Class XI – Holiday Homework – BIOLOGY

Chapter – 5: Morphology of Flowering Plants

Q1. What is a parthenocarpic fruit? Give two examples.
Q2. What are stilt roots? Give two examples.
Q3. How is the pinnately compound leaf different from a palmately compound leaf?
Q4. Differentiate between apocarpous ovary and syncarpous ovary.
Q5. Justify the following statements on the basis of external features:-
   (a) Underground parts of a plant are not always roots.
   (b) Flower is a modified shoot.
Q6. What is an aleurone layer in a maize grain?
Q7. How can you differentiate a palmately compound leaf and a pinnately compound leaf?
Q8. Sketch and label the following to show the internal structure:
   a)  

Chapter – 6: Anatomy of Flowering Plants

Q1. Why is cambium considered to be lateral meristem?
Q2. How are sclereids different from sclerenchyma fibres?
Q3. How are the endarch and exarch conditions different anatomically?
Q4. What are guard cells? What is their function?
Q5. What is a periderm? How periderm formation does take place in dicot stem?
Q6. What is stomatal apparatus? Explain the structure of stomata with a labeled diagram.
Q7. Describe the internal structure of dorsiventral leaf with the help of labeled diagram.
Q8. Flower is a modified stem. Give reasons.
Q9. Compare the internal anatomy of dicot plant and a monocot plant.
Holiday Home Work for Classes XI

*Class XI –* The students need to read the following chapters and summarise/review them in their *English Literature* note-books (100 words each)

Snapshots – The Address; Ranga’s Marriage

Hornbill – We’re Not Afraid to Die...; Discovering Tut...
STD XI SCI AND COM

1. Complete Practical Record Journal. Enter all the programs in journal as instructed.
2. Revise the syllabus covered so far.
### PRINCIPLES ON COMPOUND ANGLES

#### FORMULA USED

1. Evaluate:
   \[ \cos 105 \quad \tan 75 \quad \cot 75 \]

2. Find the value of:
   (i) \[ \cos 70 \cos 10 \sin 70 \sin 10 \]
   (ii) \[ \cos 130 \cos 40 \sin 130 \sin 40 \]

3. Find the value of:
   \[ \sin 780 \sin 480 \cos 240 \cos 300 \]

4. Show that:
   \[ \tan 70 \quad 2 \tan 50 \tan 20 \]

5. Show that:
   \[ \tan 75 \tan 30 \tan 75 \tan 30 = 1 \]

6. Show that:
   \[ 2 \tan 70 = \tan 80 - \tan 10 \]

7. Prove that:
   \[ \tan 3A \tan 2A \tan A = \tan 3A - \tan 2A - \tan A \]

8. Prove that:
   \[ \frac{\sec 8A - 1}{\sec 4A - 1} = \frac{\tan 8A}{\tan 2A} \]

9. Prove that:
   \[ \cot x \cot 2x - \cot 2x \cot 3x - \cot 3x \cot x = 1 \]

10. Prove that:
    \[ \frac{\cos 8^0 - \sin 8^0}{\cos 8^0 + \sin 8^0} = \tan 37^0 \]

11. Prove that:
    \[ \tan 9^0 = \frac{\cos 36^0 - \sin 36^0}{\cos 36^0 + \sin 36^0} \]

12. Show that:
    \[ \frac{\sin(A - B)}{\sin(A + B)} = \frac{\tan A - \tan B}{\tan A + \tan B} \]

### Some Useful Results:

1. \[ \sin(A + B) \cdot \sin(A - B) = \sin^2 A - \sin^2 B = \cos^2 B - \cos^2 A \]
2. \[ \cos(A + B) \cdot \cos(A - B) = \cos^2 A - \sin^2 B = \cos^2 B - \sin^2 A \]
13. Show that: \[ \frac{\sin(A - B)}{\cos A \cos B} + \frac{\sin(B - C)}{\cos B \cos C} + \frac{\sin(C - A)}{\cos C \cos A} = 0 \]

14. Prove that: \[ \frac{1 + \sin A - \cos A}{1 + \sin A + \cos A} = \tan \frac{A}{2} \]

15. Prove that: \[ \sin^2 \left( \frac{\pi}{8} + \frac{A}{2} \right) - \sin^2 \left( \frac{\pi}{8} - \frac{A}{2} \right) = \frac{1}{\sqrt{2}} \sin A \]

16. Show that: \[ \frac{\cos 11^\circ + \sin 11^\circ}{\cos 11^\circ - \sin 11^\circ} = \tan 56^\circ \]

17. If \( \cos \alpha = -\frac{12}{13}, \cot \beta = \frac{24}{7} \), \( \alpha \) lies in II quadrant, \( \beta \) lies in III quadrant. Find (i) \( \sin(\alpha + \beta) \) (ii) \( \cos(\alpha + \beta) \) (iii) \( \tan(\alpha + \beta) \)

18. If \( \tan x = \frac{3}{4}, \pi < x < \frac{3\pi}{2} \), find the value of \( \sin \frac{x}{2}, \cos \frac{x}{2} \) and \( \tan \frac{x}{2} \)

19. Show that \( \sin^2(A + B) - \sin^2(A - B) = \sin 2A \sin 2B \)

20. Prove that \( \sin^2 A = \cos^2(A - B) + \cos^2 B - 2\cos(A - B) \cos A \cos B \)

21. If A, B, C and D are angles of a cyclic quadrilateral, prove that \( \cos A + \cos B + \cos C + \cos D = 0 \)

22. If \( 3 \tan \theta \tan \phi = 1 \), prove that \( 2 \cos(\theta + \phi) = \cos(\theta - \phi) \).

23. If \( \cot \alpha \cot \beta = 2 \), show that \( \frac{\cos(\alpha + \beta)}{\cos(\alpha - \beta)} = 2 \)

24. Show that \( \cos^2 \frac{\theta - \phi}{2} - \sin^2 \frac{\theta + \phi}{2} = \cos \theta \cos \phi \)

25. If \( \tan A = \frac{m}{m - 1} \) and \( \tan B = \frac{1}{2m - 1} \), prove that \( A - B = \frac{\pi}{4} \).

26. If \( \tan \beta = \frac{n \sin \alpha \cos \alpha}{1 - n \sin^2 \alpha} \), prove that \( \tan(\alpha - \beta) = (1 - n) \tan \alpha \).

27. If \( \sin x + \sin y = a \) and \( \cos x + \cos y = b \), show that \( \cos(x - y) = \frac{1}{2}(a^2 + b^2 - 2) \).

28. If \( \tan \theta + \tan \phi = a \) and \( \cot \theta + \cot \phi = b \), prove that \( \cot(\theta + \phi) = \frac{1}{a} - \frac{1}{b} \).

29. If \( \sin(\alpha + \beta) = 1 \) and \( \sin(\alpha - \beta) = \frac{1}{2} \), where \( 0 \leq \alpha, \beta \leq \frac{\pi}{2} \), find the values of \( \tan(\alpha + 2\beta) \) and \( \tan(2\alpha + \beta) \).

30. If \( \tan \frac{\alpha}{2} \) and \( \tan \frac{\beta}{2} \) are the roots of the equation \( 8x^2 - 26x + 15 = 0 \), then find the value of \( \cos(\alpha + \beta) \).
CLASS XI: MATHEMATICS

TRIGONOMETRY FORMULAE

PRODUCT TO SUM OR DIFFERENCE FORMULAE

1. \(2 \sin A \cos B = \sin(A + B) + \sin(A - B)\)
2. \(2 \cos A \sin B = \sin(A + B) - \sin(A - B)\)
3. \(2 \cos A \cos B = \cos(A + B) + \cos(A - B)\)
4. \(2 \sin A \sin B = \cos(A - B) - \cos(A + B)\)

SUM OR DIFFERENCE TO PRODUCT FORMULAE

5. \(\sin C + \sin D = 2 \sin \frac{C + D}{2} \cos \frac{C - D}{2}\)
6. \(\sin C - \sin D = 2 \cos \frac{C + D}{2} \sin \frac{C - D}{2}\)
7. \(\cos C + \cos D = 2 \cos \frac{C + D}{2} \cos \frac{C - D}{2}\)
8. \(\cos C - \cos D = 2 \sin \frac{C + D}{2} \sin \frac{D - C}{2}\)

1. Find the value of

(i) \(2 \sin 15^\circ \cos 75^\circ\)
(ii) \(2 \cos 45^\circ \sin 15^\circ\)
(iii) \(2 \sin 75^\circ \sin 15^\circ\)

2. Find the value of \(2 \cos \frac{\pi}{13} \cos \frac{9\pi}{13} \cos \frac{3\pi}{13} + \cos \frac{5\pi}{13}\).

3. Find the value of \(\sin \frac{5\pi}{12} \sin \frac{\pi}{12}\).

4. Prove that: \(\sin 20^\circ \sin 40^\circ \sin 80^\circ = \frac{\sqrt{3}}{8}\).

5. Prove that: \(\tan(45^\circ + \theta) - \tan(45^\circ - \theta) = 2 \tan 2\theta\)

6. Prove that: \(\tan 20^\circ \tan 40^\circ \tan 80^\circ = \tan 60^\circ\)

7. Prove that: \(\sec \left(\frac{\pi}{4} + \theta\right) \sec \left(\frac{\pi}{4} - \theta\right) = 2 \sec 2\theta\)

8. Prove that \(\frac{2 \sin(\alpha - \gamma) \cos \gamma - \sin(\alpha - 2\gamma)}{2 \sin(\beta - \gamma) \cos \gamma - \sin(\beta - 2\gamma)} = \frac{\sin \alpha}{\sin \beta}\).

9. Prove that \(\cos(120^\circ + \alpha) \cos(120^\circ - \alpha) = \frac{2 \cos 2\alpha - 1}{4}\)
10. Prove that \( \tan 20^\circ \tan 40^\circ \tan 60^\circ \tan 80^\circ = 3 \).

11. Prove that: \( \sin 10^\circ \sin 30^\circ \sin 50^\circ \sin 70^\circ = \frac{1}{16} \).

12. Prove that \( \cos^2 A + \cos^2 B - 2 \cos A \cos B \cos(A + B) = \sin^2(A + B) \)

13. Prove that \( \sin^2 A + \sin^2 (A - B) - 2 \sin A \cos B \sin(A - B) = \sin^2 B \)

14. Prove that \( \tan(A + 30^\circ) + \cot(A - 30^\circ) = \frac{1}{\sin 2A - \sin 60^\circ} \)

15. Prove that \( 4 \cos 20^\circ \cos 40^\circ \cos 60^\circ \cos 80^\circ = \frac{1}{4} \)

16. Prove that \( 4 \cos A \cos(60^\circ - A) \cos(60^\circ + A) = \cos 3A \)

17. Prove that \( \sin A \sin(B - C) + \sin B \sin(C - A) + \sin C \sin(A - B) = 0 \)

18. Prove that \( \sin(60^\circ + A) \sin(420^\circ - A) = \frac{1 + 2 \cos 2A}{4} \)

19. Prove that: \( (\cos \alpha + \cos \beta)^2 + (\sin \alpha + \sin \beta)^2 = 4 \cos^2 \left( \frac{\alpha - \beta}{2} \right) \)

20. If \( \cos A + \cos B = \frac{1}{3} \) and \( \sin A + \sin B = \frac{1}{4} \), then prove that \( \tan \frac{A + B}{2} = \frac{3}{4} \)

21. Find the value of (i) \( \sin 75^\circ + \sin 15^\circ \) (ii) \( \cos 75^\circ + \sin 15^\circ \) (iii) \( \cos \frac{4\pi}{5} + \cos \frac{\pi}{5} \)

   (iv) \( \sin 50^\circ - \cos 80^\circ \)

22. Find the value of \( \frac{\cos 20^\circ - \cos 70^\circ}{\sin 70^\circ - \sin 20^\circ} \).

23. Find the value of \( \frac{\sin 75^\circ - \sin 15^\circ}{\cos 75^\circ - \cos 15^\circ} \).

24. Show that: \( \sin \left( \frac{\pi}{4} + \theta \right) + \sin \left( \frac{\pi}{4} - \theta \right) = \sqrt{2} \cos \theta \)

25. Show that \( \cos \left( \frac{2\pi}{3} + \theta \right) + \cos \left( \frac{2\pi}{3} - \theta \right) = \sqrt{3} \cos \theta \)

26. Prove that \( \cos 15^\circ - \sin 15^\circ = \frac{1}{\sqrt{2}} \)

27. Prove that \( \tan 5\theta + \tan 3\theta \over \tan 5\theta - \tan 3\theta = 4 \cos 2\theta \cos 4\theta \)

28. Prove that \( \frac{\cos \theta + \cos 2\theta + \cos 3\theta + \cos 4\theta}{\sin \theta + \sin 2\theta + \sin 3\theta + \sin 4\theta} = \cot \frac{5\theta}{2} \)

29. Prove that \( \frac{\cos 3\theta + 2 \cos 5\theta + \cos 7\theta}{\cos \theta + 2 \cos 3\theta + \cos 5\theta} = \cos 2\theta - \sin 2\theta \tan 3\theta \)
30. If \( x \cos \theta = y \cos \left( \frac{\theta + 2\pi}{3} \right) = z \cos \left( \frac{\theta + 4\pi}{3} \right) \), then show that \( xy + yz + zx = 0 \).

31. Prove that \( \cos \alpha + \cos \beta + \cos \gamma + \cos(\alpha + \beta + \gamma) = 4 \cos \frac{\alpha + \beta}{2} \cos \frac{\beta + \gamma}{2} \cos \frac{\gamma + \alpha}{2} \).

32. Prove that \( \sin \alpha + \sin \beta + \sin \gamma - \sin(\alpha + \beta + \gamma) = 4 \sin \frac{\alpha + \beta}{2} \sin \frac{\beta + \gamma}{2} \sin \frac{\gamma + \alpha}{2} \).

33. Prove that \( \cos 2A \cos 3A - \cos 2A \cos 7A + \cos A \cos 10A \) \( \sin 4A \sin 3A - \sin 2A \sin 5A + \sin 4A \sin 7A \) = cot 6A cot 5A.

34. Prove that \( \cos \left( \frac{\pi}{4} + \theta \right) - \cos \left( \frac{\pi}{4} - \theta \right) \) \( \sin \left( \frac{2\pi}{3} + \theta \right) - \sin \left( \frac{2\pi}{3} - \theta \right) \) = \( \sqrt{2} \).

35. Prove that \( \frac{\sin(4A - 2B) + \sin(4B - 2A)}{\cos(4A - 2B) + \cos(4B - 2A)} \) = tan(\( A + B \)).

36. If \( A + B + C = \pi \), prove that \( \frac{\cos A}{\sin B \sin C} + \frac{\cos B}{\sin C \sin A} + \frac{\cos C}{\sin A \sin B} = 2 \).

37. Prove that \( \sin(y + z - x) + \sin(z + x - y) + \sin(x + y - z) - \sin(x + y + z) = 4 \sin x \sin y \sin z \).

38. If \( b \sin \beta = a \sin(2\alpha + \beta) \), prove that \( (b + a) \cot(\alpha + \beta) = (b - a) \cot \alpha \).

39. If \( \sin A + \sin B = a \) and \( \cos A + \cos B = b \), then prove that \( (i) \tan \frac{A + B}{2} \) and \( (ii) \tan \frac{A - B}{2} \).

40. If \( \sin \theta = n \sin(\theta + 2\alpha) \), prove that \( \tan(\theta + \alpha) = \frac{1 + n}{1 - n} \tan \alpha \).
**CLASS: XI: MATHEMATICS**

**TRIGO NO METRY FORMULAE**

**MULTIPLES FORMULAE**

1. Find the value of (i) \( \sin 15^\circ \) (ii) \( \sin 7^\circ \) (iii) \( \cos 22^\circ \) (iv) \( \sin 22^\circ \) (v) \( \tan 142^\circ \)

2. Find \( \sin \frac{x}{2}, \cos \frac{x}{2} \) and \( \tan \frac{x}{2} \) (i) if \( \sin x = \frac{1}{4} \), x in II quadrant (ii) if \( \cos x = -\frac{1}{3} \), x in III quadrant.

**SUB-MULTIPLES FORMULAE**

\[
\begin{align*}
\sin A &= 2 \sin A \cos A = \frac{2 \tan A}{1 + \tan^2 A} \\
\cos 2A &= \cos^2 A - \sin^2 A = 2 \cos^2 A - 1 = 1 - 2 \sin^2 A = \frac{1 - \tan^2 A}{1 + \tan^2 A} \\
\tan 2A &= \frac{2 \tan A}{1 - \tan^2 A} \\
\sin^2 A &= \frac{1 - \cos 2A}{2}, \quad \cos^2 A = \frac{1 + \cos 2A}{2} \quad \text{and} \quad \tan^2 A = \frac{1 - \cos 2A}{1 + \cos 2A} \\
\sin 3A &= 3 \sin A - 4 \sin^3 A \\
\cos 3A &= 4 \cos^3 A - 3 \cos A \\
\tan 3A &= \frac{3 \tan A - \tan^3 A}{1 - 3 \tan^2 A}
\end{align*}
\]
3. Evaluate: $8\cos^3\frac{\pi}{9} - 6\cos\frac{\pi}{9}$

4. If $\sin A = \frac{3}{5}$ and $A$ is in I quadrant, find $\sin 2A$, $\cos 2A$ and $\tan 2A$.

5. Prove that: $\cos 5A = 16\cos^5 A - 20\cos^3 A + 5\cos A$

6. Prove that: $16\sin^2 \theta - 20\sin^3 \theta + 5\sin \theta = \sin 5\theta$

7. Prove that: $\frac{1 + \sin A - \cos A}{1 + \sin A - \cos A} = \tan \frac{A}{2}$

8. Prove that: $\frac{\cos A}{1 - \sin A} = \tan \left(45^\circ + \frac{A}{2}\right)$

9. Prove that: $\sqrt{2 + \sqrt{2(1 + \cos 4A)}} = 2\cos A$

10. Prove that: $\cos^3 x \sin^2 x = \frac{1}{16} (2\cos x - \cos 3x - \cos 5x)$

11. If $\tan x = \frac{1}{7}$ and $\tan y = \frac{1}{3}$, prove that $\cos 2x = \sin 4y$

12. Prove that: $\sqrt{2 + \sqrt{2 + \sqrt{2 + \cos 3A}}} = 2\cos A$

13. Prove that: $4(\cos^3 20^\circ + \cos^3 40^\circ) = 3(\cos 20^\circ + \cos 40^\circ)$

14. Prove that: $\tan A + 2\tan 2A + 4\tan 4A + 8\cot 8A = \cot A$

15. Prove that: $\sin A.\sin(60^\circ - A).\sin(60^\circ + A) = \frac{1}{4} \sin 3A$

16. Prove that: $\cos A.\cos(60^\circ - A).\cos(60^\circ + A) = \frac{1}{4} \cos 3A$

17. Prove that: $\cos A.\cos 2A.\cos 4A \ldots \ldots \cos 2^{n-1} A = \frac{\sin(2^n A)}{2^n (\sin A)}$

18. If $\tan \frac{A}{2} = \sqrt{\frac{1-x}{1+x}} \tan \frac{B}{2}$, prove that $\cos B = \frac{\cos A - x}{1 - x \cos A}$

19. If $\cos A = \frac{a \cos B + b}{a + b \cos B}$, prove that $\tan \frac{A}{2} = \frac{\sqrt{a-b}}{\sqrt{a+b}} \tan \frac{B}{2}$

20. If $2\cos A = x + \frac{1}{x}$, prove that $2\cos 3A = x^3 + \frac{1}{x^3}$

21. Prove that: $\cos^3 A + \cos^3(120^\circ + A) + \cos^3(240^\circ + A) = \frac{3}{4} \cos 3A$

22. Prove that: $\cot A + \cot(60^\circ + A) + \cot(120^\circ + A) = 3 \cot 3A$

23. Prove that: $\sin^2 \frac{\pi}{8} + \sin^2 \frac{3\pi}{8} + \sin^2 \frac{5\pi}{8} + \sin^2 \frac{7\pi}{8} = \frac{3}{2}$
24. Prove that: \( \cos^2 \frac{\pi}{8} + \cos^2 \frac{3\pi}{8} + \cos^2 \frac{5\pi}{8} + \cos^2 \frac{7\pi}{8} = 2 \)

25. Prove that: \( \cos^2 \frac{\pi}{10} + \cos^2 \frac{2\pi}{5} + \cos^2 \frac{3\pi}{5} + \cos^2 \frac{9\pi}{10} = 2 \).

26. If \( m \tan(\theta - 30^0) = n \tan(\theta + 120^0) \), prove that \( \cos 2\theta = \frac{m + n}{2(m - n)} \).

27. If \( \sin \alpha = \lambda \sin(\theta - \alpha) \), prove that \( \tan \left( \frac{\alpha - \theta}{2} \right) = \frac{\lambda - 1}{\lambda + 1} \tan \frac{\theta}{2} \).

28. Prove that: \( \cos^3 \left( x - \frac{2\pi}{3} \right) + \cos^3 x + \cos^3 \left( x + \frac{2\pi}{3} \right) = \frac{3}{4} \cos 3x \)

29. If \( \theta = \frac{\pi}{2^n + 1} \), prove that \( 2^n \cos \theta \cos 2\theta \cos 4\theta \ldots \cos 2^{n-1}\theta = 1 \).

30. If \( \sec(\phi + \alpha), \sec \phi \text{ and } \sec(\phi - \alpha) \) are in A.P., prove that \( \cos \phi = \pm \sqrt{2 \cos^2 \frac{\alpha}{2}} \).

31. Find the value of (i) \( \sin 18^0 \) (ii) \( \cos 18^0 \) (iii) \( \sin 36^0 \) (iv) \( \cos 36^0 \)

32. Prove that: \( \sin^2 72^0 - \sin^2 60^0 = \frac{\sqrt{5} - 1}{8} \)

33. Prove that: \( \sin \frac{\pi}{5} \sin \frac{2\pi}{5} \sin \frac{3\pi}{5} \sin \frac{4\pi}{5} = \frac{5}{16} \)

34. Prove that: \( \sin 6^0 \sin 42^0 \sin 66^0 \sin 78^0 = \frac{1}{16} \)

35. Prove that: \( \cos 36^0 \cos 72^0 \cos 108^0 \cos 144^0 = \frac{1}{16} \)

36. Prove that: \( \tan 6^0 \tan 42^0 \tan 66^0 \tan 78^0 = 1 \)

37. Prove that: \( \cos \frac{\pi}{15} \cos \frac{2\pi}{15} \cos \frac{3\pi}{15} \cos \frac{4\pi}{15} \cos \frac{5\pi}{15} \cos \frac{6\pi}{15} \cos \frac{7\pi}{15} = \frac{1}{128} \)

38. Prove that: \( \left( 1 + \cos \frac{\pi}{10} \right) \left( 1 + \cos \frac{3\pi}{10} \right) \left( 1 + \cos \frac{7\pi}{10} \right) \left( 1 + \cos \frac{9\pi}{10} \right) = \frac{1}{16} \)

39. If \( 13\alpha = \pi \), prove that \( \cos \alpha \cos 2\alpha \cos 3\alpha \cos 4\alpha \cos 5\alpha \cos 6\alpha = \frac{1}{64} \).

40. If \( 15\alpha = \pi \), prove that \( \cos 2\alpha \cos 4\alpha \cos 8\alpha \cos 14\alpha = \frac{1}{16} \).
Economics

Time: 2 Hours
Marks: 40

Instructions
● All questions are compulsory.
● Questions Nos 01-04 & 09-12 are very short answer questions carrying 1 mark each. They are required to be answered in one sentence each.
● Questions Nos 05-06 & 13-14 are short answer questions carrying 3 marks each. Answer to them should not normally exceed 60 words each.
● Questions Nos 07 & 15 are short answer questions carrying 4 marks each. Answer to them should not normally exceed 70 words each.
● Questions Nos 08 & 16 are short answer questions carrying 6 marks each. Answer to them should not normally exceed 100 words each.
● Answer should be brief and to the point and the above word limit be adhered to as far as possible

Section A
(Statistics for Economics)

1. Define statistics? 1
2. What is the Economic activity? 1
3. What do you mean by scarcity? 1
4. Read the questions carefully & give the answer from the codes given below:
Which of the following are economic activities? 1
1. Consumption 2. Production
3. Distribution 4. Investment
(a) 1 and 2  (b) 2 and 3  (c) 1, 2 and 3  (d) All of these

5. Why do economic problems arise?  
6. You have unlimited wants and limited resources to satisfy them. Explain this statement by giving two examples.  
7. How will you choose the wants to be satisfied?  
8. Explain the important features of Statistics.

Section B  
(Microeconomics)

9. What will happen to PPF if there is technological upgradation in case of both the goods?  
10. Define marginal utility.  
11. What is marginal rate of transformation?  
12. Define an economy.  
13. Explain the central problem ‘ how to produce’

OR

Distinguish between microeconomics and macroeconomics.

14. Giving reasons, comment on the shape of production possibility curve based on the following table:

<table>
<thead>
<tr>
<th>Good X (units)</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Good Y (units)</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>

15. Explain the relationship between total utility and marginal utility with the help of a diagram.

16. A consumer consumes only one good. Explain consumer’s equilibrium with the help of utility analysis.
Roll No.: ___________  

Class: XI

Economics

Time: 2 Hours  
Marks: 40

Instructions

● All questions are compulsory.

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● Questions Nos 05-06 & 13-14 are short answer questions carrying 3 marks each. Answer to them should not normally exceed 60 words each.

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● Questions Nos 08 & 16 are short answer questions carrying 6 marks each. Answer to them should not normally exceed 100 words each.

● Answer should be brief and to the point and the above word limit be adhered to as far as possible

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Section A  
(Statistics for Economics)
1. Define Economics. 

2. Explain the following terms. 
   1. Service provider 
   2. Producer 

3. Mark the following statement as true or false. 
   (i) Statistics can only deal with qualitative data. 
   (ii) Statistics is affected by multiplicity of causes. 

4. Resources to satisfy human wants have ................ uses. 

5. Economic problem is the cause of scarcity. Defend or refute. 

6. What are your reasons for studying Economics? 

7. Name statistical tools to study the following methods: Collection of data, Organization of data and presentation of data. 

8. Explain different types of economics activities in detail. 

Section B 
(Microeconomics) 

9. Define Production Possibility Curve. 

10. What is marginal opportunity cost? 

11. What is meant by scarcity? 

12. Define marginal utility. 

13. Explain the law of diminishing marginal utility. 

14. Explain the properties of PPC. 
   OR 
   Explain the central problem ‘For whom to produce’ 

15. Following is the utility schedule of a consumer: 

<table>
<thead>
<tr>
<th>Units</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>MU in utils</td>
<td>40</td>
<td>32</td>
<td>15</td>
<td>10</td>
<td>07</td>
</tr>
</tbody>
</table>
If the commodity is sold for Rs. 5 and MU of one rupee is 2 utils. How many units will a consumer purchase to maximize his satisfaction?

16. (A) Underutilization and unutilisation of resources will shift the production possibility curve to the left. Defend or refute. 3
(B) “An economy always operate on production possibility curve and not inside it.”
Do you agree with the given statement? 3
Solve the following problems from reference book.

<table>
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<tr>
<th>Name of the Chapter</th>
<th>Page No.</th>
<th>Problem No.</th>
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<td>1,3,4,6,7</td>
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<td>4,6,9,10,12</td>
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<td>4. Journals</td>
<td>8.67</td>
<td>1 to 16</td>
</tr>
<tr>
<td></td>
<td>8.68</td>
<td>1,2,3,4,5,6</td>
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</table>
PHYSICS HOLIDAY HOMEWORK – 2019
Class XI

Chapter 1 (Physical World)

1. What is Physics? Discuss the relation between Physics & technology.
2. Give two advancements made in technology on the basis of Physics.
3. Compare the relative strength and range of four fundamental forces in nature.
4. State fundamental forces in nature.
5. Name three important discoveries of physics, which have contributed a lot in development of biological sciences.
6. Name two Indian born physicists who have been awarded Nobel Prize in Physics.

Chapter 2 (Units and Measurements)

1. If unit of force, velocity and energy are 100 dyne, 10 cm/s and 400 ergs respectively, what will be the unit of mass, length & time?
2. Magnitude of force \( F \) experienced by a certain object moving with speed \( v \) is given by \( F = kv^2 \), where \( k \) is a constant. Find the dimensions of \( k \).
3. Write the dimensions of \((a,b)\) in the relation \( E = b \cdot x^2 \cdot \sqrt{a \cdot t} \), where \( E \) is energy, \( x \) is distance and \( t \) is time.
4. The time period of oscillation of simple pendulum in an experiment is recorded as 2.56s, 2.62s, 2.70s, 2.58s, 2.45s respectively. Find the time period, absolute error in each observation & percentage error.
5. Write down the number of significant figures in the following: (i) 3285 N (ii) 7100 kg (iii) 64.000 m (iv) 0.04192 N m^-1.
6. The radius of a sphere is measured to be \((5.3 \pm 0.1)\) cm. Calculate the percentage error in the measurement of its volume.
7. Check the dimensional consistency of following equations:
   (i) \( v = \sqrt{\frac{GM}{r}} \)
   (ii) \( T = \frac{2\pi L}{\sqrt{g}} \)
8. Assuming the critical velocity \( v \) of viscous fluid flowing through a tube depends only upon its density \( \rho \), radius of the tube \( r \) & the coefficient of viscosity of fluid \( \eta \), show by the method of dimensions that \( v = K \eta / \rho r \)

Chapter 3 (Motion in a Straight Line)

1. A ball dropped from height \( h \) reaches the ground in \( t \) s. After what time the ball was passing through a point at a height \( h/2 \)?
2. A particle is thrown upwards. It attains a height \( h \) after 5s & again after 9s. What is the speed of the particle at the height \( h \)?
3. A balloon starts rising from the ground with an acceleration of 1.25 ms^-2. After 8 s, a stone is released from the balloon. Find the time taken by the stone to reach the ground after its release. Take \( g = 10 \) ms^-2.
4. A car covers one half of its journey with a speed of 40 km/h and other half with the speed of 60 km/h. What is the average speed during the whole journey?
5. Can the speed of a body change if its velocity is constant? Explain.
6. Deduce the equations of motion by calculus method.
7. A particle covers 16 m during the 4th second of its motion and 24 m during the 6th second of its motion. Determine the value of initial velocity as well as acceleration.
8. If the time displacement graph of a particle is parallel to the time axis, what will be the velocity of the particle?

Chapter 4 (Motion in a Plane)

1. An astronaut on a new planet finds that he can jump a maximum horizontal distance of 30 m with his initial speed of 9 m/s. What is the value of g on this planet?
2. Two forces each of 4 N act on a body at an angle of 60°. Find the magnitude and the direction of the resultant force acting on the body.
3. A particle is projected with a velocity of 40 m/s. After 2 s it just crosses a vertical pole of height 20 m. Calculate the angle of projection and the horizontal range. \( g = 10 \text{m/s}^2 \)
4. Is it possible to accelerate a particle if it is travelling at constant speed?
5. Show that there are two angles of projection for which the horizontal range is same.
6. A hunter always aims slightly higher above the target. Why?
7. At which point of the projectile motion trajectory, is the speed maximum?
8. A ball is projected horizontally from the top of the tower of height 100 m with a velocity of 5 m/s. Calculate the time taken by the ball to reach the ground.

Chapter 5 (Laws of Motion)

1. In the system shown below, all surfaces are smooth and string is massless and inextensible. If \( m_A = 2 \text{Kg}, m_B = 5 \text{Kg} \) and \( g = 10 \text{m/s}^2 \), then find the acceleration and tension in the string.

2. Why a cricket player lowers his hands while catching a cricket ball?
3. Why does a heavy gun recoil so strongly as a light gun firing the same bullet?
4. Define angle of friction. A block slides down an incline at an angle 30° with an acceleration \( g/4 \). Find the coefficient of kinetic friction.
5. Find the maximum speed at which a car can turn around a curve of 30 m radius on a level road, if the coefficient of friction between the tyres and the road is 0.4.
6. The blocks A & B of mass \( m_1 = 6 \text{kg} \) & \( m_2 = 4 \text{kg} \) are attached by an inextensible light string as shown. Both blocks are pulled vertically upwards by a force of 120 N. Find (i) the acceleration of the blocks (ii) tension in the string.
Chapter 6 (Work, Energy and Power)

1. A ball bounces to 80% of its original height. What fraction of its mechanical energy is lost in each bounce?
2. Define conservative & non conservative forces with example.
3. A man rowing a boat upstream is at rest with respect to the shore. Is any work being done in this case?
4. A cake of mud is thrown on a wall where it sticks. What happens to its initial kinetic energy?
5. A car of mass 1000 kg accelerates uniformly from rest to a velocity of 54 km/h in 5s. Calculate (i) its acceleration (ii) its gain in kinetic energy (iii) average power of the engine during this period. Neglect friction.
6. From where does the energy in a water fall come?
7. A ball falls under gravity from a height of 10 m with an initial downward velocity u. It collides with the ground, loses 50% of its energy in collision and then rises back to the same height. Find the initial velocity u.
8. A motor can pump up water to fill a tank of volume 500 m$^3$ in 25 minutes, which is placed at a height of 20 m. If efficiency of the motor is 40%, calculate the power of the motor.

CHAPTER – 7 (System of Particles and Rotational Motion)

1. Four identical spheres each of radius R are placed on a horizontal table so that their centres form a square of side 2R. find the positions of centre of mass of the system.
2. From a uniform disc of radius R, a circular hole of radius R/2 is cut out. The centre of the hole is at R/2 from the centre of the original disc. Locate the centre of mass of the resulting flat body.
3. Two masses 6 & 2 units are at positions 6î - 7ĵ and 2î + 5ĵ - 8k respectively. Deduce the position of their centre of mass.
4. Calculate moment of inertia of a circular disc of radius 10 cm, thickness 5 mm and uniform density 8 g/cc about a transverse axis through the centre of the disc.
5. Show that the radius of gyration of a circular ring & a circular disc of same size about the axis passing through their centres and perpendicular to their planes are in the ratio $\sqrt{2}:1$.
6. A 3 m long ladder weighing 20 kg leans on a frictionless wall. Its feet rest on the floor 1 m from the wall. Find the reaction forces of the wall and the floor.
7. A cylinder of length 20 cm & radius 10 cm is rotating about its central axis at an angular speed of 100 rad/s. What tangential force will stop the cylinder at a uniform rate in 10 s? The moment of inertia of the cylinder about its axis of rotation is 0.8 kg m$^2$.
8. Two bodies of masses 1 kg and 2 kg are located at (1,2) & (-1,3) respectively. Calculate the co-ordinates of the centre of mass.

CHAPTER – 8 (Gravitation)

1. A 400 kg satellite is in a circular orbit of radius 2R$_E$ about the earth. Calculate the kinetic energy, potential energy and total energy of the satellite. Given that radius of earth R$_E$ = 6.4 X 10$^6$ m and mass of earth M = 6 X 10$^{24}$ kg.
2. Suppose there exist a planet that went around the sun twice as fast as the earth. What would be its orbital size as compared to that of the earth?
3. If the radius of earth is 6400 km and acceleration due to gravity is 9.8 m/s$^2$, then calculate mass and density of earth.
4. At point above the surface of earth, the gravitational potential is -5.12 x 10$^7$ J/kg$^{-1}$ and the acceleration due to gravity is 6.4 m/s$^2$. Assuming the mean radius of the earth to be 6400 km, calculate the height of this point above the earth’s surface.
5. The Earth’s mass is 80 times that of Moon and their diameters are in the ratio 4:1 respectively. What is the value of g on Moon? Given that the value of g on Earth is 9.8 m/s$^2$. 

6. With what velocity must a body be thrown upward from the surface of the earth so that it reaches a height of 10 \( R_e \)? Earth's mass = \( 6 \times 10^{24} \) kg, radius of earth = \( 6.4 \times 10^6 \) m & \( G = 6.67 \times 10^{-11} \) Nm\(^2\)kg\(^{-2}\).

7. Show that weight of all the bodies at the centre of earth is zero.

CHAPTER – 9 (Mechanical Properties of Solids)

1. The elastic limit of a steel cable and a copper wire of equal length and equal cross sectional area are joined end to end and the combination is subjected to a tension. Find the ratio of (a) the stress developed in the two wires (b) the strain developed in the two wires. Given \( Y_{steel} = 2.0 \times 10^{11} \) N/m\(^2\) & \( Y_{copper} = 1.1 \times 10^{11} \) N/m\(^2\).

2. What force is required to stretch a steel wire 1 sq.cm in cross section to double its length?

3. A copper wire 2.5 m long and 2 mm\(^2\) in cross sectional area is hung from the ceiling. What will be its elongation if 5 kg mass is suspended from the lower end of the wire? \( Y_{copper} = 1.1 \times 10^{11} \) N/m\(^2\) & \( g = 10 \) m/s\(^2\).

4. A rubber ball is taken at a depth of 300 m in a deep lake. Its volume decreases by 0.15\%. Calculate the bulk modulus of elasticity of rubber. The density of water of lake is \( 1.0 \times 10^3 \) kg/m\(^3\) and \( g = 10 \) m/s\(^2\).

5. A spherical ball contracts in volume by 0.0098\% when subjected a pressure of 100 atm. Calculate its bulk modulus. Given 1 atm = \( 1.013 \times 10^5 \) Pa.

6. Two identical solid balls, one of ivory & the other of wet-clay, are dropped from the same height on the floor. Which will rise to a greater height after striking the floor and why?

7. What is the effect of temperature on Young’s modulus?

CHAPTER – 10 (Mechanical Properties of Fluids)

1. Calculate the height to which water will rise in a capillary tube of 1 mm diameter. Given surface tension of water = \( 72 \times 10^{-3} \) Nm\(^{-1}\).

2. A soap bubble is formed at one end, and a smaller soap bubble at the other end of a bent tube. Which of the bubbles will expand and why?

3. A flask contains glycerine & the other contains water. Both are stirred vigorously & placed on the table. In which flask will the liquid come to rest earlier & why?

4. Deduce an expression for the excess pressure inside a soap bubble.

5. Wings of an aeroplane helps it to rise high against gravity. Explain.

6. Compute the terminal velocity with which an air bubble of diameter 0.8mm will rise in a liquid of viscosity 0.18 Pa-s and relative density 0.8. Neglect the weight of air bubble.

7. What is the effect of impurities on the surface tension of liquid?

8. Work done in blowing a soap bubble of radius \( r \) is \( W \). what is the work done in increasing its radius to \( 2r \)?

CHAPTER – 11 (Thermal Properties of Matter)

1. The coefficient of volume expansion of glycerine is \( 49 \times 10^{-5}/^\circ C \). Find the fractional change in its density for 30\(^\circ\)C rise in temperature.

2. How does the density of a solid affected when the solid is heated? Derive the mathematical relation.

3. The brass scale of barometer gives correct reading at 0\(^\circ\)C. Coefficient of linear expansion of Brass is \( 2.0 \times 10^{-5}/^\circ C \). The barometer reads 75.00 cm at 27\(^\circ\)C. What is the true atmospheric pressure at 27\(^\circ\)C?

4. A metallic ball has a radius of 9.0 cm at 0\(^\circ\)C. Calculate the change in its volume when it is heated at 90\(^\circ\)C. Given that coefficient of linear expansion of metal of ball is \( 1.2 \times 10^{-5} K^{-1} \).

5. When a drop of water falls on a very hot iron, it takes quite long to evaporate. Why?

6. We take our right hand 5 cm above 500 W live bulb, and the left hand at the same distance below the bulb. The right hand feels more heat. Why?

7. Calculate the difference in temperatures between two sides of an iron plate 20 mm thick, when heat is conducted at the rate of \( 6 \times 10^5 \) cal.min\(^{-1}\)m\(^{-2}\). K for metal is 0.2 cal.s\(^{-1}\)cm\(^{-1}\)K\(^{-1}\).

8. A specific gravity glass bottle is marked with its volume along with a temperature. Why?

CHAPTER – 12 (Thermodynamics)

1. A car tyre contains air at a pressure of 4 atm & its temperature is 27\(^\circ\)C. the tyre suddenly bursts. Calculate the resulting temperature.
2. If the coefficient of performance of a refrigerator is 5 & operates at the room temperature, find the temperature inside the refrigerator.

3. Calculate the fall in temperature of helium initially at 15°C, when it is suddenly expanded to 8 times its volume. Given γ = 5/3.

4. When we rub our hands together, they are warmed but only upto a final maximum temperature. Why?

5. Assuming an ordinary domestic refrigerator to be ideal one working between the temperature of melting ice and that of atmosphere (300K), calculate the energy which must be supplied to it to freeze 1 kg of water at 0°C. Given that latent heat of ice = 3.33 X 10^5 J/kg.

6. Calculate the rise in temperature of water which falls from a height 100 m, if 80% of the energy due to fall is converted into heat and retained by water. (J = 4.2 J/cal, g = 9.8 m/s^2)

7. Find the amount of work done to increase the temperature of one mole of an ideal gas by 30°C, if it is expanding under the condition V ∝ T^{2/3}. Given R = 1.99 cal/(mol · K).

8. A Carnot engine whose heat sink is at 27°C has an efficiency of 40%. By how many degrees should the temperature of source be changed to increase the efficiency by 10% of the original efficiency?

CHAPTER - 13 (Kinetic Theory)
1. The density of carbon dioxide gas at 0°C and at a pressure of 1.0 x 10^5 Nm^{-2} is 1.98 kgm^{-3}. Find the rms speed of its molecules at 0°C & 30°C. Pressure is constant

2. State the law of equipartition of energy. Prove that for an ideal gas γ = 1 + (2/f), where f is no. of degrees of freedom of gas molecules.

3. At what temperature will the average velocity of oxygen molecules be sufficient so as to escape from the earth? Escape velocity from the earth is 11.0 km/s and the mass of one molecule of oxygen is 5.34 x 10^{-26} kg.

4. A cylinder of fixed capacity 44.8 litre contains helium gas at standard temperature and pressure. What is the amount of heat needed to raise the temperature of the gas in the cylinder by 15.0°C? (R = 8.31 J mol^{-1} K^{-1})

5. The absolute temperature of the gas is increased 3 times. What will be the increase in root mean square velocity of the gas molecules?

6. Three moles of an ideal diatomic gas is taken at a temperature of 300 K. Its volume is doubled keeping its pressure constant. Find the change in internal energy of gas.

7. Find the temperature at which rms velocity of a gas is half of its value at 0°C, pressure remaining constant.

CHAPTER -14 (Oscillations)
1. List any two characteristics of simple harmonic motion.

2. A particle starts executing SHM from its positive extreme position. Draw graphs showing variation of its potential energy and total energy with time.

3. The bob of a simple pendulum is made of solid brass. What will be the effect on the time period if the brass bob is replaced by a wooden bob?

4. A body of mass 0.4 kg when suspended by an ideal spring increases the length of the spring by 2 cm. What will the time period when a body of 2 kg is suspended by this spring?

5. The acceleration of a particle executing SHM is 20 cm/s^2 at a distance 5 cm from its equilibrium position. Calculate its time period

6. A particle executing SHM of period 8 s. After what time of its passing through the mean position will the energy be half kinetic and half potential?

7. The periodic time of a body executing SHM is 2 s. After how much interval from t=0, will its displacement be half of its amplitude?

8. What do you understand by restoring force acting on a vibrating body? Give its one example.

9. A mass m is attached to a spring has a time period 2 s. If the mass is increased by 2 kg, the time period becomes 3 s. find the initial mass.

10. When an army crosses a suspension bridge then the soldiers break steps, why?
CHAPTER - 15 (Waves)

1. Derive the equation for the stationary wave. Explain the conditions for formation of antinodes and nodes. Show that the distance between two consecutive antinodes or nodes is equal to half of the wavelength.

2. A policeman blows a whistle of frequency 400 Hz as a car speeds past him with a velocity of 54 km/h. Find the change in frequency as heard by the driver of the car just as he passes the policeman. Velocity of sound in air is 350 m/s.

3. A car siren emitting sound of frequency 800 Hz is going away from a static listener with a speed of 30 m/s. What is the frequency of the sound heard by the listener? Take speed of sound in air as 330 m/s.

4. Horn of a running automobile is producing sound frequency \( \nu \). Find the change in observed frequency of sound as the automobile passes past a stationary observer. Given that speed of sound = \( v \) and constant speed of automobile = \( v_s \).

5. Show that velocity of sound in gaseous medium does not depend on the pressure of the gas.

6. A policeman on duty detects a drop of 15% in the pitch of the horn of a motor car as it crosses him. If the velocity of sound is 330 m/s, calculate the speed of the car.
HOLIDAY HOME WORK SET - 1

Roll No.: __________                    Class : XI

CHEMISTRY

Time: 3 Hours             Marks: 70

General Instructions:

(i) Question 1 to 5 one mark.

(ii) Question 6 to 10 each two mark.

(iii) Question 11 to 22 each three mark.

(iv) Question 23 is question carry four marks.

(v) Questions 24 to 26 each five mark.

1. Explain the terms Molarity and mole fraction
2. Calculate molar mass of \(\text{C}_6\text{H}_{12}\text{O}_6\).
3. What is electromagnetic spectrum.
4. A solution is prepared by adding 2 g of a substance A to 18g of water. Calculate the mass percentage of the solute.
5. How many neutrons and protons are there in the following nuclei?
   a) \(\text{Fe}^{56}_26\)  b) \(\text{Sr}^{88}_38\)
6. Calculate the molality of a 1 litre solution of 93\% \(\text{H}_2\text{SO}_4\) (weight/volume) density of the solution is 1.84 g ml\(^{-1}\).
7. Calculate the normality of the solution containing 31.5g of hydrated oxalic acid (\(\text{H}_2\text{C}_2\text{O}_4.2\text{H}_2\text{O}\)) in 1250mL of the solution.
8. Explain Thomson atomic model of an atom.
9. Explain Rutherford’s model of an atom and write limitations.
10. Calculate the wavelength of an electron moving with a velocity of \(2.05 \times 10^7\) ms\(^{-1}\).
11. The density of 3 M solution of \(\text{NaCl}\) is 1.25 g mL\(^{-1}\). Calculate the molality of the solution.
12. Calculate and compare the energies of two radiations one with a wave length of 800 nm and other with wave length of 400 nm.
13. The wave number of a beam of light is 400 cm\(^{-1}\). What is the wave length of the light in nanometers? Also find out frequency of the light.
14. Yellow light emitted from a sodium lamp has a wavelength of 580 nm, calculate the frequency (\(v\)) and wave number of the yellow light.
15. What is the number of photons of light with a wavelength of 4000 pm that provide 1 Joule of energy?
16. Calculate the energy of one mole of photons of radiation whose frequency is \(5 \times 10^{14}\) Hz.
17. A 100 watt bulb emits electromagnetic light of wavelength 400 nm. Calculate the number of photons emitted per second by the bulb.

18. 2.8 g of KOH is dissolved in water to give 200 cm$^3$ of solution. Calculate the molarity of KOH in the solution.

19. What volume of 10M HCl and 3 M HCl should be mixed to obtain 1 L of 6 M HCl solution?

20. What is the molality of ammonia in a solution containing 0.85 g of NH$_3$ in 100 cm$^3$ of a liquid of density 0.85 g cm$^{-3}$.

21. Calculate the mole fraction of water in a mixture of 12 g water, 108 g acetic acid and 92 g ethyl alcohol.

22. Determine the percentage composition of potassium nitrate (KNO$_3$) (Atomic mass K = 39, N=14, O=16)

23. A compound contains 75% carbon and 25% hydrogen. Determine its empirical formula. The molecular mass of this compound is 16u. Determine its molecular formula also. The atomic masses are C=12u, H = 1u.

24. Explain about particle nature of electromagnetic radiation and Planck's quantum theory.

25. Calculate the mass of a photon of sodium light having wavelength 5894 Å and velocity $3 \times 10^8$ m s$^{-1}$, $h = 6.63 \times 10^{-34}$ Js.

26. An organic compound on analysis gave the following data:

<table>
<thead>
<tr>
<th>Element</th>
<th>Percentage composition</th>
<th>Atomic mass</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium</td>
<td>43.4</td>
<td>23</td>
</tr>
<tr>
<td>Carbon</td>
<td>11.3</td>
<td>12</td>
</tr>
<tr>
<td>Oxygen</td>
<td>45.3</td>
<td>16</td>
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</tbody>
</table>

Calculate its empirical formula.
NEW ERA HIGH SCHOOL AND SENIOR SECONDARY PANCHGANI

TEST NO 1 2015-16

SUBJECT :- BUSINESS STUDIES

STD :- XI COM

MARKS :-50

TIME :- 1.30

1. State the different types of economic activities [01]

2. Give two examples of non economic activities [01]

3. Enumerate any two business activities which are auxiliaries to trade [01]

4. Define sole proprietorship. [01]

5. Explain the meaning of coparcener. [01]

6. What is private company? [03]

7. Name and explain the partner who does not have interest in the partnership business but lends his name to the firm. [03]

8. The liability of partner is limited. Explain [03]

9. What are the various types of industries. [03]

10. What is business risk? what is its nature [03]

11. Differentiate between business, profession and employment. [04]

12. Explain the following terms in brief :- Perpetual succession , Common Seal, Karta, Artificial person. [04]

13. How does a cooperative society exemplify democracy and secularism Explain? [04]

14. What do you mean by sole proprietorship firm? Explain its merits and limitations. [05]

15. Why is it important to choose an appropriate from of organization Discuss the factors that determine the choice of form of organization. [05]

16. Distinguish between a Joint Hindu family business and partnership [05]

17. Profit do not have to be shared. This statement refers to

18. The capital of a company is divided into number of parts each one of which are called
    a. Dividend b. Profit c. Interest d. Share [01]

19. Which of the broad categories of industries covers oil refinery and sugar mills?
    a. Primary b. Secondary c. Tertiary d. None of them [01]

20. The occupation in which people work for others and get remunerated in return is known as
    a. Business b. Employment c. Profession d. None of them. [01]
HOLIDAY HOMEWORK – BUSINESS STUDIES

1. Name the economic activity in which specialized knowledge is required. [01]

2. Name the organization which is considered as a part of Government only. [01]

3. What is perpetual succession? [01]

4. Name the basic document prepared in Partnership. [01]

5. What term is used for sale of share to private sector of public sector? [01]

6. Name the company which operates in more than one country. [01]

7. Business services which creates time utility? [01]

8. What you call the elected member of joint Stock company [01]

9. Manisha produces goods not for the purpose of sale but for personal consumption will it be a business activity? Why? [03]

10. Why businessman earn profit? [03]

11. State the various types of organization in the private sector. [03]

12. Explain the characteristic of business. [05]

13. If you want to start business what factors will you consider important [05]

14. Despite of limitation of size and resources many people continue to prefer sole proprietorship over other forms of business. Why? [05]

15. Reshma is a sole proprietor. Over the past decade, her business has grown from operating a neighborhood corner shop selling accessories such as artificial jewellery, bags hair clips and nail art to a retail chain with three branches in the city. Although she looks after the varied functions in all the branches, she is wondering whether she should form a company to better manage the business. She also has plans to open branches countrywide.

a) Explain two benefits of remaining a sole proprietor [02]

b) Explain two benefits of converting to a joint stock company. [02]

c) What role will her decision to go nationwide play in her choice of form of the organization? [02]

d) What legal formalities will she have to undergo to operate business as company? [02]

16. State the meaning of statutory corporation and give its merits and demerits [04]

17. What do you mean by Joint Hindu Family business give its features [06]