Sri Chaitanya IIT Academy.,India.

A.P T.S KARNATAKA TAMILNADU MAHARASTRA DELHI RANCHI

A right Choice for the Real Aspirant

ICON Central Office - Madhapur - Hyderabad

SEC: Sr. Super60 NUCLEUS-BT	**JEE-MAIN**	**Date: 07-06-2025**
Time: 09.00Am to 12.00Pm	**WTM-31**	**Max. Marks: 300**

IMPORTANT INSTRUCTION:

1. Immediately fill in the Admission number on this page of the Test Booklet with **Blue/Black** Ball Point **Pen** only.
2. The candidates should not write their Admission Number anywhere (except in the specified space) on the Test Booklet/ Answer Sheet.
3. The test is of **3 hours** duration.
4. The Test Booklet consists of 90 questions. The maximum marks are **300.**
5. There are **three** parts in the question paper 1,2,3 consisting of **Physics, Chemistry** and **Mathematics** having **30 questions** in each subject and subject having **two sections.**

   (I) Section –I contains 20 **multiple choice** questions with only one correct option.

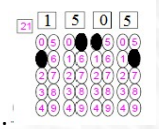
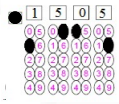
   Marking scheme: +4 for correct answer, 0 if not attempt and -1 in all other cases.

   (II) Section-II contains 10 **Numerical Value Type** questions. Attempt any 5 questions only, if more than 5 questions attempted, First 5 attempted questions will be considered.

   ■ The Answer should be within **0 to 9999.** If the Answer is in **Decimal** then round off to the **nearest Integer** value (Example i,e. If answer is above **10** and less than **10.5** round off is **10** and If answer is from **10.5** and less than **11** round off is **11).**

   To cancel any attempted question bubble on the question number box.

   For example: To cancel attempted question 21. Bubble on 21 as shown below

   Question Answered for Marking **Question Cancelled for Marking**

   Marking scheme: +4 for correct answer, 0 if **not attempt** and **-1** in all other cases.
6. Use **Blue / Black Point Pen only** for writing particulars / marking responses on the Answer Sheet. **Use of pencil is strictly prohibited.**
7. No candidate is allowed to carry any textual material, printed or written, bits of papers, mobile phone any electron device etc, except the Identity Card inside the examination hall.
8. Rough work is to be done on the space provided for this purpose in the Test Booklet only.
9. On completion of the test, the candidate must hand over the Answer Sheet to the invigilator on duty in the Hall. **However, the candidate are allowed to take away this Test Booklet with them.**
10. **Do not fold of make any stray marks on the Answer Sheet**

Name of the Candidate (in Capital): _____

Admission Number: | | | | | | | | | |

Candidate's Signature:_____ **Invigilator's Signature: _____**

07-06-2025_Sr.Super60_NUCLEUS-BT_Jee-Main-WTM-31_Test Syllabus

MATHEMATICS : Number of integral divisors of a number, Complete combinations, Number of integrals solution of linear equations

PHYSICS : Interference due to a thin film, Interference due to a thin wedge-shaped film, Newtons rings, Diffraction, Optical instruments: Telescope and Microscopes, Magnifying and resolving power (Deleted pertaining to JEE MAINS but still in JEE ADV Syllabus)

CHEMISTRY : Addition of ammonia derivatives, Beckmann rearragement, Alpha deuteration, Alpha-racemization, Alpha-halogenation, Haloform reaction, Aldol condensation (self, crossed & intra molecular),Canizzaro reaction, Tollen's Reaction, Perkin Condensation(aromatic aldehyde with acetic anhydride)

MATHEMATICS **Max Marks: 100**

SECTION-I
(SINGLE CORRECT ANSWER TYPE)

This section contains **20 Multiple Choice Questions.** Each question has 4 options (1), (2), (3) and (4) for its answer, out of which ONLY ONE option can be correct.

Marking scheme: +4 for correct answer, 0 if not attempted and –1 in all other cases.

01. There are 10 different pairs of shoes in a show case. The number of ways of selecting 4 shoes so that there is no pair is

1) 3472 **2)** 3360 **3)** 3216 **4)** 3156

02. The number of mixed double tennis games that can be arranged from 8 couples so that no lady is a partner (or) opponent to her husband is

1) 420 **2)** 240 **3)** 402 **4)** 840

03. Let $x_1x_2x_3x_4x_5x_6$ be a six digit number then the number of numbers such that $x_1 < x_2 < x_3 \le x_4 < x_5 < x_6$ is

1) 84 **2)** 120 **3)** 210 **4)** 48

04. A committee of 11 members is to be formed from 8 males and 5 females. If m is the number of ways of the committee is formed with at least 6 males and n is the number of ways the committee is formed with atleast 3 females then

1) $m+n=68$ **2)** $m=n=78$ **3)** $m-n=10$ **4)** $m=n=68$

05. The number of triplets (x,y,z) where x,y,z are distinct non-negative integers satisfying $x+y+z=15$ is

1) 91 **2)** 136 **3)** 114 **4)** 90

06. A natural number n has prime factorization given by $n=2^x.3^y.5^z$ where y and z are such that $y+z=5$ and $y^{-1}+z^{-1}=\frac{5}{6}$, $y>z$. Then the number of odd divisors of n, including 1 is

1) 11 **2)** 6 **3)** 12 **4)** 13

07. The number of ordered pairs (r,k) for which $\left({}^{35}C_r\right)=\left(\frac{k^2-3}{6}\right).{}^{36}C_{r+1}$ where k is an integer is

1) 3 **2)** 2 **3)** 6 **4)** 4

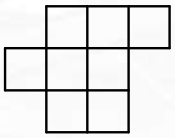
08. The number of ways of choosing 10 objects out of 31 objects of which 10 are identical and the remaining 21 are distinct is_____

1) 2^{21} **2)** $2^{20}+1$ **3)** 2^{20} **4)** $2^{20}-1$

09. From all the English alphabets, five letters are chosen and are arranged in alphabetical order. The total number of ways in which the middle letter is R is_____

1) 5148 **2)** 3808 **3)** 5418 **4)** 3880

10. The number of ways in which the letters A, B, C, D, E can be placed in the 8 boxes of the figure below so that no row remains empty and at most one letter can be placed in a box is



1) 5880 **2)** 960 **3)** 840 **4)** 5760

11. From a group of 7 batsman and 6 bowlers 10 players are to be chosen for a team, which should include at least 4 batsmen and at least 4 bowlers. One batsman and one bowler who are captain and vice-captain respectively of the team should be included. Then the total number of ways such a selection can be made, is____

1) 135 **2)** 155 **3)** 145 **4)** 165

12. There are 12 points in a plane, no three of which are in the same straight line, except 5 points which are collinear. Then the total number of triangles that can be formed with vertices at any three of these 12 points is

1) 230 **2)** 220 **3)** 200 **4)** 210

13. The number of non-negative integral solutions of the equation $3x+y+z=24$ is___

1) 117 **2)** 120 **3)** 119 **4)** 118

14. Let $S=\{1,2,3,4,.....,9\}$. If X denotes the set of all subsets of S containing exactly two elements then the value of $\sum_{A\in X}$(minimum of A) is_____

1) 102 **2)** 112 **3)** 210 **4)** 120

15. The total number of integral solutions of $xyz=30$ is

1) 27 **2)** 108 **3)** 30 **4)** 4

16. The sum of the reciprocals of all positive integral divisors of $N=3600$ is R then the integral part of R is

1) 1 **2)** 2 **3)** 3 **4)** 4

17. Match the following

Column-I		Column-II	
A)	The interior angles of a regular polygon measures 150° each. Then the number of diagonals of the polygon is	**P)**	50
B)	The maximum number of points into which 4 circles and 4 straight lines intersect is	**Q)**	60
C)	The number of ways of selecting 3 vertices of a regular decagon so that only two of them are consecutive is	**R)**	54
D)	If one quarter of all three element subsets of set $\{a_1,a_2,a_3,.....,a_n\}$ contains element a_3 then $4n=$	**S)**	48

1) A-S; B-Q; C-R; D-P **2)** A-R; B-P; C-Q; D-S

3) A-P; B-Q; C-R; D-S **4)** A-S; B-P; C-Q; D-R

18. An engineer is required to visit a factory for exactly four days during the first 15 days of every month and it is mandatory that no two visits take place on consecutive days. The number of all possible ways in which such visits to the factory can be made by the engineer during 1-15 June 2025 is_____

1) ${}^{15}C_4$ **2)** ${}^{14}C_4$ **3)** ${}^{13}C_4$ **4)** ${}^{12}C_4$

19. Let $S=\{1,2,3,4,.....,9\}$. For $K=1,2,3,4,5$, let N_K be the number of subsets of S each containing five elements out of which exactly K are odd then $N_1+N_2+N_3-N_4-N_5$ is

1) 126 **2)** 105 **3)** 100 **4)** 84

20. Statement-I : For any integer $n\geq 1$, the number of positive divisors of n is denoted by $d(n)$. Then for a prime "P" $d(d(d(P^7)))$ is 3

Statement-II : The number of equilateral triangles formed by Joining the vertices of regular Hexagon is 2

1) Statement-I is true, statement-II is false

2) Statement-I is false statement-II is true

3) Statement-I is true, statement-II is true

4) Statement-I is false, statement-II is false

SECTION-II
(NUMERICAL VALUE TYPE)

This section contains **5 Numerical Value Type Questions.** The Answer should be within **0 to 9999.** If the Answer is in **Decimal** then round off to the **Nearest Integer** value (Example i,e. If answer is above **10** and less than **10.5** round off is **10** and If answer is from **10.5** and less than **11** round off is **11).**

Marking scheme: +4 for correct answer, 0 if not attempt and -1 in all other cases.

21. The number of divisors of $3^5.5^7.7^9$, which are in the form of $4n+1$, $n\in N$, is

22. Let $n\geq 2$ be an integer. Take n distinct points on a circle and join each pair of points by a line segment. Colour the line segment joining every pair of adjacent points by blue and the rest by red. If the number of red and blue line segments are equal then twice the value of n is_____

23. Let a,b be natural numbers such that their L.C.M is 166320 and H.C.F is 792. Then the number of possible ordered pairs (a,b) is_____

24. The total number of regions in which 4 coplanar circles can divide the plane, it is known that each pair of the circles intersect in two different points and no three of them have common point of intersection is equal to_____

25. Let $n_1<n_2<n_3<n_4<n_5$ be positive integers such that $n_1+n_2+n_3+n_4+n_5=20$. Then the number of such distinct arrangements (n_1,n_2,n_3,n_4,n_5) is_____

PHYSICS **Max Marks: 100**

SECTION-I
(SINGLE CORRECT ANSWER TYPE)

This section contains **20 Multiple Choice Questions.** Each question has 4 options (1), (2), (3) and (4) for its answer, out of which ONLY ONE option can be correct.

Marking scheme: +4 for correct answer, 0 if not attempted and –1 in all other cases.

26. Assertion (A): Thin films such as soap bubble or a thin layer of oil on water show beautiful colours when illuminated by sunlight.

Reason (R): The colours are obtained by dispersion of light only.

1) Both (A) and (R) are correct and (R) is correct explanation of (A)

2) Both (A) and (R) are correct and (R) is not correct explanation of (A)

3) (A) is correct but (R) is incorrect

4) (A) is incorrect but (R) are correct

27. White light is incident normally on a glass plate of thickness $0.50\times10^{-6}\ m$ and index of refraction 1.50. Which wavelengths in the region (400nm – 700nm) are strongly reflected by the plate?

1) 449 nm & 650 nm **2)** 429 nm & 600 nm

3) 529 nm & 629 nm **4)** 400 nm & 600 nm

28. A certain region of a soap bubble reflects red light of vacuum wavelength $\lambda = 650\ nm$. What is the minimum thickness that this region of the soap bubble could have? Take the index of refraction of the soap film to be 1.41.

1) $1.2\times10^{-7}\ m$ **2)** $650\times10^{-9}\ m$ **3)** $120\times10^{7}\ m$ **4)** $650\times10^{5}\ m$

29. High-quality camera lenses are often coated to prevent reflection. A lens has an optical index of refraction of 1.72 and a coating with an optical index of refraction 1.31. For near normal incidence, the minimum thickness of the coating to prevent reflection for wavelength of $5.3\times10^{-7}\ m$ is

1) $0.75\ \mu m$ **2)** $0.2\ mm$ **3)** $0.1\ \mu m$ **4)** $1.75\ mm$

30. Blue light of wavelength 480 nm is most strongly reflected off a thin film of oil on a glass slab when viewed near normal incidence. Assuming that the index of refraction of the oil is 1.2 and that of the glass is 1.6, what is the minimum thickness of the oil film (other than zero)?

1) 100 nm **2)** 200 nm **3)** 300 nm **4)** none

31. A thin film of refractive index 1.5 and thickness $4\times10^{-5}\ cm$ is illuminated by light normal to the surface. What wavelength within the visible spectrum will be intensified in the reflected beam?

1) $4800\mathring{A}$ **2)** $5800\ \mathring{A}$ **3)** $6000\ \mathring{A}$ **4)** $6800\ \mathring{A}$

32. A simple telescope used to view distant objects has eyepiece and objective lenses of focal lengths f_e and f_o respectively. Then

Column-I		Column-II	
(A)	Intensity of light received by lens	(P)	Radius of aperture
(B)	Angular magnification	(Q)	Dispersion of lens
(C)	Length of telescope	(R)	Focal length of objective and eyepiece lens
(D)	Sharpness of image	(S)	Spherical aberration

1) A-P; B-R; C-R; D-PQS **2)** A-P; B-Q; C-R; D-PQS

3) A-P; B-R; C-Q; D-PQS **4)** A-P; B-R; C-R; D-PQ

33. If we observe the single slit Fraunhofer diffraction with wavelength λ and slit width d, the width of the central maximum is 2θ. On decreasing the slit width for the same λ

1) θ increases

2) θ remains unchanged

3) θ decreases

4) θ increases or decreases depending on the intensity of light

34. A wedged shaped air film having an angle of 40 second is illuminated by a monochromatic light and the fringes are observed vertically down through a microscope. The fringe separation between two consecutive bright fringes is 0.12 cm. The wavelength of light is :

1) $5545\ \mathring{A}$ **2)** $6025\ \mathring{A}$ **3)** $4925\ \mathring{A}$ **4)** $4655\ \mathring{A}$

35. A compound microscope has a magnifying power of 100 when the image is formed at infinity. The objective has a focal length of 0.5 cm and the tube length is 6.5 cm. Then the focal length of eye piece is

1) 2 cm **2)** 2.5 cm **3)** 3.25 cm **4)** 4 cm

36. An astronomical telescope has an angular magnification of magnitude 5 for distant objects. The separation between objective and eye piece is 36 cm and final image is formed at infinity. Then focal lengths of objective and eye piece respectively are

1) 25 cm, 11 cm **2)** 30 cm, 6 cm **3)** 32 cm, 4 cm **4)** None of these

37. A beam of light of wavelength 600 nm from a distant source falls on a single slit 1 mm wide and the resulting diffraction pattern is observed on a screen 2 m away. The distance between the first dark fringes on either side of the central bright fringe is

1) 1.2 mm **2)** 1.2 cm **3)** 2.4 cm **4)** 2.4 mm

38. Statement-I : In single slit diffraction, intensity of all secondary maxima are same.

Statement-II : In a standard YDSE intensity distribution in all bright bands is same.

1) Both Statement-I and Statement-II are true and Statement-II is the correct explanation of Statement-I

2) Both Statement-I and Statement-II are true and Statement-II is not the correct explanation of Statement-I

3) Statement-I is true but Statement-I is false

4) Statement-I is false but Statement-II is true

39. If white light is used in the Newton's rings experiment, the colour observed in the reflected light is complementary to that observed in the transmitted light through the same point. This is due to

1) 90° change of phase in one of the reflected waves

2) 180° change of phase in one of the reflected waves

3) 145° change of phase in one of the reflected waves

4) 45° change of phase in one of the reflected waves

40. Statement-I: Very large size telescopes are reflecting telescopes instead of refracting telescopes.
Statement-II: It is easier to provide mechanical support to large size mirrors than large size lenses.
1) Statement-I is true but Statement-I is false
2) Statement-I is false but Statement-II is true
3) Both Statement-I and Statement-II are true and Statement-II is the correct explanation of Statement-I
4) Both Statement-I and Statement-II are true and Statement-II is not the correct explanation of Statement-I

41. Assertion (A): When a tiny circular obstacle is placed in the path of light from some distance, a bright spot is seen at the centre of shadow of the obstacle.
Reason (R): Destructive interference occurs at the centre of the shadow.
1) Both (A) and (R) are correct and (R) is correct explanation of (A)
2) Both (A) and (R) are correct and (R) is not correct explanation of (A)
3) (A) is correct but (R) is incorrect
4) (A) is incorrect but (R) are correct

42. When objects at different distances are seen by the eye, which of the following remain constant?
1) The focal length of the eye-lens.
2) The object-distance from the eye-lens.
3) The radii of curvature of the eye-lens.
4) The image-distance from the eye-lens.

43. An object is placed at a distance u from a simple microscope of focal length f. The angular magnification obtained depends
1) on f but not on u **2)** on u but not on f
3) on f as well as u **4)** neither on f nor on u

44. To increase the angular magnification of a simple microscope, one should increase
1) the focal length of the lens **2)** the power of the lens
3) the aperture of the lens **4)** the object size

45. Focal length of objective of a terrestrial telescope is 80 cm and it is adjusted for parallel rays, then its magnifying power is 20. If the focal length of erecting lens is 20 cm, the full length of telescope will be (in cm)
1) 84 **2)** 100 **3)** 124 **4)** 164

SECTION-II
(NUMERICAL VALUE TYPE)

This section contains **5 Numerical Value Type Questions.** The Answer should be within **0 to 9999.** If the Answer is in **Decimal** then round off to the **Nearest Integer** value (Example i,e. If answer is above **10** and less than **10.5** round off is **10** and If answer is from **10.5** and less than **11** round off is **11).**

Marking scheme: +4 for correct answer, 0 if not attempt and -1 in all other cases.

46. Visible light of variable wavelength is incident normally on a thin film in air. The reflected light has a minima only for $\lambda = 512\ nm$ and $\lambda = 640\ nm$ in the visible spectrum. What is the minimum thickness (in μm) of the film ($\mu = 1.28$)?

47. A parallel beam of wavelength $\lambda = 4500\,\text{Å}$ passes through a long slit of width $2\times10^{-4}\ m$. The angular divergence for which most of the light is diffracted is $\frac{x}{2}\times10^{-3}$ radian, then x is

48. The focal lengths of the lenses of an astronomical telescope are 50 cm and 5 cm. The length of the telescope when the image is formed at the least distance of distinct vision is $\frac{x}{y}\,cm$ then $x+y=$ ___ (x and y least integers)

49. The focal length of objective and eye lens of a microscope are 4 cm and 8 cm respectively. If the least distance of distinct vision is 24 cm and object distance is 4.5 cm from the objective lens, then the magnifying power of the microscope will be

50. If the focal lengths of objective and eye lens of a microscope are 1.2 cm and 3 cm respectively and the object is put 1.25 cm away from the objective lens and the final image is formed at infinity, then magnifying power of the microscope is

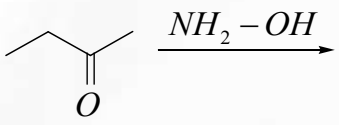
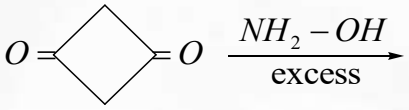
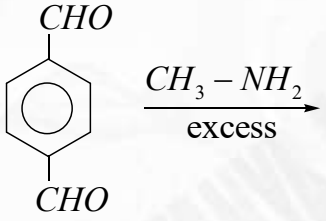
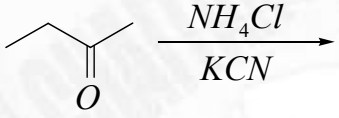
CHEMISTRY **Max Marks: 100**

SECTION-I
(SINGLE CORRECT ANSWER TYPE)

This section contains **20 Multiple Choice Questions.** Each question has 4 options (1), (2), (3) and (4) for its answer, out of which ONLY ONE option can be correct.

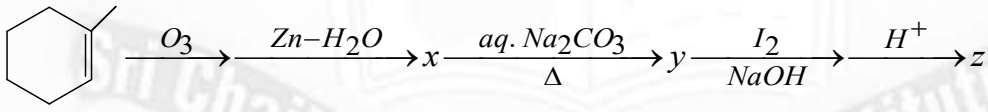
Marking scheme: +4 for correct answer, 0 if not attempted and –1 in all other cases.

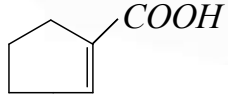
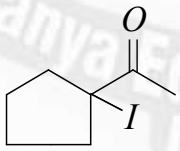
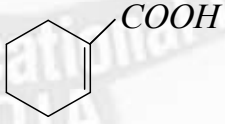
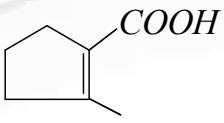
51. Match the following:

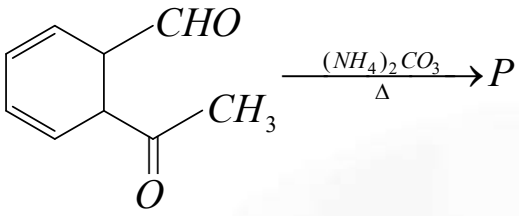
Column-I (Reactions)		Column-II (Number of stereoisomers of product)	
(A)		(P)	2
(B)		(Q)	4
(C)		(R)	3
(D)		(S)	1

1) A-P; B-P; C-S; D-R **2)** A-P; B-S; C-Q; D-R

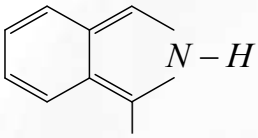
3) A-P; B-P; C-R; D-P **4)** A-P; B-Q; C-R; D-S

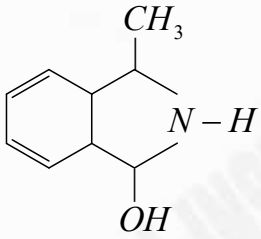
52.  ; z is

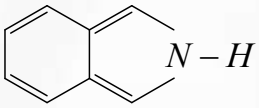
1)  **2)**  **3)**  **4)** 

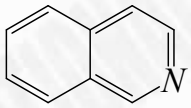
53. 

; P is

1) 

2) 

3) 

4) 

54. Statement-I : All aldehydes and ketones undergo aldol condensation in basic medium.

Statement-II : All aldehydes and ketones having no $\alpha - H$ undergo cannizzaros reaction with *conc.NaOH*

1) Both statement-I & statement-II are correct

2) Both statement-I & statement-II are incorrect

3) Statement-I is correct & statement-II is incorrect

4) Statement-I is incorrect & statement-II is correct

55. Statement-I: Cannizzaro reaction is disproportionation reaction

Statement-II: Cannizzaro reaction takes place via formation of unstable tetrahedral intermediate

1) Both statement-I & statement-II are correct

2) Both statement-I & statement-II are incorrect

3) Statement-I is correct & statement-II is incorrect

4) Statement-I is incorrect & statement-II is correct

56. **Assertion (A) :** Acetaldehyde and acetone can be distinguished by haloform test

Reason (R) : Haloform reaction follows carbanion mechanism

1) Both (A) and (R) are correct and (R) is correct explanation of (A)

2) Both (A) and (R) are incorrect

3) Both (A) and (R) are correct and (R) is not correct explanation of (A)

4) (A) is incorrect but (R) is correct

57. **Assertion (A):** Ketones have higher boiling point than isomeric aldehydes

Reason (R): Dipole moment of ketones is more than aldehydes

1) Both (A) and (R) are correct and (R) is correct explanation of (A)

2) Both (A) and (R) are incorrect

3) Both (A) and (R) are correct and (R) is not correct explanation of (A)

4) (A) is incorrect but (R) is correct

58. $H-\overset{\overset{O}{\|}}{C}-H+D-\overset{\overset{O}{\|}}{C}-D \xrightarrow[conc.]{NaOH}$ Products

Which is not formed

1) CH_3-OD **2)** CD_3-OH

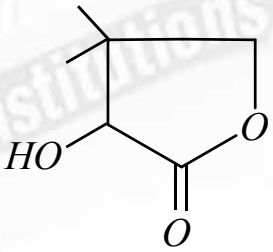
3) CH_2D-OH **4)** CD_2H-OH

59. $3CH_2=O \xrightarrow[aq.NaOH]{CH_3CHO} x \xrightarrow[HCHO]{NaOH\,(conc)} y \xrightarrow[H^+]{2HCHO} z$; DBE or DUS of z is?

1) 2 **2)** 4 **3)** 5 **4)** 6

60.

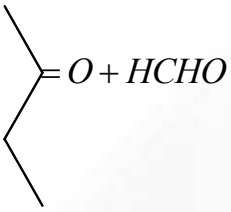
$$x+y \xrightarrow{aq.\,NaOH} z \xrightarrow[NaCN]{HCN} \xrightarrow{H_3O^+} \xrightarrow{\Delta}$$

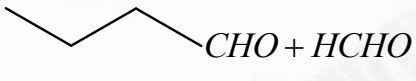


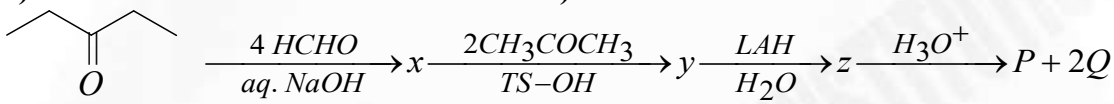
x & y are

1) 

2) 

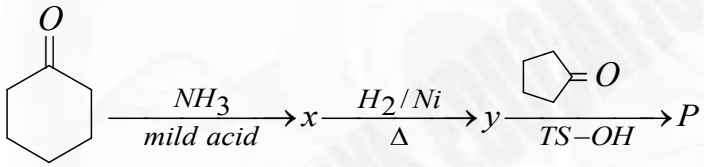
3) 

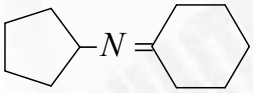
4) 

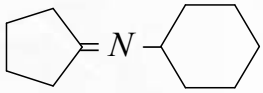
61. 

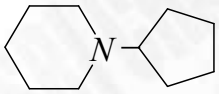
Number of moles of $RMgX$ reacts with 3 moles of P

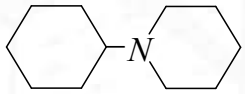
1) 3.5 **2)** 17.5 **3)** 15 **4)** 12

62.  ; P is

1) 

2) 

3) 

4) 

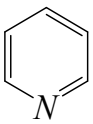
63. Which of the following show keto-enol tautomerism

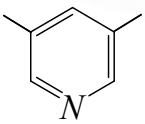
(i) cyclohexanone (ii) acetophenone

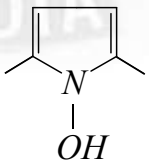
(iii) benzophenone (iv) quinone

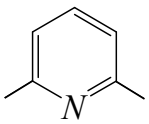
1) (i), (iii) only **2)** (i), (ii), (iv) only **3)** (i), (ii) only **4)** (ii), (iv) only

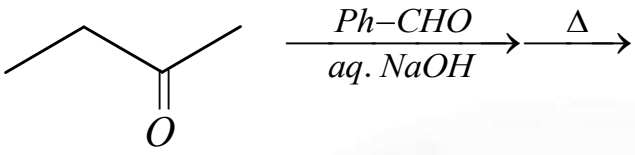
64. 2, 6-heptanedione $\xrightarrow[\text{mild acid}]{NH_2-OH}$ cyclic product (x); x is

1) 

2) 

3) 

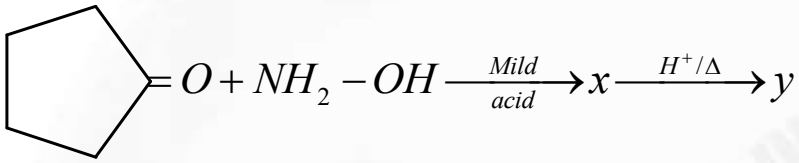
4) 



65.

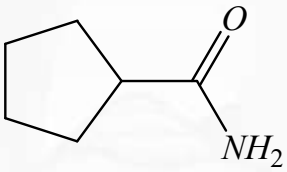
How many isomeric cross condensation products are formed in above reaction

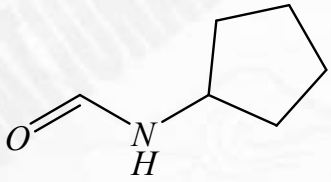
1) 3 **2)** 6 **3)** 4 **4)** 5

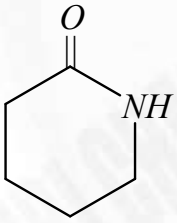


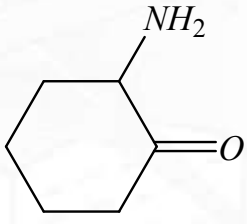
66. ;

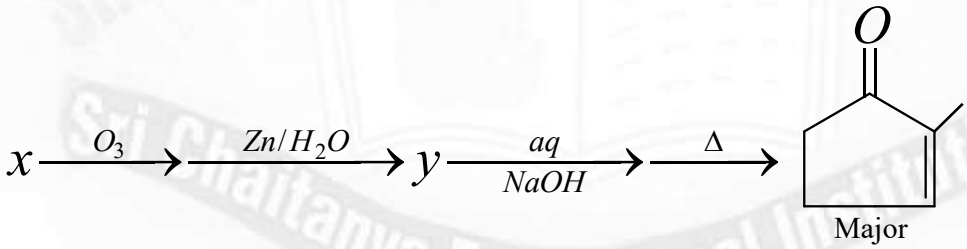
y is ?

1) 

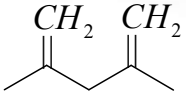
2) 

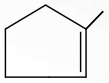
3) 

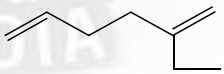
4) 

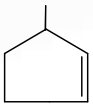


67. . Then x is

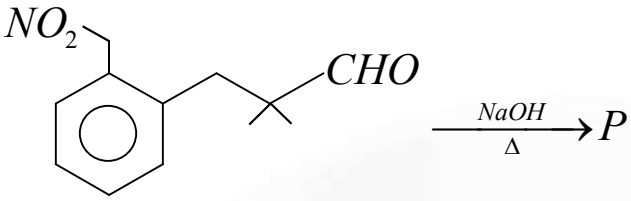
1) 

2) 

3) 

4) 

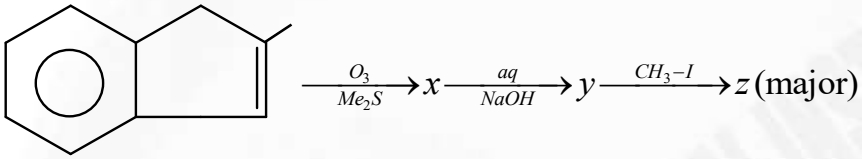
68.



Number of sp^3 carbon atoms in 'P' is

1) 2 **2)** 3 **3)** 6 **4)** 4

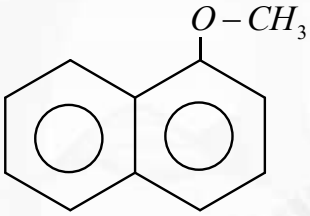
69.



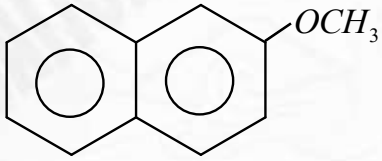
;

z is

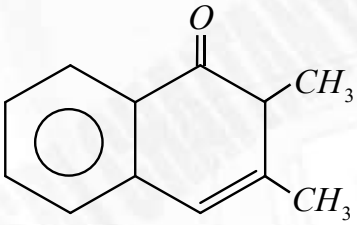
1)



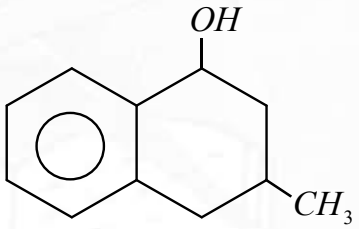
2)



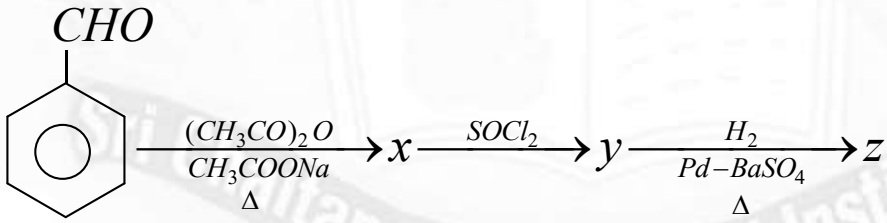
3)



4)



70.



1) 3-phenylpropanal **2)** 3-phenylprop-2-enal

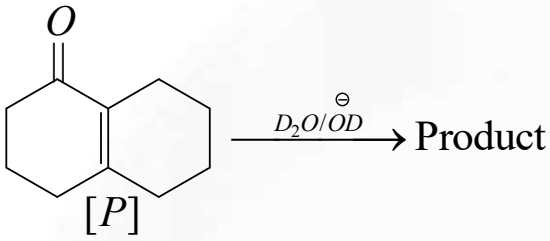
3) 3-phenylprop-2-enoicacid **4)** 1-phenylprop-1-enal

SECTION-II
(NUMERICAL VALUE TYPE)

This section contains **5 Numerical Value Type Questions.** The Answer should be within **0 to 9999.** If the Answer is in **Decimal** then round off to the **Nearest Integer** value (Example i,e. If answer is above **10** and less than **10.5** round off is **10** and If answer is from **10.5** and less than **11** round off is **11).**

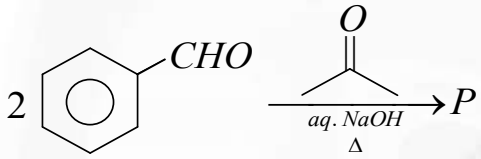
Marking scheme: +4 for correct answer, 0 if not attempt and -1 in all other cases.

71.



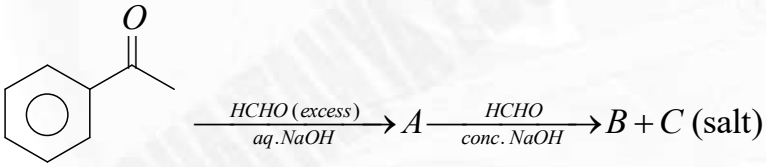
How many 'H' is replaced by 'D' from 'P'

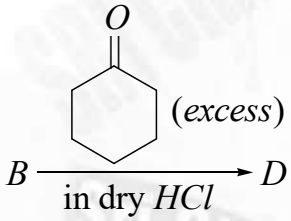
72.



Product 'P' contains _____ number of sp^2 hybridised carbon atoms

73.





How many 6 membered rings are there in D?

74. $Ph-CHO+H-CHO \xrightarrow{aq.\ NaOH} \xrightarrow[H_2O]{H^+}$ Products mixture

how many different type of carboxylic acids are present in product mixture?

75. $3\ Ph-CHO \xrightarrow[dry\ HCl]{2\ NH_3}$ Product (P)

DBE / DUS of product 'P' is

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1 RANK	9 RANK	14 RANK	20 RANK	21 RANK	22 RANK	26 RANK	28 RANK		
G N NIRMALKUMAR Appl.No. 240310385062*	REDDI ANIL Appl.No. 240310238514*	K C BASAVA REDDY Appl.No. 240310618179*	THOTAMSETTY NIKILESH Appl.No. 240310813888*	A V TANISH REDDY Appl.No. 240310807613	HIMANSHU THALOR Appl.No. 240310580429*	VEDANT SAINI Appl.No. 240310182830	P MEET VIKRAMBHAI Appl.No. 240310157524*		
34 RANK	40 RANK	43 RANK	46 RANK	49 RANK	52 RANK	53 RANK	57 RANK		
SANVI JAIN Appl.No. 240310150036*	VISHARAD SRIVASTAVA Appl.No. 240310046262*	T JAYADEV REDDY Appl.No. 240310167365	ISHAAN GUPTA Appl.No. 240310100229*	MAVURU JASWITH Appl.No. 240310542275*	DORISALA SRINIVASA REDDY Appl.No. 240310682440*	ARCHIT RAHUL PATIL Appl.No. 240310512311*	KRISHNA AGRAWAL Appl.No. 240310285850*		
60 RANK	68 RANK	70 RANK	76 RANK	92 RANK	93 RANK	95 RANK	96 RANK	98 RANK	
AYUSH GANGAL Appl.No. 240310270709	PALAGIRI SATHISH REDDY Appl.No. 240310905497	MD K GHOUSE MOHIUDDIN Appl.No. 240310176352	T V S SAI NAGA BHUSHAN Appl.No. 240310868568	M M PRUTHVI RAJ Appl.No. 240311084545	M SAI SIVA LOCHAN Appl.No. 240310866829*	RAJDEEP MISHRA Appl.No. 240310265621*	MANOJ SOHAN GAJULA Appl.No. 240310529661	KRISH NARSARIA Appl.No. 240310028286*	

Below 100 All-India Open Category Ranks — 25
Below 500 All-India Open Category Ranks — 108
Below 1000 All-India Open Category Ranks — 222
Below 100 All-India All Category Ranks — 97
Below 1000 All Category Ranks — 888

TOTAL QUALIFIED RANKS FOR JEE ADVANCED-2024 21,987

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