0166

C

Total No. of Questions · 37

Total No. of Printed Pages · 4

Regd. No.

Part - III

MATHEMATICS, Paper - I (A)

(Algebra, Vector Algebra and Trigonometry)

(English Version)

Time : 3 Hours ***Max. Marks : 75***

Note : This question paper consists of **three** sections *A*, *B* and *C*.

SECTION - A

$10 \times 2 = 20$

I. Very Short Answer Type Questions.

i) Answer **any ten** of the following questions.

ii) Each question carries **two** marks.

1. If $f : R \to R$ is defined by $f(x) = \dfrac{1 - x^2}{1 + x^2}$, then show that $f(\tan\theta) = Cos\,2\theta$.

2. Find the domain of real-valued function $f(x) = \dfrac{1}{(x^2 - 1)(x + 3)}$

3. If $A = \begin{bmatrix} -1 & 3 \\ 4 & 2 \end{bmatrix}$, $B = \begin{bmatrix} 2 & 1 \\ 3 & -5 \end{bmatrix}$, $X = \begin{bmatrix} x_1 & x_2 \\ x_3 & x_4 \end{bmatrix}$ and if $A + B = X$, then find the values of x_1, x_2, x_3, x_4.

4. If $A = \begin{bmatrix} 4 & 2 \\ -1 & 1 \end{bmatrix}$, then find A^2.

5. If $A = \begin{bmatrix} -1 & 2 & 3 \\ 2 & 5 & 6 \\ 3 & x & 7 \end{bmatrix}$ is a symmetric matrix, then find 'x'.

6. If $A = \begin{bmatrix} 2 & 4 \\ -1 & k \end{bmatrix}$ and $A^2 = 0$, then find the value of k.

7. If the vectors $-3i + 4j + \lambda k$, $\mu i + 8j - 6k$ are collinear vectors, then find λ and μ.

8. Find the vector equation of the line passing through the point $2i + 3j + k$ and parallel to the vector $4i - 2j + 3k$.

9. If $OA = i + j + k$, $AB = 3i - 2j + k$, $BC = i - 2j - 2k$ and $CD = 2i + j + 3k$, then find the vector OD.

10. If $a = 2i - 3j + 5k$, $b = -i + 4j + 2k$, then find $a \times b$.

11. Find the area of the parallelogram having $a = 2j - k$, $b = -i + k$ as adjacent sides.

12. Find the period of the function "$Tan\,5x$".

13. Find the minimum and maximum values of the function "$3Cos\,x + 4Sin\,x$".

14. If $Coshx = Sec\,\theta$, then prove that $Tanh^2\frac{x}{2} = Tan^2\frac{\theta}{2}$.

15. If $Sinhx = \frac{3}{4}$, then find $Sinh(2x)$.

SECTION - B

5 × 4 = 20

II. Short Answer Type Questions.

i) Answer **any five** questions.

ii) Each question carries **four** marks.

16. Find the adjoint and the inverse of the matrix $A = \begin{bmatrix} 1 & 2 \\ 3 & -5 \end{bmatrix}$.

17. $\begin{bmatrix} x-1 & 2 & 5-y \\ 0 & z-1 & 7 \\ 1 & 0 & a-5 \end{bmatrix} = \begin{bmatrix} 1 & 2 & 3 \\ 0 & 4 & 7 \\ 1 & 0 & 0 \end{bmatrix}$, then find the values of x, y, z and 'a'.

18. If $A=\begin{bmatrix}0 & 1 & 2\\ 2 & 3 & 4\\ 4 & 5 & -6\end{bmatrix}$ and $B=\begin{bmatrix}-1 & 2 & 3\\ 0 & 1 & 0\\ 0 & 0 & -1\end{bmatrix}$, then find $B-A$ and $4A-5B$.

19. Let $a=2i+4j-5k$, $b=i+j+k$ and $c=j+2k$. Find the unit vector in the opposite direction of $a+b+c$.

20. If the position vectors of the points A, B and C are $-2i+j-k$, $-4i+2j+2k$ and $6i-3j-13k$ respectively and $AB=\lambda\cdot AC$, then find the value of λ. $-\frac{1}{4}$

21. Find the angle between the vectors $i+2j+3k$ and $3i-j+2k$. $\theta=60^\circ$

22. If $a=i+2j-3k$ and $b=3i-j+2k$, then show that $a+b$ and $a-b$ are perpendicular to each other. https://www.telanganaboard.com

23. Prove that $Cot\frac{\pi}{20}\cdot Cot\frac{3\pi}{20}\cdot Cot\frac{5\pi}{20}\cdot Cot\frac{7\pi}{20}\cdot Cot\frac{9\pi}{20}=1$.

24. If $Sin\alpha+Cosec\alpha=2$, find the value of $Sin^n\alpha+Cosec^n\alpha$, $n\in Z$.

25. Prove that for any $x\in R$, $Sinh(3x)=3Sinhx+4Sinh^3x$.

26. In ΔABC, if $Sin\theta=\frac{a}{b+c}$, then show that $Cos\theta=\frac{2\sqrt{bc}}{b+c}Cos\frac{A}{2}$.

27. Show that $b.Cos^2\frac{C}{2}+c.Cos^2\frac{B}{2}=S$. (In ΔABC).

SECTION - C (5) 5 × 7 = 35

III. Long Answer Type Questions.

i) Answer **any five** questions.

ii) Each question carries **seven** marks.

28. If $f = \{(4, 5), (5, 6), (6, -4)\}$ and $g = \{(4, -4), (6, 5), (8, 5)\}$, then find

i) $f + g$ ii) $f - g$ iii) $2f + 4g$ iv) $f + 4$

v) fg vi) f/g vii) $|f|$.

29. By using Cramer's rule, solve the system of equations : $2x - y + 3z = 8$, $-x + 2y + z = 4$, $3x + y - 4z = 0$.

30. If $A = \begin{bmatrix} 1 & 2 & 2 \\ 2 & 1 & 2 \\ 2 & 2 & 1 \end{bmatrix}$, then show that $A^2 - 4A - 5I = 0$.

31. Solve $x + y + z = 1$, $2x + 2y + 3z = 6$ and $x + 4y + 9z = 3$ by using Matrix Inversion Method.

32. Show that the line joining the pair of points $6a - 4b + 4c$, $-4c$ and the line joining the pair of points $a - 2b - 3c$, $a + 2b - 5c$ intersect at the point $-4c$ when a, b, c are non-coplanar vectors.

33. $a = 3i - j + 2k$, $b = i + 3j + 2k$, $c = 4i + 5j - 2k$ and $d = i + 3j + 5k$, then compute the following :

i) $(a \times b) \times (c \times d)$

34. Find the unit vector perpendicular to the plane passing through the points $(1, 2, 3)$, $(2, -1, 1)$ and $(1, 2, -4)$.

35. If A, B, C are angles in a triangle, then prove that $Sin\,2A - Sin\,2B + Sin\,2C = 4 \cdot Cos\,A \cdot Sin\,B \cdot Cos\,C$.

36. In triangle ABC, if $r_1 = 2$, $r_2 = 3$, $r_3 = 6$ and $r = 1$, then prove that $a = 3$, $b = 4$ and $c = 5$.

37. In ΔABC, prove that $\dfrac{Cot\frac{A}{2} + Cot\frac{B}{2} + Cot\frac{C}{2}}{Cot\,A + Cot\,B + Cot\,C} = \dfrac{(a+b+c)^2}{a^2 + b^2 + c^2}$.

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Total No. of Questions - 37
Total No. of Printed Pages - 4

Regd. No.

Part - III
MATHEMATICS, Paper - I (B)
(English Version)

Time : 3 Hours ***Max. Marks : 75***

Note : This question paper consists of three sections *A*, *B* and *C*.

SECTION - A **10 × 2 = 20**

I. Very Short Answer Type Questions.

i) Answer **any ten** of the following questions.

ii) Each question carries **two** marks.

1. Find the equation of the line containing the points $(2,-3)$ and $(0,-3)$.

2. Transform the equation $3x+4y=5$ into intercept form.

3. Find the length of the perpendicular from $(-2,-3)$ to the straight line $5x-2y+4=0$.

4. Find the ratio in which the X-axis divide the line segment $\overline{AB}$ joining $A(2,-3)$ and $B(3,-6)$.

5. Show that the points $A(3,-2,4)$, $B(1,1,1)$ and $C(-1,4,-2)$ are collinear.

6. Find x if the distance between $(5,-1,7)$ and $(x,5,1)$ is 9 units.

7. Find the ratio in which the XZ-plane divides the line joining $A(-2,3,4)$ and $B(1,2,3)$.

8. Find the direction cosines of the normal to the plane $x+2y+2z-4=0$.

9. Find $\lim_{x\to 0}\left(\frac{\sqrt{1+x}-1}{x}\right)$

10. Show that $\lim_{x\to 2-}\frac{|x-2|}{x-2}=-1$.

11. Find $\lim_{x\to 1}\left(\frac{2x+1}{3x^2-4x+5}\right)$.

12. Find the derivative of $f(x)=e^x\cdot(x^2+1)$.

13. If $y=Log(Sin(Log\,x))$, then find $\frac{dy}{dx}$.

14. Find Δy and dy for the function $y = x^2 + 3x + 6$, $x = 10$ and $\Delta x = 0.01$.

15. Find the slope of the tangent to the curve $y = 3x^4 - 4x$ at $x = 4$.

SECTION - B

5 × 4 =

II. Short Answer Type Questions.

i) Answer **any five** questions.

ii) Each question carries **four** marks.

16. Find the locus of the third vertex of a right angled triangle, the ends of whose hypetenuse are $(4, 0)$ and $(0, 4)$.

17. $A(5, -3)$, $B(3, -2)$ are two fixed points. Find the equation of the locus of P, so that the area of triangle PAB is 9.

18. Find the equation of locus of a point which is equidistant from the points $A(3, -2)$ and $B(0, 4)$.

19. When the origin is shifted to $(-1, 2)$ by the translation of axes, find the transformed equation of $x^2 + y^2 + 2x - 4y + 1 = 0$.

20. When the axes are rotated through an angle $\pi/6$, find the transformed equation of $x^2 + 2\sqrt{3}xy - y^2 = 2a^2$.

21. Find the value of P, if the lines $3x + 4y = 5$, $2x + 3y = 4$, $Px + 4y = 6$ are concurrent.

22. Find the foot of the perpendicular drawn from $(4, 1)$, upon the straight line $3x - 4y + 12 = 0$.

23. Find the coordinates of the vertex C of ΔABC if its centroid is the origin and the vertices A, B are $(1, 1, 1)$ and $(-2, 4, 1)$ respectively.

24. Compute $\lim_{x \to \infty} \dfrac{x^2 + 5x + 2}{2x^2 - 5x + 1}$.

25. Find the derivative of the function $\cos ax$ from the first principles.

26. Find the equation of tangent and normal to the curve $xy = 10$ at $(2, 5)$.

27. Find two positive integers whose sum is 16 and the sum of whose squares is minimum.

SECTION - C

$5 \times 7 = 35$

III. Long Answer Type Questions.

i) Answer **any five** questions.

ii) Each question carries seven marks.

28. Find the circumcenter of the triangle whose vertices are $(1, 0), (-1, 2)$ and $(3, 2)$.

29. Find the orthocenter of the triangle whose vertices are $(-2, -1), (6, -1)$ and $(2, 5)$.

30. Find the equation of the straight line passing through $(1, 3)$ and (i) Parallel to (ii) perpendicular to the line passing through the points $(3, -5)$ and $(-6, 1)$.

31. Show that the product of the perpendicular distances from a point (α, β) to the pair of straight lines $ax^2 + 2hxy + by^2 = 0$ is $\dfrac{\left|a\alpha^2 + 2h\alpha\beta + b\beta^2\right|}{\sqrt{(a-b)^2 + 4h^2}}$.

32. Find the condition for the chord $lx + my = 1$ of the circle $x^2 + y^2 = a^2$ (whose center is the origin) to subtend a right angle at the origin.

33. Find the angle between two diagonals of a cube.

34. Find the derivatives of the functions :

i) $Log(Tan5x)$ ii) $Tan(e^x)$

35. Find the derivative of $f(x) = Log\left(\dfrac{x^2 + x + 2}{x^2 - x + 2}\right)$.

36. Find the derivatives of the functions :

i) $\dfrac{1 - Cos2x}{1 + Cos2x}$ ii) $Cot^n x$

37. Find the angle between the curves $y^2 = 4x$, $x^2 + y^2 = 5$.

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C

Total No. of Questions - 33
Total No. of Printed Pages - 3

Regd. No.

Part - III
PHYSICS, Paper - I
(English Version)

Time : 3 Hours *Max. Marks : 60*

SECTION - A

10 × 2 = 20

Note : i) Answer **ANY TEN** of the following questions.
ii) Each question carries **TWO** marks.
iii) All are very short answer type questions.

1. What are the fundamental forces in nature?

2. Distinguish between fundamental units and derived units

3. Why do we have different units for the same physical quantity?

4. If $P = 2i + 4j + 14k$ and $Q = 4i + 4j + 10k$, then find the magnitude of $P + Q$.

5. We cannot open or close the door by applying force at the hinges. Why?

6. Is it necessary, that a mass should be present at the center of mass of any system?

7. When does a real gas behave like an ideal gas?

8. Give an expression for the excess pressure of the soap bubble in air.

9. Two forces of magnitudes 3 units and 5 units act at 60^0 with each other. What is the magnitude of their resultant?

10. If a bomb at rest explodes into two pieces, the pieces must travel in opposite directions. Explain.

11. What happens to the coefficient of friction if the weight of the body is doubled?

12. Express unified atomic mass unit in kg.

13. By spinning eggs on a table top, how will you distinguish a hard boiled egg from a raw egg?

14. What is magnus effect?

15. State Dalton's law of partial pressures.

SECTION - B $6 \times 4 = 24$

Note : i) Answer **ANY SIX** of the following questions.

ii) Each question carries **FOUR** marks.

iii) All are of short answer type questions.

16. Explain the advantages and disadvantages of friction.

17. Show that the trajectory of an object thrown at a certain angle with the horizontal is a parabola.

18. What is escape velocity? Obtain an expression for it.

19. Explain Celsius and Fahrenheit scales of temperature. Obtain the relation between Celsius and Fahrenheit scales of temperature.

20. Using parallelogram law of vectors, derive an expression for the magnitude and direction of the resultant vector.

21. A bird holds a fruit in its beak and flies parallel to the ground. It lets go of the fruit at some height. Describe the trajectory of the fruit as it falls to the ground as seen by (a) the bird (b) a person on the ground.

22. If $|\vec{a} + \vec{b}| = |\vec{a} - \vec{b}|$ prove that the angle between $\vec{a}$ and $\vec{b}$ is 90^0.

23. Can the velocity of an object be in a direction other than the direction of acceleration of the object? If so, give an example.

24. State the laws of rolling friction

25. Define angular velocity (ω). Derive $V = r\omega$

26. What is the geostationary satellite? State its uses

27. State and explain first law of thermodynamics.

28. Describe the behaviour of a wire under gradually increasing load

29. Compare isothermal and an adiabatic process.

SECTION - C

2×8

Note : i) Answer ANY TWO of the following questions.

ii) Each question carries EIGHT marks

iii) All are of long answer type questions

30. Develop the notions of work and kinetic energy. Show that it leads to work-energy theorem

A pump is required to lift 600 kg of water per minute from a well, 25 m deep and to eject it with a speed of 50 ms^{-1}. Calculate the power required to perform the above task.

31 Show that the motion of a simple pendulum is simple harmonic and hence derive an equation for its time period. What is seconds pendulum?

32 State and explain Newton's law of cooling. State the conditions under which Newton's law of cooling is applicable. A body cools down from 60^0C to 50^0C in 5 minutes and to 40^0C in another 8 minutes. Find the temperature of the surroundings.

33 What are collisions? Explain the possible types of collisions. Develop the theory of one dimensional elastic collision.

0123 B

Total No. of Questions—33

Total No. of Printed Pages—3 Regd. No.

Part III

CHEMISTRY, Paper - I

(English Version)

Time : 3 Hours] *[Max. Marks : 60*

SECTION - A **10 × 2 = 20**

Note: (i) Answer **ANY TEN** Questions

(ii) Each Question carries **TWO** marks

(iii) All are very short answer type questions.

1. What is an Ideal gas?
2. Which of the gases diffuses faster among N_2, O_2 and CH_4? Why?
3. State the first law of the thermodynamcs.
4. What is Lewis acid ? Give one example.
5. The empirical formula of a compound is CH_2O. Its molecular weight is 90. Calculate the molecular formula of the compound.
6. Lithium salts are mostly hydrated. Why?
7. What are the characteristic colours imparted by the II A elements?
8. What is Octet rule?
9. Which of the two ions Ca^{2+} or Zn^{2+} is more stable and why?
10. How many Sigma and Pi bonds are present in (a) C_2H_2 and (b)C_2H_4?
11. Which in each pair of elements has a more negative electron gain enthalpy?

a. *O* or *F* b. *F* or *Cl*

12. What is diagonal relation? Give one pair of elements, that have this relation.

13. Graphite is a good conductor – explain.

14. What is allotropy? Give the crystalline allotropes of carbon.

15. Write the structures of: Trichloroethanoic acid, Neopentane, p-nitro benzaldehyde.

SECTION - B

6 × 4 = 24

Note: (i) Answer **ANY SIX** questions.
(ii) Each question carries **FOUR** marks.
(iii) All are of short answer type questions.

16. State and expalin the Hess's law of constant Heat summation.

17. Name the isotopes of hydrogen. What is the ratio of the masses of these isotopes ?

18. Explain the difference between emission and absorption spectra.

19. What is Hydrogen bond? Explain the different types of Hydrogen bonds with examples.

20. Deduce (a) Boyle's law and (b) Charle's law from Kinetic gas equation.

21. Write the postulates of Kinetic Molecular Theory of Gases.

22. What is lanthanide contraction ? What are its consequences ?

23. What are disproportionation reactions ? Give exmaple.

24. Balance the following redox reactions by ion – electron method:

$MnO_4^-(aq) + SO_2(g) \rightarrow Mn^{2+}(aq) + HSO_4^-(aq)$

$MnO_4^-(aq) + SO_2(g) \rightarrow Mn^{2+}(aq) + HSO_4^-(aq)$

(in acidic solution)

25. Derive the relation between K_p and K_c for the equilibrium reaction

$N_2(g) + 3H_2(g) \rightleftharpoons 2NH_3(g)$

26. Explain the Arrhenins concept of acids and bases.

27. What are electron deficient compounds ? Is BCl_3 an electron deficient species? Explain.

28. Why is diamond hard?

29. Give two examples each for position and functional isomerism.

SECTION - C **2 × 8 = 16**

Note: (i) Answer any **ANY TWO** questions.
(ii) Each question carries **EIGHT** marks.
(iii) All are long answer type questions.

30. What are the postulates of Bohr's model of hydrogen atom? Discuss the importance of this model to explain various series of line spectra in hydrogen atom.

31. What do you understand by Hybridisation? Explain different types of hybridization involving s and p orbitals.

32. Define IE_1 and IE_2. Why is $IE_2 > IE_1$ for a given atom? Discuss the factors that effect IE of an element.

33. Describe two methods of preparation of ethane. Give any three reactions of ethane.

0109

A

Total No. of Questions – 16 **Regd.**
Total No. of Printed Pages – 4 **No.**

Part – II
SANSKRIT, Paper – I
(Second Language)

Time : 3 Hours] **[Max. Marks : 100**

Note:

1. All questions should be attempted.
2. Question Nos. 1, 2 & 3 should be answered in the medium of
3. The remaining questions should be answered in Sanskrit (Devnagari Script) only.
4. The bits of a question should be attempted together.

सूचना :-

1. सर्वे प्रश्नाः समाधेयाः ।
2. प्रथम, द्वितीय, तृतीय प्रश्नान् विहाय अन्ये प्रश्नाः संस्कृतभाषायामेव (देवनागरी लिप्या) समाधेयाः ।
3. अंशयुक्तस्य प्रश्नस्य अन्तर्गतांशाः एकत्रैव समाधेयाः ।

I. एकं श्लोकं पूरयित्वा तस्य भावं लिखत । **1×6=6**

1. दुर्जनः ..... भयङ्करः ॥
2. कुसुमस्तबकस्येव ..... वा ॥
3. अज्ञः ..... रञ्जयति ॥

II. एकं निबन्धप्रश्नं समाधत्त । **1×6=6**

1. हनुमता शिलासनं स्वीकर्तुं नारदतुम्बुरौ किमर्थम् आदिष्टौ ? ससन्दर्भं निरूपयत।
2. रामः कः ? सः किमर्थं चित्रकूटम् अगच्छत् ? तत्र किमभवत् ?
3. नारदतुम्बुरौ उभयोः तारतम्यं कथं ज्ञातवन्तौ ?

III. एकं निबन्धप्रश्नं समाधत्त । 1×6

1. वासवानलौ शिबिचक्रवर्तिनं कथं परीक्षितवन्तौ ?
2. दयालोः नागार्जुनस्य दानशीलताम् उपवर्णयत ।
3. शिबिचक्रवर्तिनः भूतदयां विवृणुत ।

IV. चतुर्णां प्रश्नानां समाधानानि लिखत । 4×

1. निपुणः चेत् वणिक् किं कृत्वा सुखी भवति ?
2. हीरालाले परिवर्तने आगते सः किमकरोत् ?
3. पेटिका कैः पूरिता आसीत् ?
4. अब्दुल् कलामः छात्राणां मनः विकासयितुं कं कं अशिक्षयत् ?
5. वणिजः पत्नी का ? तयोः पुत्रस्य नाम किम् ?
6. हीरालालस्य माता कति रोटिकाः निर्मितवती ?
7. एकदा नीलाम्बा कां दृष्टवती ?
8. अब्दुल् कलामः कैः पुरस्कारैः सम्मानितः ।

V. द्वयोः ससन्दर्भं व्याख्यां लिखत । 2×

1. नियुज्यमानो राज्याय नैच्छद्राज्यं महाबलः ।
2. स्थाणवोऽङ्कुरिता येन प्रद्रुता अभवन् शिलाः ।
3. रक्षसां निहतान्यासन् सहस्राणि चतुर्दश ।
4. ततो विहाय मां गत्वा वैकुण्ठं पृच्छतं युवाम् ।
5. पूर्वं दत्तवरा देवी वरमेनमयाचत ।

VII. द्वौ लघुप्रश्नौ समाधत्त ।

1. उत्तमजनाः कथंभूतः अपि प्रारब्धं न परित्यजन्ति ?
2. महीपतिः दशरथः किं कर्तुम् ऐच्छत् ?
3. विष्णुः नारदतुम्बुरौ कं प्रति गन्तुं आज्ञप्तवान् ?
4. मनसः रसायनानि कानि ?

5. किं कुर्वन् पुत्रः भवति ?
6. जनस्थाने रामेण का विरूपिता अभवत् ?

VIII. द्वौ लघुप्रश्नौ समाधत्त । **2×3=6**

1. राज्यलोभः कम् अतिवर्तते ?
2. भगवता समुद्रः किमिति अभिहित ?
3. राजन्यपुत्री शिबेः भार्या किमकरोत् ?
4. जगदीशः कान् गृहीत्वा परिशीलयति स्म ?
5. मन्त्री नागार्जुनः कीदृशः ?
6. टिट्टिभदम्पती कुत्र प्रतिवसतः स्मः ?

IX. एकेन पदेन समाधत्त । **5×1=**

1. भरतः कुत्र राज्यमकरोत् ?
2. ''तुम्बुर! मे नारदः पुत्रः'' इति कः अवोचत् ?
3. प्राणिनां परं सुखदा का ?
4. तरवः कैः नम्राः भवन्ति ?
5. मुनिद्वन्द्वं कीदृशम् आअनेयम् ऐक्षिष्ट ?

X. एकेन पदेन समाधत्त । **5×1**

1. चिरायुः कं यौवराज्ये अभिषिक्तवान् ?
2. कः दुर्जयः ?
3. विहगोत्तमः कः ?
4. मासत्रयं इंग्लाण्डदेशे वसन् जगदीशः कं समागतवान् ?
5. चिरायु भूपतेः मन्त्री कः ?

XI. संवित्परीक्षा - अधोनिर्दिष्ट कथां पठित्वा प्रश्नान् समाधत्त । **5×1=5**

पुरा कश्चन सन्न्यासी स्वेन आर्जितं धनम् एकस्मिन् ताम्रभाजने निक्षिप्य अरक्षत्। सः एकदा मकरसङ्क्रान्तिपर्वदिने पर्वस्नानार्थं नदीम् अगच्छत् । धनपूर्णं **ताम्रघटं** कुटीरे त्यक्तुं भीतः सः तं गृहीत्वैव अगच्छत्। नद्याः तीरे गर्तं कृत्वा **धनघटं** तस्मिन् निक्षिप्य गर्तं पूरितवान् । अभिज्ञानार्थं तस्य उपरि सैकतलिङ्गम् एकं विन्यस्य स्नानार्थम् अगच्छत् । तं दृष्ट्वा इतरे जनाः तस्मिन् तीर्थे सैकतलिङ्गस्य

विन्यस्य स्नानार्थम् अगच्छत् । तं दृष्ट्वा इतरे जनाः तस्मिन् तीर्थे सैकतलिङ्गस्य पूजा समुदाचारः स्यात् इति अमन्यन्त । अतः ते अपि तथैव अकुर्वन् । स्नात्वा

प्रत्यागतः सन्न्यासी नदीतीरं सैकतलिङ्गमयम् अपश्यत् । तेषां लिङ्गानां मध्ये आत्मना न्यस्तम् अभिज्ञानलिङ्गं ज्ञातुम् असमर्थः निर्विण्णः अभवत् ।

नीतिः- गतानुगतिको लोकः न लोकः पारमार्थिकः ।

1 सन्न्यासी स्वेन आर्जितं धनं कथम् अरक्षत् ?

2. सन्न्यासी कदा किमर्थं च नदीम् अगच्छत् ?

3. नद्याः तीरे सन्न्यासी किम् अकरोत् ?

4. इतरे जनाः किमिति अमन्यन्त ?

5. अस्याः कथायाः का नीतिः ?

XII. चत्वारि सन्धिनामनिर्देशसहितं विघटयत ।

1. शुभाङ्गः	**2. परमेशः**	**3. दिवौकसः**	**4. प्रत्युपकारः**
5. हरये	6. भानोऽत्र	7. केऽपि	**8. गुरवे**
9. देव्युवाच	10. महौषधिः	11. परमेशः	**12. गुरूपदेशः**

XIII. चत्वारि सन्धिनामनिर्देशसहितं सन्धत्त । **4×2=**

1. गज + आननः	2. नर + इन्द्रः	3. महा + ऐक्यता
4. वाणी + एका	5. पादौ + उपगृह्य	6. गते + अपि
7. उदरे + अर्भकम्	8. गै + अकः	9. प्रति + आगमनम्
10. मम + एव	11. नर + इन्द्रः	12. गज + आननः

XIV. द्वयोः शब्दयोः अन्त-लिङ्ग-वचनमात्रनिर्देशसहितं रूपाणि लिखत । **2×4=**

1. कवि	2. सीता	3. वारि	4. किम् (पुं)

XV. द्वयोः धात्वोः निर्दिष्टानि लकाररूपाणि लिखत । **2**

1. भविष्यति	2. अभवत्	3. पठतु	4. नन्दते

XVI. संस्कृतभाषया अनुवदत । **5**

1. Let your father be your God.
2. India is the land of work.
3. Education gives humility.
4. Boy studies Sanskrit.
5. No Goddess other than mother.

0101 (New Syllabus)

A

1 No. of Questions – 20

1 No. of Printed Pages – 4

Part - I

ENGLISH, Paper – I

(First Language)

[Max. Marks : 100

e : 3 Hours]

SECTION – A

Annotate **ANY TWO** of the following in about **100** words each. **2 × 4 = 8**

(a) In thought, in talk, in action, I think you will find that you can separate life into these two divisions -- the dark side and the bright side, the discouraging side and the encouraging side.

(b) At the age of 40, she wanted to end her life as she could not conceive.

(c) But in your Departmental Store, do you apply Pythagoras Theorem or Newton's Law of Gravity ?

(d) A voice shouting 'Relax, penetrated into me above the noise of the crowd.

(e) They are the people who never go forward. They never suggest a line of activity. They live simply on the negative side of life.

Annotate **ANY TWO** of the following in about **100** words each. **2 × 4 = 8**

(a) I asked the professors who teach the meaning of life to tell me what happiness is.

(b) Have you sighted anyone
With shadows in his dusky eyes ?

(c) A lily of a day
Is fairer far in May.

(d) O my Luve's like the melodie
That's sweetly play'd in tune.

(e) And I saw a crowd of Hungarians under the trees with their women and children and a keg of beer and an accordion.

3. Answer **ANY TWO** of the following **questions** in about **100** words each. **2 × 4 = 8**

(a) **All great things have humble, small beginnings**. Justify the statement based on the life and work of Thimmakka.

(b) How did Roger Bannister feel in the first lap of the race ?

(c) How does Booker T. Washington advise the teacher-trainees to develop frankness and honesty in their teaching ?

(d) What does the boy think of his grandparents in his letter ?

(e) Why did Thimmakka and her husband decide to plant trees ? Describe how hard they tried to succeed in their mission.

4. Answer **ANY TWO** of the following **questions** in about **100** words each. **2 × 4 = 8**

(a) How is the feeling of love expressed in **A Red Red Rose** ?

(b) Explain the narrator's experience in finding out what happiness is.

(c) How does the poem, **The Beggar** describe the farmer's pathetic physical condition ?

(d) Explain with the example of the lily that size matters not but beauty counts a lot.

(e) Why is love compared to a red red rose ?

5. Answer **ANY TWO** of the following **questions** in about **100** words each. **2 × 4 =**

(a) Write a paragraph on how Alan and his parents felt excited when he was chosen to play for the school cricket match.

(b) Is the title, **Sanghala Panthulu**, apt for the story ? Explain.
(c) Is the title, **The Short-sighted Brothers**, apt for the story ? Explain.
(d) Describe the result of the declaration by the *Mohathemeem*.
(e) Helping the old is as good as playing the game. Elucidate with reference to the story.

SECTION - B

6. Read the following **passage** carefully and answer **ANY FOUR questions** given after it in a word or a sentence each. **4 × 1 = 4**

Three elderly brothers, all very short-sighted, lived in a large house on the outskirts of a city, in China. One day the youngest brother suggested that he should take charge of the finances. "Elder brother's sight is so bad, he cannot see how much money he's receiving or giving," he said, "and people take advantage of his disability."

(i) Where did the three brothers live ?
(ii) What did the youngest brother propose one day ?
(iii) How did the youngest brother support his claim ?
(iv) Was the youngest brother sincere in his suggestion ?
(v) Their sight problem was negligible. Is it **true** or **false** ?
(vi) Give the **synonym** of **edge** from the passage.

7. Read the following **passage** carefully and answer **ANY FOUR questions** given after it in a word or a sentence each. **4 × 1 = 4**

The second **Swatch Badi** (the first one in India being in Bengaluru) was recently inaugurated by the Finance Minister T. Harish Rao in Siddipeta. Here, the faculty will teach how to collect garbage, segregate dry, wet and harmful garbage, take care of public health, avoid plastic and produce compost from garbage at homes. Dr. Prashanti from Bengaluru will supervise the activities at this learning centre. Children or elders, anyone can enroll here for the course. Focus is on educating school-children, DWCRA [Development of Women and Children in Rural Areas] women and leaders. Teaching here is carried on in the digital form, actual demos and power point presentations. Compost generated thus can be used as manure. Spreading the concept all around is the need of the hour!

(i) Where does the first **Swatch Badi** in India function ?
(ii) **Swatch Badi** in Siddipeta is the first of that kind in Telangana. Say **true** or **false**.
(iii) Name the three types of garbage mentioned in the passage.
(iv) Who looks after the functioning of this school ?
(v) Who can join this school ?
(vi) Mention the three teaching methods used here.

SECTION - C

[NOTE : Answers of this Section must be written at **one place** in the same Serial Order.]

8. Match **ANY EIGHT** of the following words in Column - A with their meanings in Column - B. **½ = 4**

Column - A		Column - B	
(i)	muse	(a)	unyielding, inflexible
(ii)	ancillary	(b)	willing to obey, dutiful
(iii)	fibbing	(c)	travel across
(iv)	topsy-turvy	(d)	secondary, additional
(v)	cross	(e)	great mental pain
(vi)	prattle	(f)	telling a trivial lie
(vii)	traverse	(g)	annoyed, angry
(viii)	obedient	(h)	upside down
(ix)	adamant	(i)	reflect, think over
(x)	anguish	(j)	repeat meaninglessly

9. Identify the **parts of speech** of **ANY EIGHT** of the following **underlined words**. $8 \times \frac{1}{2} = 4$

Do you (1) think, literacy (2) is a harbinger (3) of restlessness, fear (4) frustration ? Is it (5) Adam (6) and (7) Eve eating the Tree (8) of (9) knowledge, all (10) over again ?

10. Fill in **ANY EIGHT** of the following blanks with **a, an** or **the**. $8 \times \frac{1}{2} = 4$

(i) Thimmakka (She) has been recognized by (1) Government of India and was recently conferred with (2) Padma Shri award in 2019, which is (3) fourth highest civilian award in (4) Republic of India.

(ii) There are quite (5) number of divisions into which life can be divided, but for (6) purposes of this evening I am going to speak of two; (7) bright side of life and (8) dark side.

(iii) (9) ATM is a useful machine.

(iv) I bought (10) pair of new shoes.

11. Fill in **ANY EIGHT** of the following blanks with suitable **prepositions**. $8 \times \frac{1}{2} = 4$

(i) Yet she is (1) peace (2) her pots, pans, her flowers and garden, her Bhagavad Geeta and scriptures. My mother, highly qualified, is highly strung, tense and nervy. Do you think, literacy is a harbinger (3) restlessness, fear, frustration ? Is it Adam and Eve eating the Tree (4) knowledge, all (5) again ?

(ii) Thimmakka and her husband used to carry four pails (6) water (7) a distance (8) 4 km to water the saplings.

(iii) The office is open (9) 10 a.m. (10) 5 p.m.

12. Fill in **ANY FOUR** of the following blanks with suitable forms of the **verbs** given in brackets. $4 \times 1 = 4$

(i) Saalumarada Thimmakka (be) an individual who (bring) worldwide recognition to the state of Karnataka through her incredible and massive environmental services.

(ii) I (hear) those tales so many times that I (not want) to get into the atmosphere of the people who told them.

(iii) The meeting (start) by 10.00 a.m. tomorrow.

13. Rewrite **ANY FOUR** of the following sentences as **directed**. $4 \times 1 = 4$

(i) Rahul lost a quarter mark in English.
(Change the sentence into **Passive voice**)

(ii) The Principal said to the lecturers, "You should maintain records."
(Change the sentence into **Indirect speech**)

(iii) He said that he had many problems.
(Change the sentence into **Direct speech**)

(iv) A computer works much faster than the human brain.
(Change the sentence into **Positive degree**)

(v) Very few TV channels are as popular as ETV.
(Change the sentence into **Superlative degree**)

(vi) Sandeep has attended all the classes, _____ ?
(Add a **Question Tag**)

14. Rewrite **ANY FOUR** of the following sentences **correcting** the **underlined errors**. **4 × 1 = 4**

(i) Economics <u>are</u> an interesting subject.
(ii) There are five <u>womans</u> in the team.
(iii) <u>Yourself</u> are responsible for your future.
(iv) Our apartment is on <u>third floor</u>.
(v) He walks very <u>fastly</u>.
(vi) Sheela is as proud <u>like</u> a peacock.

15. Supply the **missing letters** to **ANY EIGHT** of the following words. **8 × ½ = 4**

(i) sch _ _ l (ii) enc _ _ raging (iii) app _ _ rance (iv) exce _ _ ent
(v) sp _ _ k (vi) a _ _ ention (vii) p _ _ ple (viii) kno _ _ edge
(ix) di _ _ ipline (x) a _ _ ord

16. Identify the **silent consonant letters** in **ANY EIGHT** of the following words. **8 × ½ = 4**

(i) foreign (ii) what (iii) psalm (iv) high (v) would
(vi) often (vii) depot (viii) pneumonia (ix) island (x) knot

17. Write **ANY FOUR** of the following **transcriptions** using **ordinary English spelling**. **4 × 1 = 4**

(i) /spi:k/ (ii) /'kɒnstəntli/ (iii) /ə'tenʃn/ (iv) /ʌn'fɔ:tʃənət/
(v) /wɒnt/ (vi) /ɪndɪ'vɪdʒuəl/

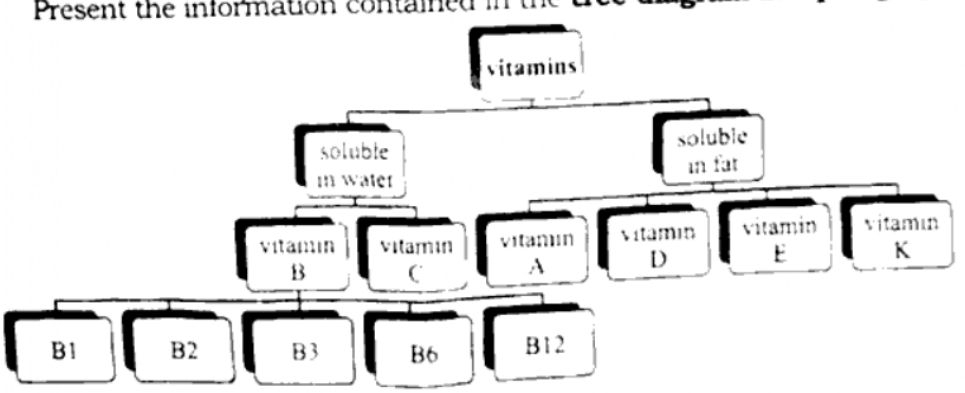
18. Circle **ANY FOUR** of the words that **sound different** from the other words in that set with regard to the sounds of the **bold** letters. **4 × 1 = 4**

(i) **k**ite **k**now **k**nife
(ii) **th**at **th**ink **th**ousand
(iii) ea**s**y e**s**cape **s**and
(iv) g**o** t**o** n**o**
(v) h**o**pe r**o**d r**o**pe
(vi) **ea**rn **ea**rth **ea**ch

19. Mention the number of **syllables** in **ANY FOUR** of the following words. **4 × 1 = 4**

(i) before (ii) doctor (iii) mother (iv) imagination
(v) essence (vi) quarter

20. (a) Present the information contained in the **tree diagram** in a **paragraph**. **1 × 4 = 4**



OR

(b) Read the following **paragraph** and convert it into a **pie chart**.

There are seven continents in the world. Asia is the largest continent with an area of 30% followed by Antarctica with 28%. North America occupies 17% of the land on the earth. South America stands fourth in the list with 12% of land. Africa and Australia are the fifth and sixth largest ones with their respective shares of 6% and 5%. Europe is the last in the list which occupies 2% of the land only.