

Umumta'lim maktabning 2024-2025 o'quv yili 9-sinf o'quvchilarining fizika fanini o'zlashtirish darajasini aniqlash uchun test, savol, masala va topshiriqlar varianti

I ChSB (fizika) DEMO

1. Avagadro soni deb qanday fizik kattalikka aytiladi? **(bilish – 2 ball)**
- A) 12 g ugleroddagi atomlar soniga
 - B) bitta uglerod atomi massasining 1/12 qismiga
 - C) 1 mol modda massasi
 - D) bitta atom massasining uglerod atomi massasining 1/12 qismiga nisbatiga
2. CO₂ gazning 10 moli massasi necha gramm? $\mu = 44 \cdot 10^{-3}$ kg/mol. **(qo'llash – 2,8 ball)**
- A) 44
 - B) 440
 - C) 220
 - D) 22
3. 9 g suvda necha mol modda bor? $\mu = 18$ g/mol. **(qo'llash – 2,8 ball)**
- A) 0,5
 - B) 1
 - C) 2
 - D) 0,2
4. Ideal gaz bosimini hisoblash uchun quyida berilgan formulalardan to'g'rilarini aniqlang. **(bilish – 2 ball)**
- a) $p = \frac{1}{3}nm_0\overline{v^2}$
 - b) $p = \frac{2}{3}nE_k$
 - c) $p = \frac{2}{3}\rho\overline{v^2}$
- A) barchasi to'g'ri
 - B) faqat b
 - C) faqat c
 - D) faqat a va b
5. 210 K necha °C ga mos keladi? **(bilish – 2 ball)**
- A) –74
 - B) –65
 - C) –63
 - D) –98

6. Molekulalari ilgarilanma harakatining o'rtacha kinetik energiyasi $8,28 \cdot 10^{-21}$ J bo'lgan gazning temperaturasi qanday ($^{\circ}\text{C}$). $k = 1,38 \cdot 10^{-23}$ J/K. **(qo'llash – 2,8 ball)**

- A) 127
- B) 137
- C) 130
- D) 400

7. 20 g gaz 600 K temperaturada va 8,31 MPa bosimda 6 l hajmni egallaydi. Bu qanday gaz? **(qo'llash – 2,8 ball)**

- A) kislorod
- B) vodorod
- C) geliy
- D) azot

8. Hajmi 20 l bo'lgan idishga kislorod (molyar massasi 32 g/mol) solingan. Idishdagi gazning temperaturasi 127°C va bosimi 160 kPa ga teng bo'lsa, idishdagi gaz massasini (g) aniqlang. **(qo'llash – 2,8 ball)**

- A) 24,4
- B) 30,8
- C) 36,6
- D) 32,2

9. Normal atmosfera bosimi sharoitida ideal gaz 5 l hajmni egallaydi. Agar gaz bosimi 20 kPa ga kamaysa, gaz qanday hajmni (l) egallaydi? Harorat o'zgarmas, deb oling. **(qo'llash – 2,8 ball)**

- A) 5,5
- B) 6,25
- C) 4,25
- D) 3,5

10. Ideal gazning harorati 27°C va hajmi 27 l. Bosim o'zgarmaganda, gazning hajmi 32,4 l ga teng bo'lishi uchun uni qanchaga (K) isitish kerak? **(qo'llash – 2,8 ball)**

- A) 20
- B) 40
- C) 80
- D) 60

11. Ideal gazning harorati 27°C va bosimi 120 kPa. Hajm o'zgarmaganda, gazning bosimi 180 kPa ga teng bo'lishi uchun uni qanchaga ($^{\circ}\text{C}$) isitish kerak? **(qo'llash – 2,8 ball)**

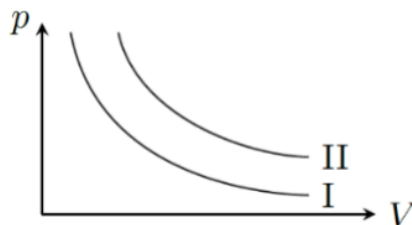
- A) 300
- B) 150
- C) 120
- D) 180

12. Ideal gazning ichki energiyasini hisoblash uchun quyida berilgan formulalardan to'g'ri-rilarini aniqlang. **(bilish – 2 ball)**

a) $U = \frac{3}{2}pV$ b) $U = \frac{m}{M}RT$ c) $U = \frac{1}{2}\nu RT$

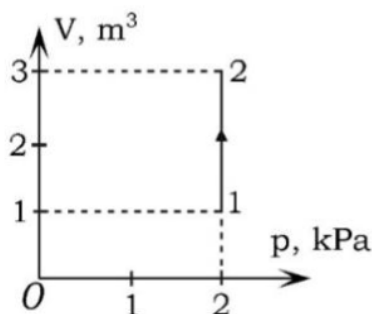
- A) barchasi to'g'ri
- B) faqat b
- C) faqat a
- D) faqat a va c

13. Ideal gaz ustida ikki xil izotermik jarayon bajarildi. Birinchi holda gazning ichki energiyasi 50 kJ ga teng, ikkinchi holda esa birinchisidan 10 kJ ga farq qilgan. Agar ikkala jarayondagi temperaturalar 50 K ga farq qilgan bo'lsa, birinchi holatdagi temperaturani (K) aniqlang. **(mulohaza – 4 ball)**



- A) 227
- B) 375
- C) 250
- D) 500

14. Gaz 1-holatdan 2-holatga o'tganda, uning bajargan ishi (kJ) qanday bo'ladi? **(qo'llash – 2,8 ball)**



- A) 0
- B) 2
- C) 4
- D) 6

15. 2 mol ideal gaz 2 K ga izoxorik isitilganda bajargan ishini (J) toping. $R = 8,31 \text{ J}/(\text{mol}\cdot\text{K})$. **(qo'llash – 2,8 ball)**

- A) 0,5
- B) 1,5
- C) 2

D) 1