

0166**A****Total No. of Questions - 24**

Regd.

Total No. of Printed Pages - 4

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Part - III**MATHEMATICS, Paper - I (A)****(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 **all** questions.
- (ii) Each question carries **two** marks.

1. If $A = \{-2, -1, 0, 1, 2\}$ and $f : A \rightarrow B$ is a surjection defined by $f(x) = x^2 + x + 1$, then find B .

2. Find the domain of real valued function $f(x) = \frac{2x^2 - 5x + 7}{(x - 1)(x - 2)(x - 3)}$

3. If $A = \begin{bmatrix} 1 & 2 & 3 \\ 3 & 2 & 1 \end{bmatrix}$ and $B = \begin{bmatrix} 3 & 2 & 1 \\ 1 & 2 & 3 \end{bmatrix}$ find $3B - 2A$.

4. If $A = \begin{bmatrix} 0 & 2 & 1 \\ -2 & 0 & -2 \\ -1 & x & 0 \end{bmatrix}$ is a skew symmetric matrix, then find x .

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

6. Find the vector equation of the line passing through the point $2\hat{i} + 3\hat{j} + \hat{k}$ and parallel to the vector $4\hat{i} - 2\hat{j} + 3\hat{k}$.



7. For what values of λ , the vectors $\hat{i} - \lambda\hat{j} + 2\hat{k}$ and $8\hat{i} + 6\hat{j} - \hat{k}$ are at right angles?
8. Find the period for the function $\cos\left(\frac{4x+9}{5}\right)$.
9. Find the minimum and maximum values of $3 \cos x + 4 \sin x$.
10. If $\sin hx = 3$ then show that $x = \log_e(3 + \sqrt{10})$.

SECTION - B

$5 \times 4 = 20$

II. Short Answer Type questions :

- (i) Answer any **five** questions.
- (ii) Each question carries **four** marks.

11. If $A = \begin{bmatrix} 1 & 1 & 3 \\ 5 & 2 & 6 \\ -2 & -1 & -3 \end{bmatrix}$ then find A^3 .

12. Let A, B, C and D be four points with position vectors $\bar{a} + 2\bar{b}$, $2\bar{a} - \bar{b}$, \bar{a} and $3\bar{a} + \bar{b}$ respectively. Express the vectors \overline{AC} , \overline{DA} , \overline{BA} and \overline{BC} in terms of \bar{a} and \bar{b} .

13. Find the volume of the tetrahedron whose vertices are (1, 2, 1), (3, 2, 5), (2, -1, 0) and (-1, 0, 1).

14. Prove that $\cos^2 \frac{\pi}{8} + \cos^2 \frac{3\pi}{8} + \cos^2 \frac{5\pi}{8} + \cos^2 \frac{7\pi}{8} = 2$.

15. Solve $7 \sin^2 \theta + 3 \cos^2 \theta = 4$.

16. Prove that $\sin^{-1} \frac{3}{5} + \sin^{-1} \frac{8}{17} = \cos^{-1} \frac{36}{85}$.

17. In ΔABC , prove that

$$\cot \frac{A}{2} + \cot \frac{B}{2} + \cot \frac{C}{2} = \frac{s^2}{\Delta}$$

SECTION - C

$5 \times 7 = 35$

III. Long Answer Type questions :

(i) Answer any **five** questions.

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

18. If $f : A \rightarrow B$, $g : B \rightarrow C$ are bijective functions then prove that

$$(gof)^{-1} = f^{-1}og^{-1}$$

19. Using mathematical induction, prove that $1 \cdot 2 \cdot 3 + 2 \cdot 3 \cdot 4 + 3 \cdot 4 \cdot 5 + \dots$
upto n terms <https://www.telanganaboard.com>

$$= \frac{n(n+1)(n+2)(n+3)}{4} \text{ for all } n \in \mathbb{N}.$$

20. Show that $\begin{vmatrix} a+b+2c & a & b \\ c & b+c+2a & b \\ c & a & c+a+2b \end{vmatrix} = 2(a+b+c)^3$

21. Solve the system of equations :

$$x - y + 3z = 5$$

$$4x + 2y - z = 0$$

$$-x + 3y + z = 5$$

by using Cramer's rule.

22. If $\bar{a} = 7\hat{i} - 2\hat{j} + 3\hat{k}$, $\bar{b} = 2\hat{i} + 8\hat{k}$ and $\bar{c} = \hat{i} + \hat{j} + \hat{k}$, then compute $\bar{a} \times \bar{b}$, $\bar{a} \times \bar{c}$ and $\bar{a} \times (\bar{b} + \bar{c})$. Verify whether the cross product is distributive over vector addition.

23. If A, B, C are angles in a triangle then prove that

$$\cos A + \cos B + \cos C = 1 + 4 \sin \frac{A}{2} \cdot \sin \frac{B}{2} \cdot \sin \frac{C}{2}$$

24. In $\triangle ABC$, if $a = 13$, $b = 14$, $c = 15$, then show that $R = \frac{65}{8}$, $r = 4$,
 $r_1 = \frac{21}{2}$, $r_2 = 12$ and $r_3 = 14$.

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A

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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

$10 \times 2 = 20$

I. Very short answer type questions :

- (i) Attempt all questions.
- (ii) Each question carries two marks.

1. Find the slope of the straight line passing through the points $(3, 4), (7, -6)$.

2. Transform the following straight line equation into normal form
 $3x + 4y = 5$.

3. Find the centroid of the tetrahedron whose vertices are $(2, 3, -4)$, $(-3, 3, -2)$, $(-1, 4, 2)$, $(3, 5, 1)$

4. Write the equation of the plane $4x - 4y + 2z + 5 = 0$ in the intercept form.

5. Compute $\lim_{x \rightarrow 2} \left(\frac{1}{x-2} - \frac{4}{x^2-4} \right)$.

6. Compute $\lim_{x \rightarrow 0} \frac{e^{7x}-1}{x}$.



7. If $y = \log(\sin(\log x))$, find $\frac{dy}{dx}$.
8. Find the derivative of $\sin^{-1}(3x - 4x^3)$.
9. Find the slope of the tangent to the curve $y = 5x^2$ at $(-1, 5)$.
10. Find dy and Δy of $y = f(x) = x^2 + x$ at $x = 10$ when $\Delta x = 0.1$.

SECTION - B

$5 \times 4 = 20$

II. Short answer type questions :

- (i) Answer any **five** questions.
- (ii) Each question carries **four** marks.

11. The ends of the hypotenuse of a right angled triangle are $(0, 6)$ and $(6, 0)$. Find the equation of the locus of its third vertex.

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

13. If $Q(h, k)$ is the foot of the perpendicular from $P(x_1, y_1)$ on the straight line $ax + by + c = 0$ then prove that

$$\frac{h - x_1}{a} = \frac{k - y_1}{b} = - \frac{(ax_1 + by_1 + c)}{a^2 + b^2}.$$

14. Compute $\lim_{x \rightarrow 0} \frac{1 - \cos 2mx}{\sin^2 nx}$ ($m, n \in \mathbb{Z}$). <https://www.telanganaboard.com>

15. Find the derivative of the function $\tan 2x$ from the first principle.

16. If the increase in the side of a square is 2%, then find the approximate percentage of increase in its area.

17. Find the lengths of subtangent, subnormal at a point 't' on the curve

$$x = a(\cos t + t \sin t), y = a(\sin t - t \cos t).$$

III. Long answer type questions :

- (i) Answer any five questions.
- (ii) Each question carries seven marks.

18. Find the orthocentre of the triangle with the following vertices $(-2, -1)$, $(6, -1)$ and $(2, 5)$.
19. If the equation $ax^2 + 2hxy + by^2 = 0$ represent a pair of straight lines and ' θ ' is the angle between the lines then prove that

$$\cos \theta = \frac{|a+b|}{\sqrt{(a-b)^2 + 4h^2}}$$
20. Find the values of k , if the lines joining the origin to the points of intersection of the curve $2x^2 - 2xy + 3y^2 + 2x - y - 1 = 0$ and the line $x + 2y = k$ are mutually perpendicular.
21. Find the angle between two diagonals of a cube.
22. If $\sqrt{1-x^2} + \sqrt{1-y^2} = a(x-y)$ then show that $\frac{dy}{dx} = \sqrt{\frac{1-y^2}{1-x^2}}$.
23. Show that the curves $y^2 = 4(x+1)$ and $y^2 = 36(9-x)$ intersect orthogonally.
24. The volume of a cube is increasing at a rate of 9 cubic centimeters per second. How fast is the surface area increasing when the length of the edge is 10 centimetres ?
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A

Total No. of Questions - 21

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Total No. of Printed Pages - 2

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

Time : 3 Hours]

(Max Marks : 60)

$10 \times 2 = 20$

SECTION A

- Note:**(i) Answer ALL Questions
(ii) Each Question carries TWO marks.
(iii) All are very short answer type questions.

- 1, What is the contribution of S. Chandra Sekhar to Physics?
- 2, Can the coefficient of friction be greater than one?
- 3, When does a real gas behave like an ideal gas?
- 4, State Dalton's law of partial pressures.
- 5, How can systematic errors be minimised or eliminated ?
- 6, Give the expression for the excess pressure in a liquid drop.
- 7, What is the principle behind the carburetor of an automobile?
- 8, Can a substance contract on heating? Give an example.
- 9, What is greenhouse effect? Explain global warming.
- 10, $A = \vec{i} + \vec{j}$. What is the angle between the vector and x-axis?



SECTION - B

$6 \times 4 = 24$

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

11. If $|a + \vec{b}| = |\vec{a} - \vec{b}|$ prove that the angle between \vec{a} and \vec{b} is 90° .
12. A ball is dropped from the roof of a tall building and simultaneously another ball is thrown horizontally with some velocity from the same roof. Which ball lands first? Explain your answer.
13. Explain advantages and disadvantages of friction.
14. Distinguish between centre of mass and centre of gravity.
15. Define angular acceleration and torque. Establish the relation between angular acceleration and torque.
16. What is orbital velocity? Obtain an expression for it.
17. Define Young's modulus, Bulk modulus and Shear modulus.
18. Pendulum clocks generally go fast in winter and slow in summer. Why?

SECTION - C

$2 \times 8 = 16$

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

19. What are collisions? Explain the possible types of collisions? Develop the theory of one dimensional elastic collision.
20. Show that the motion of a simple pendulum is simple harmonic and hence derive an equation for its time period. What is seconds pendulum?
21. State second law of thermodynamics. How is heat engine different from a refrigerator.



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0123

B

Total No. of Questions—**21**

Total No. of Printed Pages—**3**

Regd. No.

Part III

CHEMISTRY, Paper - I

(English Version)

Time : 3 Hours]

[**Max. Marks : 60**

SECTION - A

$10 \times 2 = 20$

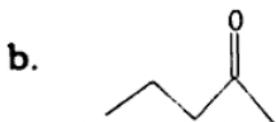
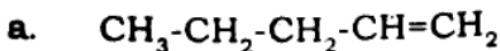
- Note:**(i) Answer **ALL** Questions
 (ii) Each Question carries **TWO** marks
 (iii) All are very short answer type questions.

1. What is Biochemical Oxygen Demand (BOD) ?
2. What happens when magnesium metal is burnt in air?
3. Describe the important uses of sodium carbonate.
4. Why pressure Cooker is used for cooking food on hills?
5. Give the hybridization of carbon in
 - a. CO_3^{2-}
 - b. diamond
 - c. graphite
 - d. fullerene
6. What is PAN ? What effect is caused by it ?
7. The empirical formula of a compound is CH_2O . Its molecular weight is 90. Calculate the molecular formula of the compound.
8. All Lewis acids are not Bronsted acids. Why ?
9. Diamond has high melting point – explain.

P.T.O.

0123-B

10. Write the IUPAC names of :



SECTION - B

$6 \times 4 = 24$

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

11. State Fajan's rules, and give suitable examples.
12. Deduce (a) Boyle's law and (b) Charle's law from Kinetic gas equation.
13. State and explain the Hess's law of constant Heat summation.
14. Derive the relation between K_p and K_c for the equilibrium reaction

$$\text{N}_2(\text{g}) + 3\text{H}_2(\text{g}) \rightleftharpoons 2\text{NH}_3(\text{g})$$
15. Balance the following redox reaction by ion – electron method:

$$\text{MnO}_4^-(\text{aq}) + \text{SO}_2(\text{g}) \rightarrow \text{Mn}^{2+}(\text{aq}) + \text{HSO}_4^-(\text{aq})$$

 (in acidic solution)
16. Explain the hybridization involved in SF_6 molecule.
17. Write a few lines on the utility of hydrogen as a fuel.
18. Explain borax bead test with a suitable example.

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

19. 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.
20. 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.
21. How does acetylene react with the following reagents? Give the corresponding equations and name the products formed in the reactions.
- a. Water b. Hydrogen
c. Halogens d. Hydrogen halide

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0109

C

A

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

Max. Marks : 100

Time : 3 Hours

Note:

1. All question should be attempted.
2. Question Nos. 1, 2 & 3 should be answered in the medium of instructions of the candidate.
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 प्रभाः समाधेयाः।	
2. प्रथम्, द्वितीय, तृतीय प्रभान् विहाय अन्ये प्रभाः संस्कृतभाषायामेव (देवनागरी लिप्या) समाधेयाः।	
3. अशायुकस्य प्रश्नस्य अन्तर्गताशा. एकत्रैव समाधेयाः।	
I. एक इलोकं पूर्यित्वा, तस्य भावं लिखत।	1×6=6
1. अङ्गा _____ रज्जयति ॥	
2. सपत्सु _____ कर्कशम् ॥	
II. एक निबन्धप्रश्नं समाधत।	1×6=6
1. रामः क? स किमर्थं वित्रकूटम् अगच्छत? तत्र किमध्यत?	
2. कृष्णबलरामयो गुरुपरादनं, गुरुपुत्ररक्षणं य विवृणुत।	
III. एक निबन्धप्रश्नं समाधत।	1×6=6
1. जीवहरः केन उपायेन राज्यमितिरथी? रांदाहरणम् उद्दिष्टत।	
2. वारायानलौ शिवियक्वर्तिनं कथं परीक्षितावन्ती?	
IV. चतुर्वर्षा प्रभानां समाधानानि लिखत।	4×2=8
1. निपुणं चेत् वाणिकं कि कृप्या सुखी भवति?	
2. पौटिका कै पूरिता आसीत?	
3. राजा सुकृतं लम्णं प्राराद कै अलङ्घत?	
4. अब्दुल कलाम कै पुरस्कारे सामानित?	
5. सजीवं कुत्र निवासति? विद्यालयं च सु कथमागच्छति?	
6. हीरालाले परिवर्तने आगते स किमकरोत?	
7. एकदा नीलाम्बा का दृष्टवती?	
8. वणिजः पर्णी का? तयोऽपुरस्य नाम किम?	
V. द्वयोः ससन्दर्भी व्याख्यां लिखत।	2×3=6
1. पूर्वे दत्तवरा देवी वरमेनमयादत।	
2. शिरं पश्यामि भासस्य न गात्रम्।	
3. जलमाविश्य त हत्या नापश्यतुदरेभंकम्।	
4. ततो विहाय मा गत्वा दैकुण्ठं पृच्छत युवाम्।	

VII.	द्वयः ससन्दर्भां व्याख्यां लिखत ।	2x3=6
1.	कि त्वं साम्राज्य प्रजापति जेतुमुद्यत?	
2.	राजन् बुधुशा मामत्यन्तं पीडयति ।	
3.	अस्मत् तृष्णये स राजा तृष्णं पहचयं यातु ।	
4.	पुत्रशोकेन कालं करिष्यसि ।	
VIII.	द्वी लघुप्रश्नां समाप्तत ।	2x3=6
1.	मीन केषा कुत्र च विभूषणम्?	
2.	पार्थः द्रोण किमिति अभ्यमाप्त?	
3.	नारद-तुम्हुरी परस्पर निन्दन्ती किं अकुरुताम्?	
4.	मनस रत्यानानि कानि?	
VIII.	द्वी लघुप्रश्नां समाप्तत ।	2x3=6
1.	टिहिभद्रम्पती कुत्र प्रतिवस्त रम?	
2.	कीर्तिसेना कथं गृहे अवस्त?	
3.	दशरथं करय शब्दं तुक्षाव?	
4.	जगदीशः कस्मिन् मन अधात?	
IX.	एकेन पदेन समाप्तत ।	5x1=5
1.	कं पशु भवति?	
2.	सुरगायनी को?	
3.	गुहः क?	
4.	गुरुः पात्याय किं नामान् अस्त्रं ददौ?	
5.	प्राणिना पर सुखदा का?	
X.	एकेन पदेन समाप्तत ।	5x1=5
1.	पूर्णिमादिने का घरति?	
2.	रथेन कम् अन्यायत्?	
3.	पाटलिपुत्रं नाम नगरं कुत्र अस्ति?	
4.	दशरथस्य इपुणा कः हत?	
5.	जगदीशः किं शास्त्रं प्रति आकृष्टः अभवत?	
XI.	सवित्परीक्षा – अधोनिर्दिष्टकथां पठित्वा, प्रश्नान् समाप्तत ।	5x1=5
मूर्खस्य नास्त्वैषप्यम्		
<p>पुरा दश मूर्खः तीर्थयात्रार्थं प्रतिष्ठन् । मार्गं कापि नदी आगता । ता तीर्त्वा तेषां नायकः सर्वे आगता: या न वा इति ज्ञातुम् आत्मानम् अगणयित्वा अन्यान् अगणयत् । तेन तेषां संख्या नव अजायत । तेन पर्याकुत्तेषु तेषु एकैकः आत्मानं विहाय अवशिष्टान् अगणयन् । इत्थं दशवारं ते नव संख्यामेव अगणयन् । त्वेषु एकः नदा निमग्र इति सम्भाव्य ते मूर्खाः उच्चैः रोदितुम् आरभन्त । कथन सन्ध्यासी तत्र आगत्य तेषां दुखस्य कारणं ज्ञात्वा स्वयं तान् अगणयत् । तेन तेषां संख्या दश अजायत । ते च आत्मनां प्रमादं ज्ञात्वा लज्जाः अभवन् ।</p>		
<p>नीति- सर्वस्य औषधम् अस्ति । किन्तु मूर्खस्य औषधं नास्ति ।</p> <ol style="list-style-type: none"> नदी तीर्त्वा मूर्खाणा नायकः किम् अकरोत्? मूर्खः किमिति सम्भाव्य रोदितुम् आरभन्त? सन्ध्यासी तत्र आगत्य किम् अकरोत्? ते कं ज्ञात्वा लज्जाः अभवन्? अस्याः कथायाः का नीति? 		

XII. चत्वारि सम्बिनिदेशसहितं विषट्यत।

4x2=8

1. गजाननः 2. नरेन्द्रः 3. तथैव 4. प्रत्यहम्
5. हरये 6. केऽपि 7. गुरुपदेशः 8. महोत्तामः

XIII. चत्वारि सम्बिनिदेशसहितं सम्यत।

4x2=8

1. विद्या + आलयः 2. परम + ईशः 3. नव + औषधम्
4. अभि + उत्त्राति 5. गै + अकः 6. भानो + अत्र
7. शशी + इव 8. गुण + उत्तमः

XIV. द्वयोः शब्दयोः अन्त-लिङ्ग-वचनमात्रानिर्देशसहितं रूपाणि लिखत।

2x4=8

1. कवि 2. सीता 3. मधु

XV. द्वयोः धात्वोः निर्दिष्टानि लकाररूपाणि लिखत।

2x3=6

1. पठति 2. भवतु 3. अगच्छत् 4. लभेत

XVI. संस्कृतभाषया अनुवदत।

5x1=5

1. Let your mother be your God.
2. Speech is the ornament.
3. Speak truth.
4. I am going to college.
5. Tree protects when protected.

0101

B

Total No. of Questions—**30**

Total No. of Printed Pages—**7**

Regd. No. _____

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Part I

ENGLISH, Paper - I

(First Language)

(Max. Marks : 100)

Time : 2 Hours

SECTION - A

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

- a) Education is not what a person is able to hold in his head, so much as it is what a person is able to find.
- b) And she was cross. She said go ask the guy who keeps gardening things.
- c) Her intentions are evidently good as she has planted trees rich in biodiversity.

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

- a) And then one Sunday afternoon I wandered out along the Desplaines river
- b) And fare thee weel, my only
Luve and fare thee weel a while!
- c) Have you sighted anyone
With shadows in his dusky eyes?

3. Answer ANY TWO of the following questions in about 100 words each

2 × 4 = 8

- a) The whole speech is on the human traits. Comment with reference to Booker T. Washington's Two Sides of Life
- b) What gave Dr Bannister strength in the final spurt?
- c) **Box and Cox** fulfills all the characteristics of a one act play. Explain

4. Answer ANY TWO of the following questions in about 100 words each.
 $2 \times 4 = 8$

- a) What does the speaker promise in **A Red Red Rose**?
- b) Bulk does not make Man better be. How does the oak support this stand?
- c) It may be near when it seems afar; What seems afar and why?

5. Answer ANY TWO of the following questions in about 100 words each.
 $2 \times 4 = 8$

- a) Every time the youth chooses a gift, the fairy expresses her dissatisfaction with her gestures. Comment.
- b) Helping the old is as good as playing the game. Elucidate with reference to the story.
- c) Is the title, **Sanghalu Panthulu**, apt for the story? Explain.

SECTION - B

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

"The tablet has a flowery border." The second brother went away very pleased with himself. Hardly had he gone when the third brother arrived there. He too enquired about the inscription and on being told what it was, asked if there was any other writing on it."

"Only the donor's name, Wang Lee, at the bottom," said the monk.

- i. What did the tablet have for its decoration?
- ii. Who answered the question about its decoration?
- iii. When did the third brother reach the monastery?
- iv. Where was the donor's name mentioned?
- v. Why was the second brother happy with himself?
- vi. Write the Antonym of departed 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

Innovation in Irrigation – Kaleswaram

Kaleswaram, the brainchild of Sri K Chandrashekhar Rao, is considered the world's largest multipurpose, multistage lift irrigation project. The other two such projects in the world (one in the USA – Colorado; and the other in Egypt – Great Manmade River) took three decades for their completion. But **Kaleswaram Lift Irrigation Project (KLIP)** was inaugurated in just three years (on 21 June 2019) after starting work on it in 2016. With three barrages, 20 lifts and 20 reservoirs, it aims at lifting water to 500 meters height and carrying it to over 500 KMs spanning 13 districts with a canal network crossing 1800 KMs. Built on the Godavari at Kaleswaram in Jayashankar Bhupalpalli district, the project mainly aims to use the till now unused Pranahitha waters near its confluence with the Godavari. The project presently lifts 2TMC (Thousand million cubic feet) water per day. Plans are afoot to increase the capacity to 3TMC a day. It aims at irrigating 37 Lakh acres, besides meeting the drinking water needs of Hyderabad and other villages, developing water transport and promoting fisheries and tourism.

- i. Why is **Kaleswaram** called a multipurpose project?
- ii. What is the difference between KLIP and the other such projects in the world?
- iii. Name the river that provides water to KLIP.
- iv. What is the irrigation potential of KLIP in acres?
- v. Expand TMC.
- vi. Give the location of KLIP.

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. $8 \times \frac{1}{2} = 4$

Column A	Column B
i. saplings	a. buckets
ii. confer	b. adopted son
iii. foster son	c. exceptionally large
iv. tending	d. without fail
v. massive	e. a beginning
vi. conceive	f. award a degree, title etc.
vii. invariably	g. a particular aspect
viii. pails	h. young plants
ix. onset	i. to become pregnant
x. facet	j. caring for

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

Although (1) Thimmakka did not receive (2) a formal (3) education, her (4) work (5) has been honoured (6) with (7) the National (8) Citizen's Award (9) of (10) India.

- 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 — Government of India and was recently conferred with — Padma Shri award in 2019, which is — fourth highest civilian award in — Republic of India. <https://www.telanganaboard.com>
- ii. Are you — vegetarian?
- iii. There are quite — number of divisions into which life can be divided, but for — purposes of this evening I am going to speak of two; — bright side of life and — dark side.
- iv. Peter is — Italian.

11. Fill in ANY EIGHT of the following blanks with suitable prepositions.

8 * 1 = 8

- I want you to go out — this institution so trained and so developed that you will be constantly looking — the bright, encouraging and beautiful things — life.
- As we lined up — the start I glanced — the flag again. It fluttered more gently now, and the scene — Shaw's *Saint Joan* flashed — my mind, how she, — her desperate moment, waited — the wind to change.
- We should not feel superior — others.

12. Fill in ANY FOUR of the following blanks with suitable forms of the verbs given in brackets.

4 * 1 = 4

- My English teacher usually — (speak) English in the class room, but surprisingly she — (speak) Telugu now.
- The audience — — — (occupy) their seats before the cinema began.
- Gandhi — — (pass away) in 1948.
- Telangana — — — (become) a developed state in two years.
- We — (have) hot coffee one hour ago.

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

- They were reading the newspaper. (Change the sentence to passive voice)
- He said, "I have lost my bag." (Change the sentence to indirect speech)
- Harika said to her friend, "Will you come to my home tomorrow?" (Change the sentence to indirect speech)
- Shimla is cooler than Ooty. (Change the sentence to positive degree)
- I cannot speak as fast as you. (Change the sentence to comparative degree)
- I am very happy now,? (Add a question tag)

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

- His both sons are lawyers.
- He speaks English very good.
- He is doing homework since 8 o'clock.
- One of my classmates are an Officer in the Indian Army.
- All Indians must respect each other.
- Keep your surrounding clean.

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

- | | | |
|-----------------|------------------|---------------------|
| i. childh - - d | ii. p - - ce | iii. frus - - ation |
| iv. ha - - en | v. gra - - ar | vi. col - - r |
| vii. ang - - sh | viii. li - - ten | ix. obed - - nt |
| x. mu - - le | | |

16. Identify the silent consonant(s) in ANY EIGHT of the following words. 8 × ½ = 4

- | | | |
|--------------|---------------|---------------|
| i. align | ii. ghost | iii. leader |
| iv. straight | v. calf | vi. plumber |
| vii. wrap | viii. thistle | ix. pneumonia |
| x. burden | | |

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

- | | | |
|------------------|----------------|---------------|
| i. /'edʒu'keɪʃn/ | ii. /'hazbənd/ | iii. /'penʃn/ |
| iv. /'risəntli/ | v. /'maʊntən/ | vi. /kləuz/ |

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. sugge st | beggar | luggage |
| ii. cap | tap | tape |
| iii. shake | take | talk |

iv.	house	hour	mouse
v.	buy	try	ray
vi.	thin	this	thick

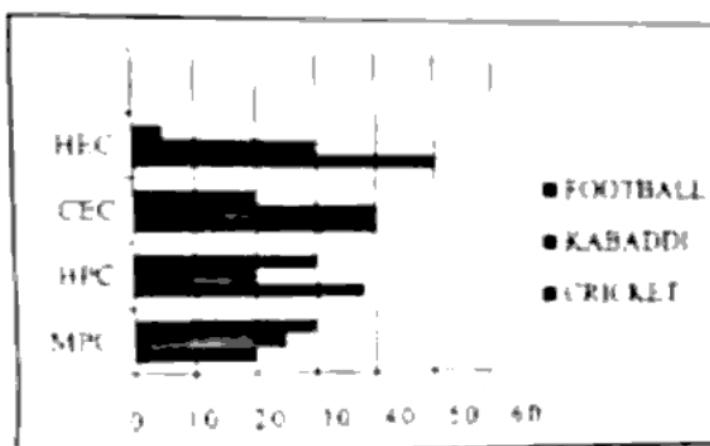
19. Mention the number of **syllables** in **ANY FOUR** of the following words.

$$4 \times 1 = 4$$

- | | | |
|---------------|------------|------------------|
| i. pension | ii. source | iii. confer |
| iv. captivate | v. modest | vi. contribution |

20. a) Convert the given bar graph into a paragraph. $1 \times 4 = 4$

FAVOURITE SPORTS OF STUDENTS



OR

b) Read the following **paragraph** and transfer the information into a **flow chart**.

Rayon is a man-made fiber. It is a reconstituted natural fiber-cellulose. Rayon is made by dissolving cellulose in a solution of sodium hydroxide or caustic soda. The cellulose is obtained from shredded wood pulp. The dissolved cellulose is formed into threads by forcing it through a spinneret in a dilute sulphuric acid setting bath. The threads are drawn from the setting bath, wound on a reel, washed, dried on a heated roller, and finally wound onto a bobbin.