

HOLIDAYS HOMEWORK- 2026

CLASS – 12 MEDICAL

ENGLISH

1. An interschool Kabaddi Competition is organized by your school. Write a notice, in not more than 50 words, requesting the students to be present at the venue to encourage the players. Invent all the necessary details. You are Arjun, the sports captain of your school.
2. You lost your Titan wrist-watch in your school. Draft a notice, in not more than 50 words, to be placed on your school notice board. You are a student of Class XII of Rani Ahalya Devi Senior Secondary School, Gwalior. Sign as Rani/Ram.
3. Mr. and Mrs. R. Vaidyanathan of 27, Appletree Orchard, Mangalore, have decided to have a party on the occasion of the twenty-first birthday of their son, Rahul Vaidyanathan. Write the invitation giving details of the date, time, and venue. Do not exceed 50 words.
4. You are Faiz/Falak Mazumdar living at 39, Udampur Colony, Shimla. You decide to hold a dinner party to congratulate your grandparents on their golden wedding anniversary. Draft a formal invitation in not more than 50 words to all family members to attend a grand dinner at home.
5. You are Dhruv/Deepa. Your father, Shri Dheeraj Garg of Gurugram wants you to draft an invitation to be sent to friends and relatives on the occasion of your elder sister's marriage. Prepare the invitation giving necessary details in not more than 50 words.
6. Neha Bajaj, the President of the English Literary and Debating Society Kendriya Vidyalaya, Sector 19, Chandigarh, has organised an Inter-school Declamation Competition on the topic 'More Vocational Courses Should be Introduced at the +2 Level'. She wishes to invite Dr Sanjay Gupta, an eminent educationist to the occasion to preside over the function to be held on November 15, 2016 at 10.00 a.m. Write an informal invitation in not more than 50 words.
7. Write a letter to the Editor, Times of India, drawing attention of the concerned authorities towards the long power cuts that your colony is facing causing a lot of inconvenience to the students, the old and the sick. You are Vimala / Vineet, 14 Srinagar Colony, Roorkee.
8. You are Samita/Sunit, resident of C-41, Sant Vihar, Delhi- 1. You find, participation of children in various reality shows on T.V. a form of child exploitation. Write a letter to the editor of a national daily showing your concern about various forms of child exploitation prevalent in Educated, Urban society giving some suggestions to curtail it.
9. Write the summary and poetic devices of all the 5 poems.

1. Make a table containing all the scientists from chapters 4 to 6 along with the theories they gave or the experiments they performed.
2. Make flowcharts of the following –
 - Microsporogenesis
 - Megasporogenesis
 - Spermatogenesis
 - Oogenesis
 - Hormonal regulation of spermatogenesis
 - Parturition
3. Learn & write the steps of following –
 - DNA replication
 - Transcription
 - Translation
 - ARTs

1. परिभाषा - आलाप,तान,रामक,मूर्च्छना,मीड,अलंकार
2. ताल - धमार और झपताल ठाह, दुगुन,तिगुन
3. रागों का समय सिद्धांत में - रे - धा कोमल , गा - नि कोमल , स्वर वाले रागों में बारे में लिखे
4. संगीत रत्नाकर में स्वराअध्याय, रागविवेका अध्याय,
वाद अध्याय

Date : 22-05-2026

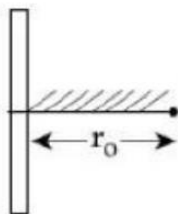
JEE/NEET JEE

Total Marks : 120

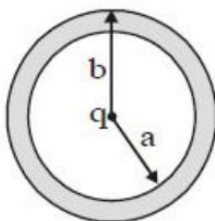
* SECTION - A

[120]

- Two metal spheres of radii R_1 and R_2 are charged to the same potential. The ratio of charges on the spheres is
 (A) $\sqrt{R_1} : \sqrt{R_2}$ (B) $R_1 : R_2$ (C) $R_1^2 : R_2^2$ (D) $R_1^3 : R_2^3$
- A uniform electric field pointing in positive x -direction exists in a region. Let A be the origin, B be the point on the x -axis at $x = +1 \text{ cm}$ and C be the point on the y -axis at $y = +1 \text{ cm}$. Then the potentials at the points A , B and C satisfy
 (A) $V_A < V_B$ (B) $V_A > V_B$ (C) $V_A < V_C$ (D) $V_A > V_C$
- The distance between H^+ and Cl^- ions in HCl molecule is $1.28 \text{ \AA}$. What will be the potential due to this dipole at a distance of $12 \text{ \AA}$ on the axis of dipole..... V
 (A) 0.13 (B) 1.3 (C) 13 (D) 130
- A positive point charge is released from rest at a distance r_0 from a positive line charge with uniform density. The speed (v) of the point charge, as a function of instantaneous distance r from line charge, is proportional to

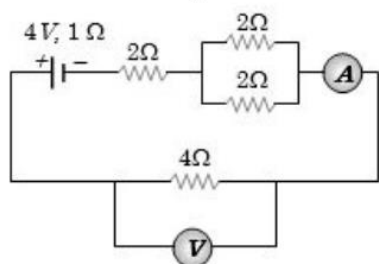


- (A) $v \propto e^{+r/r_0}$ (B) $v \propto \ln\left(\frac{r}{r_0}\right)$ (C) $v \propto \sqrt{\ln\left(\frac{r}{r_0}\right)}$ (D) $v \propto \left(\frac{r}{r_0}\right)$
5. In the figure shown the electric potential energy of the system is: (q is at the centre of the conducting neutral spherical shell of inner radius a and outer radius b)



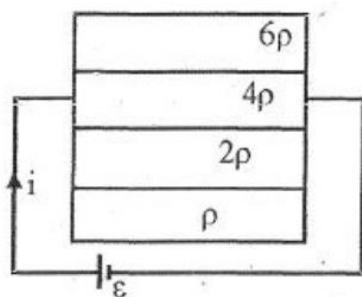
- (A) 0 (B) $\frac{kq^2}{2b}$ (C) $\frac{kq^2}{2b} - \frac{kq^2}{2a}$ (D) $\frac{kq^2}{2a} - \frac{kq^2}{2b}$
6. A potential difference of 300 *volts* is applied to a combination of $2.0\ \mu F$ and $8.0\ \mu F$ capacitors connected in series. The charge on the $2.0\ \mu F$ capacitor is

13. What is the equivalent resistance of the circuit Ω



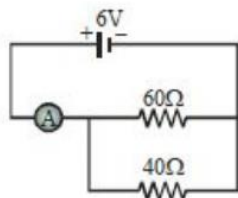
- (A) 6 (B) 7 (C) 8 (D) 9

14. If resistivity of all four wire connected in parallel is different as given in figure and all other dimensions of wire are same then current i is (resistance of wire having resistivity ρ is R_0)



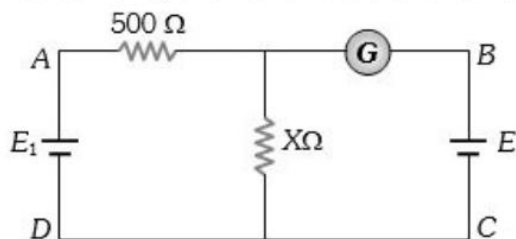
- (A) $\frac{23\varepsilon}{12R_0}$ (B) $\frac{13\varepsilon}{12R_0}$ (C) $\frac{25\varepsilon}{16R_0}$ (D) $\frac{13\varepsilon}{6R_0}$

15. The measurement of ammeter in the following circuit is A (Assuming ideal ammeter)



- (A) 2.4 (B) 3.4 (C) 4 (D) 0.25

16. In the adjoining circuit, the battery E_1 has an *e.m.f.* of 12 volt and zero internal resistance while the battery E has an *e.m.f.* of 2 volt. If the galvanometer G reads zero, then the value of the resistance X in ohm is



- (A) 10 (B) 100 (C) 500 (D) 200

17. In a potentiometer arrangement, a cell of *emf* 1.25 V gives a balance point at 35.0 cm length of the wire. If the cell is replaced by another cell and the balance

point shifts to 63.0 cm , what is the *emf* of the second cell in V ?

- (A) 4.65 (B) 2.25 (C) 8.64 (D) 10.52

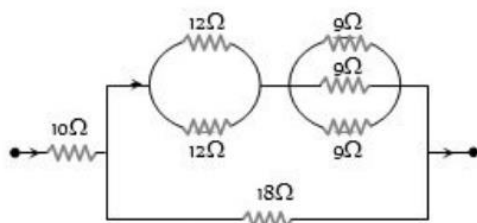
18. A heater A gives out 300 W of heat when connected to a 200 V d.c. supply. A second heater B gives out 600 W when connected to a 200 V d.c. supply. If a series combination of the two heaters is connected to a 200 V d.c. supply the heat output will be W

- (A) 100 (B) 450 (C) 300 (D) 200

19. A cable of resistance $10\ \Omega$ carries electric power from a generator producing 250 kW at 10000 volt . The current in the cable is A

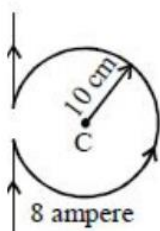
- (A) 25 (B) 250 (C) 100 (D) 1000

20. In the following circuit, $18\ \Omega$ resistor develops 2 J/sec due to current flowing through it. The power developed across $10\ \Omega$ resistance is W



- (A) 125 (B) 10 (C) 0.8 (D) 25

21. A long, straight wire is turned into a loop of radius 10 cm (see figure). If a current of 8 A is passed through the loop, then the value of the magnetic field and its direction at the centre C of the loop shall be close to



- (A) $5.0 \times 10^{-5}\text{ newton/(amp-meter)}$, outwards
 (B) $3.4 \times 10^{-5}\text{ newton/(amp-meter)}$, outwards
 (C) $1.6 \times 10^{-5}\text{ newton/(amp-meter)}$, inwards
 (D) $1.6 \times 10^{-5}\text{ newton/(amp-meter)}$, outwards

22. If wire of length L form a loop of radius R and have n turn. Find magnetic field at centre of loop if current flowing in loop is I

- (A) $\frac{\mu_0}{4\pi} \frac{I}{R^2} \times L^2$ (B) $\frac{\mu_0}{4\pi} \frac{I}{R^2} \times L \times n^2$ (C) $\frac{\mu_0 I}{4\pi} \frac{4\pi^2 n^2}{L}$ (D) $\frac{\mu_0}{4\pi} I 4\pi^2 n^2 \times L$

23. A coil having N turns is wound tightly in the form of a spiral with inner and outer radii a and b respectively. When a current I passes through the coil, the magnetic field at the centre is

(A) $\frac{\mu_0 NI}{b}$

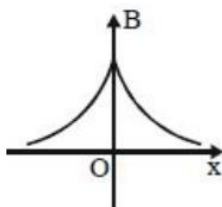
(B) $\frac{2\mu_0 NI}{a}$

(C) $\frac{\mu_0 NI}{2(b-a)} \ln \frac{b}{a}$

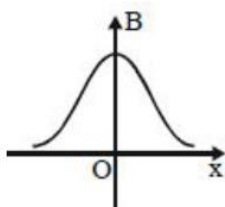
(D) $\frac{\mu_0 I^N}{2(b-a)} \ln \frac{b}{a}$

24. A circular coil is in $y-z$ plane with centre at the origin. The coil is carrying a constant current. Assuming direction of magnetic field at $x = -25 \text{ cm}$ to be positive direction of magnetic field, which of the following graphs shows variation of magnetic field along x -axis

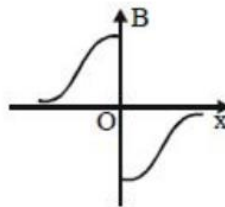
(A)



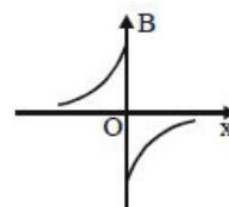
(B)



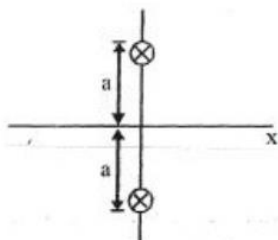
(C)



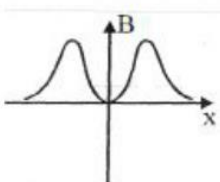
(D)



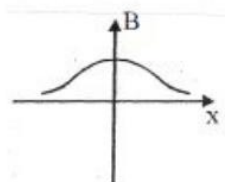
25. Two straight infinitely long current carrying wires are kept along z -axis at the coordinates $(0, a, 0)$ and $(0, -a, 0)$ respectively as shown in the figure. The current in each of the wire is equal and along negative z -axis (into the plane of the paper). The variation of magnetic field on the x -axis will be approximately



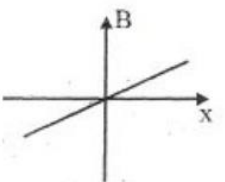
(A)



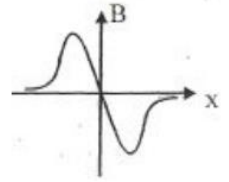
(B)



(C)



(D)



26. When a charged particle moving with velocity $\vec{v}$ is subjected to a magnetic field of induction $\vec{B}$, the force on it is non-zero. This implies that
- (A) angle between is either zero or 180°
- (B) angle between is necessarily 90°
- (C) angle between can have any value other than 90°
- (D) angle between can have any value other than zero and 180° .
27. A charge of $4.0 \mu\text{C}$ is moving with a velocity of $4.0 \times 10^6 \text{ ms}^{-1}$ along the positive y -axis under a magnetic field $\vec{B}$ of strength $(2\hat{k}) \text{ T}$. The force acting on the charge is $x\hat{i} \text{ N}$. The value of x is _____.

(A) 12

(B) 78

(C) 85

(D) 32

28. The average dipole moment of Fe atoms is $1.8 \times 10^{-23} \text{ A-m}^2$. The magnetic moment of an iron rod of length 10 cm and diameter 1 cm is..... A-m^2 : (density and at. wt. of Fe are 7.87 g/cm^3 and 55.87)
(A) 3 (B) 4 (C) 6 (D) 12
29. Due to the flow of current in a circular loop of radius R , the magnetic field produced at the centre of the loop is B . The magnetic moment of the loop is :-
(A) $BR^3/2\pi\mu_0$ (B) $2\pi BR^3/\mu_0$ (C) $BR^2/2\pi\mu_0$ (D) $2\pi BR^2/\mu_0$
30. A galvanometer of resistance 20Ω is to be converted into an ammeter of range 1 A . If a current of 1 mA produces full scale deflection, the shunt required for the purpose is Ω
(A) 0.01 (B) 0.05 (C) 0.02 (D) 0.04

1. Read the following chapters from textbook:
 - a. Python Revision Tour– I
 - b. Python Revision Tour– II
 - c. User Defined Functions
 2. Revise the concepts of programming which you had already study in class XI.
 3. Plan for the topic of the project, group members in the project and submit the same after summer break.
 4. Prepare Practical file containing given programs.
 - a. Program to read and display file content line by line with each word separated by “ #
 - b. Program to read the content of file and display the total number of consonants, uppercase, vowels and lowercase characters.
 - c. Program to read the content of file line by line and write it to another file except for the lines contains “ a” letter in it.
 - d. Program to create binary file to store Roll no and Name, Search any Roll no and display name if Roll no found otherwise “ Roll no not found”
 - e. Create a CSV file by entering user-id and password, read and search the password for given user- id.
 - f. Write a Program to implement Stack in Python using List
- g. .A stack named FruitStack, implemented using list, contains records of some fruits. Each record is represented as a dictionary with keys 'Name', 'Origin', 'Price', and 'Expiry'. A sample record is given here:
- ```
{'Name':'Apple','Origin':'France','Price':120,'Expiry':'12-08-2025'}
```
- Write the following user-defined functions in Python to perform the specified operations on FruitStack:
- (i) push\_fruit(FruitStack, Fruit):
- This function takes the stack FruitStack and a new record Fruit as arguments and pushes the record stored in Fruit onto FruitStack if the Price is less than 100.
- (ii) pop\_fruit(FruitStack):
- This function pops the topmost record from the stack and returns it. If the stack is already empty, the function should display "UNDERFLOW".
- (iii) display(FruitStack):
- This function displays all the elements of the stack starting from the topmost element. If the stack is empty, the function should display "EMPTY STACK".

**SUBJECT:-PHYSICAL EDUCATION**

1. Differentiate between intramural and extramural competitions.
2. Explain the advantages of knockout tournament.
3. What is obesity? Write its causes.
4. Explain osteoporosis.
5. Write benefits of Pranayama.
6. Explain hypertension.
7. Differentiate between disability and disorder.
8. Explain adapted physical education.

\* Make a chart on “Yoga and Healthy

Lifestyle” OR

\*Prepare a scrapbook on “Sports Events and Olympic Values