eritish yo'li bilan*. D) *TJY*.
57. Mis-64 izotopining yarim yemirilish davri 12,8 soat. Shu izotopning o'rtacha yashash vaqtini toping (sutka).  
A) 8,9. B) 25,6. C) 12,8. D) 18,4.
58. Barcha fotonlarning impulsi ..... ga to'g'ri proporsional.  
A)  $h/\pi$  B)  $h/2\pi$  C)  $2\pi h$  D)  $2h/\pi$
59. Yorug'lik tezligiga yaqin tezlikda harakatlanayotgan jismga taalluqli yoki unga bog'liq bo'lgan quyidagi kattaliklardan qaysi biri o'zgarmaydi?  
1) uzunlik; 2) vaqt; 3) massa 4) harakat yo'nalishiga perpendikular bo'lgan yuza; 5) zaryad.  
A) 1 va 2. B) 4 va 5. C) 2 va 3. D) 1 va
60. Astrofizikaga ko'ra, yulduzlar o'z rivojlanish davrining so'ngida massaning katta-kichikligiga qarab keskin kengayishi yoki keskin siqilishi mumkin. Kuzatuvlarga ko'ra bir yulduzning o'z o'qi atrofida aylanish davri ma'lum muddat ichida 2 marta kamaygan. Bunda massasi o'zgaras deb hisoblab, uning radiusi qanday o'zgarгани aniqlang.  
A) 1,41 marta kichraygan. B) 4 marta ortgan.  
C) 4 marta kichraygan. D) 1,41 marta ortgan.

## INGLIZ TILI

61. Choose the answer which correctly completes the sentence.  
Would you please remember . . . away all the books when you have finished your work?  
A) put B) to put C) putting D) puts
62. **Choose the answer which correctly completes the sentence.**  
My aunt, whose son-in-law is the managing director of a large company, has been to a garden party at ... Buckingham Palace.  
A) a B) the C) an D) -
63. **Choose the answer which correctly completes the sentence.**  
It was in the park that Ted had his money ... . Be careful going there!  
A) stolen B) steal  
C) stealing D) to steal
64. **Choose the correct answer.**  
She was ... a man who had snatched her bag.  
A) preserving B) attacking on  
C) falling for D) chasing after
65. **Choose the answer which correctly completes the sentence.**  
The harder he tried, ... he danced before the audience.  
A) the worse B) worst  
C) worse D) the worst
66. **Choose the answer which correctly completes the sentence.**  
... one of us is particularly interested in gardening.  
A) Neither B) All C) Such D) Both
67. **Choose the correct answer.**  
The bomb could explode at any ... time and in any ... place.  
A) to give/to give B) giving/giving  
C) give/give D) given/given
68. We got in the car and made ... Chicago as fast as we could.

A) towards B) for C) to D) at

69. **Choose the answer which correctly completes the sentence.**

Don't worry. We can manage by ..., thank you very much.

A) alone B) us C) them D) ourselves

70. **Choose the answer which correctly completes the sentence.**

It was ... lovely starlit night!

A) an B) the C) - D) a

71. **Choose the answer which correctly completes the sentence.**

Kite flying is especially popular ... Thailand, where the air is filled ... a great variety of kites during the spring months.

A) for/of B) with/with  
C) among/by D) in/with

72. **Choose the answer which correctly completes the sentence.**

We always have the car ... by the children who live next door.

A) cleaned B) to clean  
C) cleaning D) clean

73. **Choose the best answer.** Our teacher told us, "Discuss your ideas with your partner before presenting." Our teacher told us ... partner before presenting.

A) to discuss our ideas with our  
B) to discuss your ideas with our  
C) discussing your ideas with your  
D) discussed our ideas with our

74. **Choose the answer which correctly completes the sentence.**

Ostriches can't fly ... they have wings.

A) because B) even though  
C) as D) in spite of

75. **Choose the answer which correctly completes the sentence.**

The hotel owner informed us that he ... the police already.

A) was going to call B) is going to call  
C) had called D) has called

76. **Choose the best answer.** They don't know if the leader ... this application tomorrow morning.

A) confirmed B) would confirm  
C) confirms D) will confirm

77. **Choose the answer which correctly completes the sentence.**

I can't find the books ... I got from the library.

A) - B) who C) when D) why

78. **Choose the best answer.** We ... allow our speed of production to drop.

A) may not B) needn't  
C) mustn't D) don't have to

A hybrid vehicle is a vehicle which uses two or more kinds of propulsion. Most hybrid vehicles use a conventional gasoline engine as well as an electric motor to provide power to the vehicle. These are usually called hybrid-electric-vehicles, or HEVs. Hybrids use two types of propulsion in order to use gasoline more efficiently than conventional vehicles do. Most hybrid vehicles use the gasoline engine as a generator which sends power to the electric motor. The electric motor then powers the car. In conventional vehicles, the gasoline engine powers the vehicle directly.

Since the main purpose of using a hybrid system is to efficiently use resources, most hybrid vehicles also use other efficient systems. Most hybrid vehicles have regenerative braking 10 systems. In conventional vehicles, the gasoline

engine powers the brakes, and the energy used in braking is lost. In regenerative braking systems, the energy lost in braking is sent back into the electrical battery for use in powering the vehicle. Some hybrid vehicles use periodic engine shutoff as a gas-saving feature. When the vehicle is in idle, the engine temporarily turns off. When the vehicle is put back in gear, the engine comes back on. Some hybrids use tires made of a stiff 15 material which rolls easily and prevents drag on the vehicle. Hybrid vehicles save up to 30% of the fuel used in conventional vehicles. Since hybrid vehicles use less gasoline, the cost of operating them is less than the cost of operating conventional vehicles. Therefore, hybrid vehicles are gaining in popularity. According to a recent study, over the five years it typically takes for a person to pay for a car, a typical hybrid 20 car driver would save over \$6,000 in gasoline costs. Almost all the world's major automakers are planning and producing safe and comfortable hybrid vehicles to meet the demand for these increasingly popular vehicles. Although hybrid vehicles do represent a marked improvement in environmentally conscious engineering, there still remains one significant potential drawback: battery disposal.

25 Batteries are difficult to dispose of in an environmentally safe manner. To properly dispose of the battery in a hybrid car requires substantial effort. If the battery is not disposed of properly, the environmental impact of a hybrid car can be equal, if not greater than, that of a regular gas only car. Since hybrid vehicles use less gasoline than conventional vehicles, they put fewer 30 emissions into the atmosphere than conventional vehicles do. As hybrids become more popular, conventional vehicles are being used less, and the level of emissions being put into the air is decreasing. Hybrid vehicles are an example of an energy-efficient technology that is good for both consumers and the environment.

79. **According to the passage, which of the following statements is/are true?**

I) Two braking systems are used in most hybrid vehicles.  
II) Approximately 30% of vehicles on the road are hybrid vehicles.  
III) Some HEVs have engines which turn off when the vehicle is not moving.  
A) I and II only B) II only  
C) III only D) I only

80. **According to the passage, HEVs use two types of propulsion mainly in order to**

A) provide a safe driving experience.  
B) use gasoline efficiently.  
C) provide a comfortable ride.  
D) go faster.

81. **In line *regenerative* most closely means**

A) electric B) restorative  
C) gasoline D) powerful

- Read and then choose the correct answer to question 82-84.**

We are all born with a number of instinctive physical reactions, things we do automatically, which are called **primitive reflexes**. One of the most interesting is called "grasp reflex". If you touch the palm of a baby's hand, the fingers will close around, whatever object is doing the touching. The baby's grip is so strong that if a baby grasps a rod with both hands, it can be lifted right off the ground. Some psychologists think that this goes back to our evolutionary past when we had to be able to hang on to tree branches or to our mother's fur as she moved. The reflex disappears at about six months of age.

82. **We understand from the passage that primitive reflexes ...**

A) sometimes disappear after six months  
B) are things which we do automatically from the time we are born.

- C) are a way of lifting babies off the ground.  
D) are concentrated in the palm of a baby's hand.

83. **It is clear from the passage that ...**

- A) very young babies are sometimes stronger than we might think.  
B) only people living in primitive conditions have reflexes.  
C) human babies are good at hanging on to tree branches.  
D) until six months of age babies think their mothers have fur.

84. **According to some psychologists, ...**

- A) babies instinctively hang onto their mothers.  
B) a baby's grasp is much stronger among the members of primitive societies.  
C) lifting a baby off the ground provides good exercise for growing babies.  
D) grasp reflex can be explained by the evolutionary phases of the human species.

**Read the text. Then choose the correct answer to questions 85-87.**

At present, there are only two people in the world who have undergone successful hand transplants. This operation has only recently been available and the second successful transplant was carried out in January, 1999. Since this operation, more than one hundred people have contacted the doctor who carried out the operation. Potential candidates are put through medical, psychiatric and psychological tests. Their medical histories are scrutinized. Moreover, they are bluntly told of the risks of the medication that suppresses the immune system. This is necessary to prevent the body from rejecting the foreign tissue in the new hand, which is taken from a dead body.

85. **The passage tells us that ....**

- A) two people have recently died due to the failure of their immune systems during hand transplants  
B) effective techniques for transplanting human hands have only been recently developed  
C) having a hand transplant is a new craze in cosmetic surgery  
D) more than one hundred people have recently had hand transplants

86. **In the case of a hand transplant, the immune system ....**

- A) plays the major role on the psychological situation of the candidates  
B) is suppressed to reduce the risk of spreading the infection  
C) might reject the new hand if not controlled  
D) is risky to people with certain medical histories

87. **It is implied in the passage that ....**

- A) only the person whose immune system functions well is considered suitable for the operation  
B) the doctor who carried out the second successful operation is advertising for more business  
C) there may be psychological as well as physical problems for those who receive the operation  
D) most hand transplant operations are successful

**Read and choose the correct answer to questions 88-90.**

Panda is the name for two nocturnal Asian mammals: the red panda and the giant panda. The red panda, also known as lesser panda and cat bear, is found at high elevations in the Himalayas. It resembles a raccoon but has a longer body and tail and a more rounded head. Its thick fur is rust color to deep chestnut, with black on the under parts, limbs, and ears. The red panda spends much of its time in trees but feeds on the ground, eating primarily bamboo leaves but

also fruit and roots. The giant panda superficially resembles a bear. The body is chiefly white, and the limbs are brownish black, with the dark color extending up over the shoulder. The ears and eye patches are black. Giant pandas live in restricted areas of the high mountain bamboo forests of central China; their diet consists entirely of bamboo shoots. Rare in the wild, they produce young poorly when they are not in their natural environment. Giant pandas are protected by law in China.

88. **It can be understood from the passage that ... .**

- A) the diets of the red panda and the giant panda are not totally the same  
B) the under parts, limbs, and ears of the giant panda are all white  
C) all the nocturnal mammals in China are called panda  
D) there are no pandas in China for the time being

89. **It is clear from the passage that ... .**

- A) cat bear is a more dangerous animal than the red panda  
B) the red panda is also called raccoon in the Himalayas  
C) giant pandas do have breeding problems in captivity  
D) the giant panda never spends its time in trees

90. **It can be inferred from the passage that ... .**

- A) the number of the bamboo forests of China is decreasing  
B) red pandas usually live on chestnuts just like giant pandas  
C) though they share a name, red and giant pandas are not alike in many ways  
D) it is surprising that the giant pandas are not in danger of becoming extinct