PM SHRI KENDRIYA VIDYALAYA SEONI

Winter break homework

Biology

1.Complete your practical record completely

2.Make a herbarium file and paste any 15 flowering plants with their botanical name

Local name ,Family ,Species ,Genus,Area of collection

3 Solved last 5 years sample papers.

4 Solved the questions from chapters like respiration in plants,photosynthesis,plant growth and development

Breathing and exchange of gases

PM SHRI Kendriya Vidyalaya Seoni

winter break homework

class 11th

1.Solving three unseen passages, only answer (one case based and one note making).

2.One advertisement

3.One poster

4.One speech

5.One debate.

6.One book review(150-200 words)

7. Revising the syllabus completed upto December 23,2024

PM SHRI KENDRIYA VIDYALAYA SEONI
Winter break homework
Computer science(class 11th)

1.
Complete your practical record completely
2.
Make a project file (handwritten) on digital arrest min 4 - 5 pages
3
Solved ncert based question on ur notebook like conditionsl statement, string, data handling
4
Solved the questions from the sample paper

SUBJECT: MATHEMATICS	MAX. MARKS : 40
CLASS : XI	DURATION : 1½ hrs

General Instructions:

(i). **All** questions are compulsory.
(ii). This question paper contains **20** questions divided into five Sections A, B, C, D and E.
(iii). **Section A** comprises of **10 MCQs** of **1 mark** each. **Section B** comprises of 4 questions of **2 marks** each. **Section C** comprises of 3 questions of **3 marks** each. **Section D** comprises of 1 question of **5 marks** each and **Section E** comprises of 2 Case Study Based Questions of **4 marks** each.
(iv). There is no overall choice.
(v). Use of Calculators is not permitted

SECTION – A
Questions 1 to 10 carry 1 mark each.

1. If A(2, 0) is the vertex and the y-axis is the directrix of a parabola, then its focus is
    (a) F(2, 0)   (b) F(−2, 0)   (c) F(4, 0)   (d) F(−4, 0)

2. The vertices of a hyperbola are (±2, 0) and its foci are (±3, 0). The equation of the hyperbola is
    (a) $\dfrac{x^2}{2} - \dfrac{y^2}{3} = 1$ (b) $\dfrac{x^2}{3} - \dfrac{y^2}{4} = 1$ (c) $\dfrac{x^2}{4} - \dfrac{y^2}{5} = 1$ (d) none of these

3. The end points of a diameter of a circle are A(2, − 3) and B(−3, 5). The equation of the circle is
    (a) $x^2 + y^2 + 2x − y − 21 = 0$ (b) $x^2 + y^2 + x − 2y − 21 = 0$
    (c) $x^2 + y^2 + x − 2y + 21 = 0$ (d) none of these

4. The focal distance of a point P on the parabola $y^2 = 12x$ is 4. The abscissa of P is
    (a) –1   (b) 1   (c) –2   (d) 2

5. The vertices of an ellipse are (±5, 0) and its foci are (±4, 0). The equation of the ellipse is
    (a) $\dfrac{x^2}{25} + \dfrac{y^2}{9} = 1$ (b) $\dfrac{x^2}{9} + \dfrac{y^2}{25} = 1$ (c) $\dfrac{x^2}{25} + \dfrac{y^2}{16} = 1$ (d) $\dfrac{x^2}{16} + \dfrac{y^2}{25} = 1$

6. The centre of the circle $x^2 + y^2 − 6x + 4y −12 = 0$ is
    (a) (–3, 2)   (b) (3, 2)   (c) (3, –2)   (d) (–3, –2)

7. If the parabola $y^2 = 4ax$ passes through the point P(3, 2), then the length of its latus rectum is
    (a) 1/3   (b) 2/3   (c) 4/3   (d) 4

8. In the parabola $y^2 = −12x$, the focus and the equation of directrix are respectively
    (a) F(3, 0), x = −3   (b) F(−3, 0), x = 3
    (c) F(−3, 0), x = −3   (d) none of these

For Q9 and Q10, a statement of assertion (A) is followed by a statement of reason (R). Choose the correct answer out of the following choices.
    (a) Both A and R are true and R is the correct explanation of A.
    (b) Both A and R are true but R is not the correct explanation of A.
    (c) A is true but R is false.
    (d) A is false but R is true.

9. Let the centre of an ellipse is at (0,0)

   Assertion (A): If major axis is on the y-axis and ellipse passes through the points (3,2) and (1,6), then the equation of ellipse is $\dfrac{x^2}{10}+\dfrac{y^2}{40}=1$.

   Reason (R): $\dfrac{x^2}{b^2}+\dfrac{y^2}{a^2}=1$ is an equation of ellipse if major axis is along y-axis.

10. Parabola is symmetric with respect to the axis of the parabola.

    Assertion (A): If the equation has a term y^2, then the axis of symmetry is along the x-axis.

    Reason (R): If the equation has a term x^2, then the axis of symmetry is along the x-axis.

SECTION – B
Questions 11 to 14 carry 2 marks each.

11. Find the eccentricity of the ellipse if its latus rectum is equal to one half of its minor axis.

12. If one end of the diameter of a circle $x^2 + y^2 – 4x – 6y + 11 = 0$ is (8, 4), show that coordinates of the other end are (– 4, 2).

13. Find the coordinates of the focus, the equation of directrix, vertex and length of latus rectum for the parabola $y^2 = –12x$.

14. Find the coordinates of the foci, the vertices, the eccentricity, the length of latus rectum of the hyperbola : $16x^2 – 9y^2 = 144$.

SECTION – C
Questions 15 to 17 carry 3 marks each.

15. The foci of a hyperbola coincide with the foci of the ellipse $\dfrac{x^2}{25}+\dfrac{y^2}{9}=1$. Find equation of the hyperbola if its eccentricity is 2.

16. Find the equation of the image of the circle $x^2 + y^2 + 8x – 16y + 64 = 0$ in the line mirror $x = 0$.

17. Find the equation of the ellipse whose foci are at (± 5, 0) and x = $\dfrac{36}{5}$ as one of the directrix.

    OR

    Find the equation of an ellipse, the distance between whose foci is 5 units and the distance between the directrices is 20 units.

SECTION – D
Questions 18 carry 5 marks.

18. Find the equation of circle which passes through (2, –2) and (3, 4) and whose centre lies on the line $x + y = 2$.

SECTION – E (Case Study Based Questions)
### Questions 19 to 20 carry 4 marks each.

19. A man running on a race course notices that sum of its distances from two flag posts from him is always 10m and the distance between the flag posts is 8 m. He notes that he can read the messages of value system 'Honesty' and 'Respect for other' on the poles whichever side he moves, then answer the following questions which are based on above it.

(i) Find the value of a for the standard equation of path. (1)
(ii) Find the value of b for the standard equation of path. (1)
(iii) Find the Equation of path. (1)
(iv) Find the value of (2 a + b). (1)

20. A beam is supported at its ends by supports which are 12 m apart. Since the load is concentrated at its centre, there is a deflection of 3 cm at the centre and defected beam is in the shape of parabola. Now considering the centre of beam is at origin as shown in figure. Answer the following:
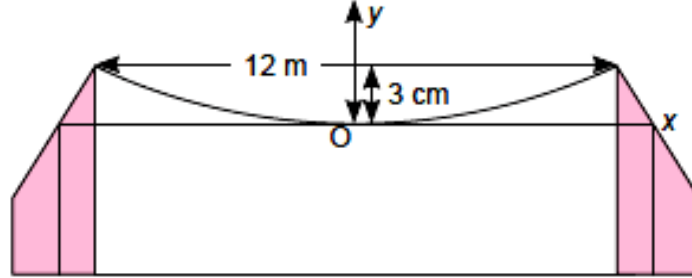
(i) Write the form of the equation of parabola. (1)
(ii) Find the focus of parabola. (1)
(iii) Find the length of latus rectum of parabola. (1)
(iv) How far from the centre is the deflection 1 cm? (1)
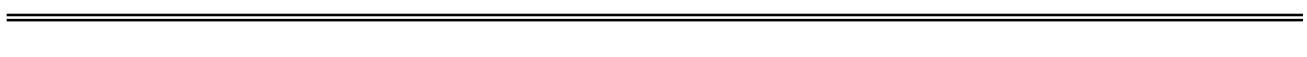
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Winter break homework

Class- XI(Chemistry)

Solve ncert questions organic chemistry some basic principles

and techniques

Complete your practical record.

Solve ncert questions of hydrocarbons.