FIITJEE - JEE (Main)

PHYSICS, CHEMISTRY & MATHEMATICS

BATCHES: PANINI426-G1 & PANINI426XII-1

PHASE TEST – V

Q.P. CODE: 101010

Time Allotted: 3 Hours **Maximum Marks: 300**

- Do not open this Test Booklet until you are asked to do so.
- Please read the instructions carefully. You are allotted 5 minutes specifically for this purpose.

Important Instructions

Caution: Question Paper CODE as given above MUST be correctly marked in the answer OMR sheet before attempting the paper. Wrong CODE or no CODE will give wrong results.

A. General Instructions

1. Attempt ALL the questions. Answers have to be marked on the OMR sheets.
2. This question paper contains **Three Sections.**
3. **Section-I** is Physics, **Section-II** is Chemistry and **Section-III** is Mathematics.
4. Each **Section** is further divided into **Two Parts**: **Part-A & B** in the OMR.
5. Rough spaces are provided for rough work inside the question paper. No additional sheets will be provided for rough work.
6. No candidate is allowed to carry any textual material, printed or written, bits of papers, clip boards, log tables, slide rule, calculator, cellular phones, pagers and electronic devices ext. except the Admit Card inside the examination hall / room.

B. Filling of OMR Sheet:

1. Ensure matching of OMR sheet with the Question paper before you start marking your answers on OMR sheet.
2. On the OMR sheet, darken the appropriate bubble with ***Blue/Black Ball Point Pen*** for each character of your Enrolment No. and write in ink your Name, Test Centre and other details at the designated places.
3. OMR sheet contains alphabets, numerals & special characters for marking answers.
4. **Do not fold or make any stray marks on the Answer Sheet.**

C. Marking Scheme for All Two Parts:

(i) **Part-A (01-20) –** Contains Twenty (20) multiple choice objective questions which have four (4) options each and only one correct option. Each question carries **+4 marks** which will be awarded for every correct answer and **-1 mark** will be deducted for every incorrect answer.

(ii) **Part-B (01-05)** contains five (05) Numerical based questions, the answer of which maybe positive or negative numbers or decimals. If the answer has more than two decimal places, truncate/round off the value to **Two decimal Places** (e.g. 6.25, 7.00, -0.33, -.30, 30.27, -127.30) and each question carries **+4 marks** for correct answer and **there will be no negative marking.**

Name of the Candidate :_____

Batch :_____ **Date of Examination :**_____

Enrolment Number :_____

Physics

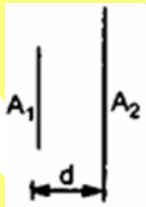
PART – A

Straight Objective Type

This part contains **20 multiple choice questions.** Each question has 4 choices (A), (B), (C) and (D), out of which **ONLY ONE** is correct.

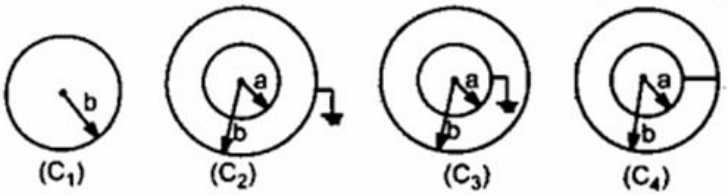
1. The electric flux from a cube of edge l is ϕ. What will be its value if edge of cube is made 2l and charge enclosed is halved?
(A) 4ϕ (B) 2ϕ (C) $\phi/2$ (D) ϕ

2. The capacitance of capacitor of plate areas A_1 and A_2 ($A_1 < A_2$) at a distance d is:



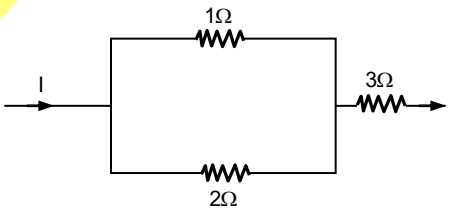
(A) $\frac{\varepsilon_0 A_1}{d}$ (B) $\frac{\varepsilon_0 A_2}{d}$
(C) $\frac{\varepsilon_0 (A_1 + A_2)}{2d}$ (D) $\frac{\varepsilon_0 (A_1 A_2)}{d}$

3. Consider the following four arangement of spherical shells of radius 'a' and 'b' (a << b).



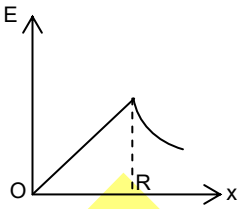
Then which of the followng holds good for the value of thier capacitances:
(A) $C_3 > C_2 > C_1 = C_4$ (B) $C_3 > C_1 = C_4 > C_2$
(C) $C_2 > C_3 > C_1 > C_4$ (D) $C_2 > C_1 = C_4 > C_3$

4. In the circuit shown in the figure, power developed across 1 Ω, 2 Ω and 3 Ω resistance are in the ratio:
(A) 1 : 2 : 3
(B) 4 : 2 : 27
(C) 6 : 4 : 9
(D) 2 : 1 : 27



Space For Rough Work

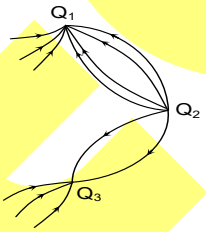
5. A sphere has a positive charge. Figure shows variation of electric field (E) with distance x from its centre. Which of the following statements is incorrect?



(A) Sphere is made of a non conducting materials
(B) Diameter of sphere is equal to R/2
(C) Electric potential, due to sphere, is maximum at its centre
(D) Density of charge is uniform throughout the volume of sphere

6. An electric dipole is placed at an angle of 30° to a non–uniform electric field. The dipole will experience:
(A) A translational force only in the direction of the field
(B) A translational force only in a direction normal to the direction of the field
(C) A torque as well as translational force
(D) A torque only.

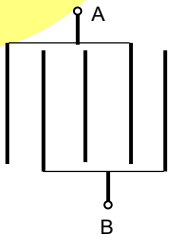
7. The field lines shown above indicate that



(A) $Q_2 = \frac{-6}{7}Q_1$ (B) $Q_2 = \frac{6}{7}Q_1$

(C) $Q_2 = \frac{-7}{6}Q_1$ (D) $Q_2 = \frac{7}{6}Q_1$

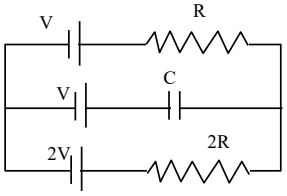
8. Find equivalent capacitance between points A and B in given figures. Each plate is having area a and distance between plate is d.



(A) $\frac{5\varepsilon_0 a}{2d}$ (B) $\frac{5\varepsilon_0 a}{d}$

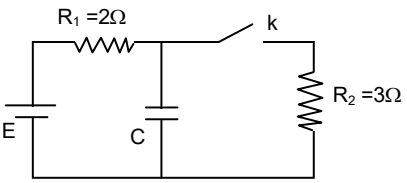
(C) $\frac{\varepsilon_0 a}{d}$ (D) $\frac{\varepsilon_0 a}{5d}$

9. In the given circuit, with steady current, find the potential drop across the capacitor.



(A) V/3
(B) V/5
(C) 2V/9
(D) 4V/3

10. In the circuit shown in the figure key (k) is open. The charge on capacitor C in steady state is q_1. Now key is closed and at steady state charge on C becomes q_2. Find the ratio of charges q_1 / q_2.



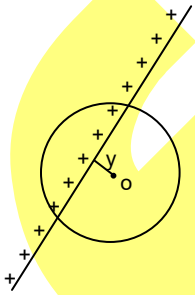
(A) 5/9 (B) 9/5
(C) 5/3 (D) 3/5

Space For Rough Work

11. The electric field in a region is givne by the vector $\vec{E} = (4\hat{i} + 1\hat{j})\left(\frac{N}{C}\right)$. The maximum drop in potential will be along:

(A) X-axis (B) Y-axis
(C) the line 4y = x (D) the line 3y = 4x

12. A uniformly charged and infinitely long line having a linear charge density 'λ' is paced at a normal distance y from a point O. Consider a sphere of radius R with O as centre and R > y. Electric flux through the surface of the sphere is



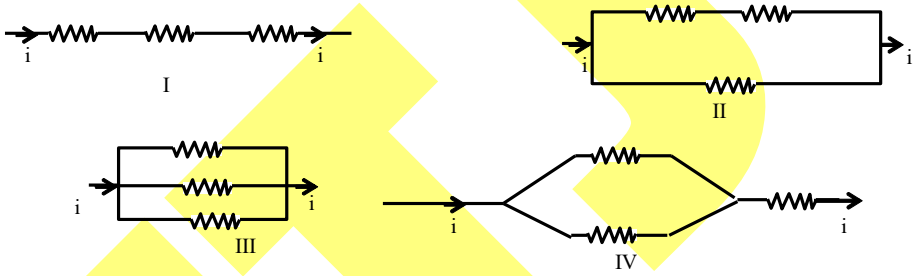
(A) zero (B) $\frac{2\lambda R}{\varepsilon_0}$

(C) $\frac{2\lambda\sqrt{R^2 - y^2}}{\varepsilon_0}$ (D) $\frac{\lambda\sqrt{R^2 + y^2}}{\varepsilon_0}$

13. In a regular polygon of n sides, each corner is at a distance r from the centre. Identical charges are placed at (n – 1) corners. At the centre, the magnitude of intensity is E and the potential is V. The ratio V/E has

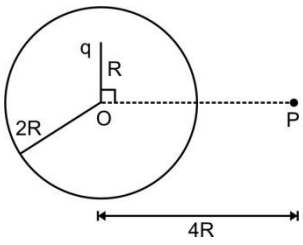
(A) r n (B) r(n – 1)
(C) (n – 1)/r (D) r(n – 1)/n

14. Three resistances of equal values are arranged in the different combinations as shown below. Arrange them in increasing order of total power dissipation.



(A) III< II < IV < I (B) III< I < IV < II (C) II< III < IV < I (D) I< III < II < IV

15. A point charge q is kept inside a conducting shell of radius 2R at a distance of R from center. Magnitude of field due to induced charges on the inner surface of the shell at point P is

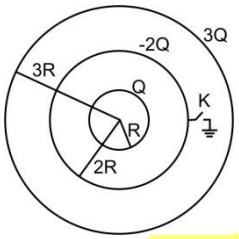


(A) $\frac{Kq}{16R^2}$ (B) 0

(C) $\frac{Kq}{17R^2}$ (D) $\frac{Kq}{4R^2}$

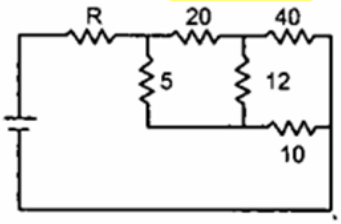
Space For Rough Work

16. Find charge flown from earth when K is switch on.



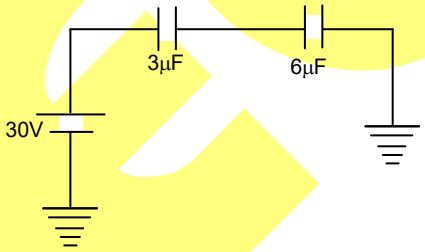
(A) –Q
(B) Q
(C) 2Q
(D) –3Q

17. What should be the value of R so that the electric power consumed by it is maximum:



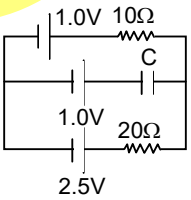
(A) 12Ω
(B) 24Ω
(C) 6Ω
(D) none of these

18. In the circuit shown, charge stored in capacitor of capacitance 3μF is:



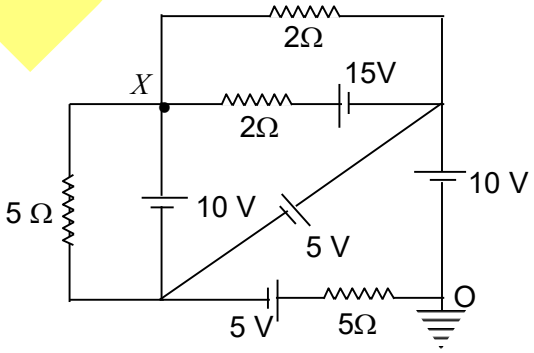
(A) 90 μC
(B) 60 μC
(C) 40 μC
(D) zero

19. In the circuit diagram, the potential difference across the plates of the capacitor C is:



(A) 2.5 volt
(B) 1.5 volt
(C) 1.0 volt
(D) 0.5 volt

20. In the circuit shown if point *O* is earthed, the potential of point *X* is equal to

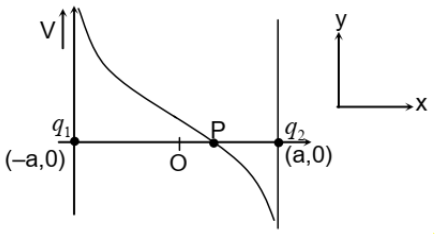


(A) 10 V
(B) 15 V
(C) 25 V
(D) 12.5 V

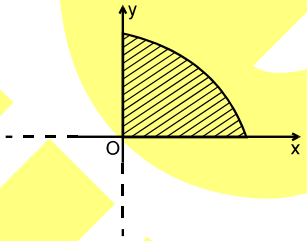
Space For Rough Work

PART-B
Numerical Type

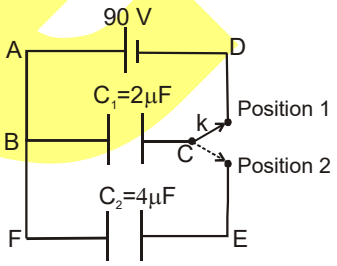
1. The following curve represents the variation of potential at points on x-axis due to two-point charges q_1 and q_2 separated by a distance 2a. Find the ratio of magnitude of two charges $|q_2/q_1|$ (point O is origin and coordinates of point P is $\left(\frac{a}{3}, 0\right)$)



2. A uniform surface charge of density σ is given to a quarter of disc extending up to infinity in the first quadrant of x – y plane. The centre of the disc is at the origin O. The potential difference between the points (0, 0, d) & (0, 0, 2d) is found to be $v_d - v_{2d} = \frac{\sigma}{n \in_0} |d|$. Find the value of n.

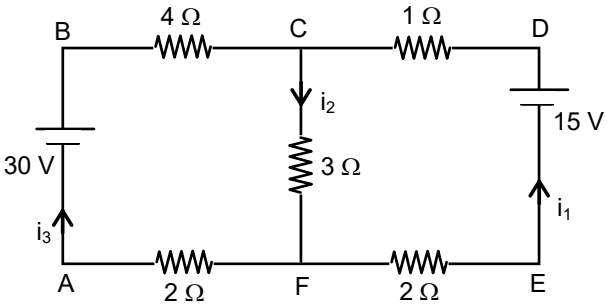


3. Figure shows two capacitors of capacitance $2\mu F$ and $4\mu F$ and a cell of 90 V. The switch 'k' is such that when it is in position 1, the circuit ABCD is closed and when it is in position 2, the circuit BCEF is closed. The resistance of both the circuits is negligible so that the capacitor gets fully charged instantly. Initially the switch is in position 1. Then it is turned in position 2. This makes one cycle. It is then again turned in position 1 and then in position 2. Now two cycles are completed. Find the charge (in multiples of 100 μC) on the capacitor of capacitance $4\mu F$ after two cycles.



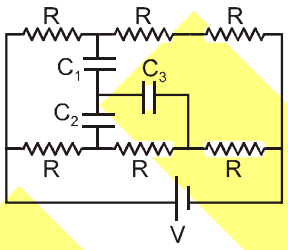
Space For Rough Work

4. The figure shows a network of five resistances and two batteries



Ratio of current $\frac{i_1}{i_2}$.

5. In the shown circuit, all three capacitor are identical and have capacitance C μF each. Each resistor has resistance of R Ω. An ideal cell of emf V volts is connected as shown. Then the magnitude of potential difference across capacitor C_3 in steady state is (1/x)V the value of x is.



Space For Rough Work

Chemistry

PART – A

Straight Objective Type

This part contains **20 multiple choice questions.** Each question has 4 choices (A), (B), (C) and (D), out of which **ONLY ONE** is correct.

1. $(X) \xrightarrow{H_2O} CH_3CH_2\overset{\overset{O}{\|}}{C} - CH_3$

Reactant(X) in above reaction is a/an

(A) secondary (2°) halide (B) vicinal dihalide

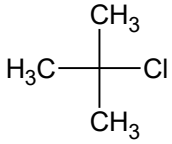
(C) geminal dihalide (D) tertiary(3°) halide

2. In Williamson's ether synthesis process, an alkyl halide reacts with sodium alkoxide to form ether.

E.g. $CH_3CH_2Br + CH_3ONa \longrightarrow CH_3CH_2OCH_3 + NaBr$

Which halide gives the lowest yield of product?

(A) CH_3Cl (B) $CH_3CH_2CH_2Cl$

(C)  (D) $CH_3CH_2\underset{\underset{Cl}{|}}{CH}CH_3$

3. $CH_3CH_2OH \xrightarrow[[O]]{\text{Mild oxidizing agent}} (X) \downarrow (Y) \rightarrow CH_3CH_2OH$

In above reaction X and Y are

(A) X = CH_3COOH, Y = $NaBH_4$ (B) X = CH_3CHO, Y = $LiAlH_4$

(C) X = CH_3CHO, Y = Zn-Hg/Conc.HCl (D) X = CH_3COOH, Y = $LiAlH_4$

4. Which reaction produces a primary(1°) amine?

(A) $CH_3NC + LiAlH_4 \longrightarrow$ (B) $CH_3CH_2CONH_2 \xrightarrow{Br_2/KOH}$

(C) $CH_3CH_2NH_2 + CH_3I \longrightarrow$ (D) $CH_3CH_2CONH_2 + P_4O_{10} \longrightarrow$

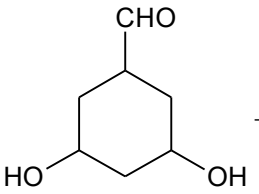
5. Benzoyl chloride is prepared from benzoic acid by

(A) Cl_2, hν (B) SO_2Cl_2 (C) $SOCl_2$ (D) Cl_2, H_2O

Space For Rough Work

6. $CH_3 - CH = CH - CH_2 - C(CH_3)_3 \xrightarrow{NBS/h\nu} Product(s)$

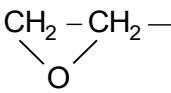
How many monobromo product(s) is/are formed in above reaction?
[Consider stereoisomers and rearrangement of the reaction intermediates]
(A) 6 (B) 10 (C) 8 (D) 12

7. 

$\xrightarrow{KMnO_4/H^+} Product(P)$

Correct statement about product(P) of above reaction is:
(A) It is an unsaturated keto acid (B) It is a hydroxyl keto acid
(C) It is a di-keto acid (D) It is a dihydroxy acid

8. A cyclic product is formed when $OHC - CH_2CH_2CH_2CH_2 - CHO$ reacts with
(A) Zn – Hg/Conc.HCl (B) NH_2NH_2/KOH
(C) NaOH (D) HCl

9. 

$\xrightarrow[2.\ Conc.H_2SO_4, High\ Temperature]{1.\ CH_2=CH-CH_2MgBr/H_2O} (P)$ (Major product)

Which is not a reductive ozonolysis product of (P)?

(A) HCHO (B) 

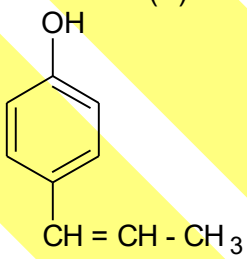
(C) CH_3CHO (D) CH_3COCH_3

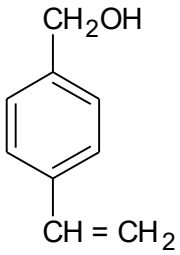
10. $(X) \xrightarrow[Zn/H_2O]{O_3} (P) + (Q)$

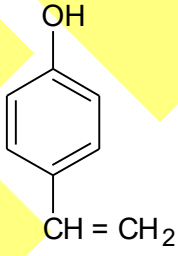
$(P) \xrightarrow{Zn/\Delta} (R)$

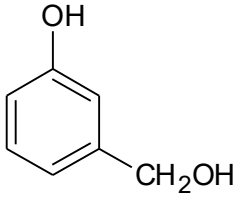
$(R) + (Q) \xrightarrow[2.H_2O/H^+]{1.Conc.NaOH} C_6H_5CH_2OH + HCOOH$

In above reaction(X) is

(A) 

(B) 

(C) 

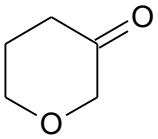
(D) 

Space For Rough Work

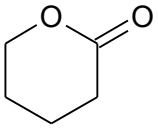
11. When propionic acid is treated with aqueous sodium bicarbonate, CO_2 is liberated. The carbon(C) of CO_2 comes from
(A) Methyl group (B) Carboxyl acid group
(C) Methylene group (D) Bicarbonates

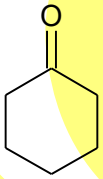
12. CH_3COCH_3 can form a tertiary alcohol when reacts with
(A) CH_3Cl (B) CH_3MgBr/H_3O^+ (C) Cu/300°C (D) (i)PCl_5/(ii)H_2O

13. Which of the following compound does not react with $NaBH_4$?

(A) 

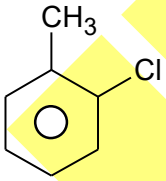
(B) 

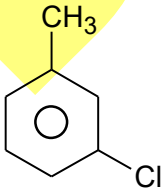
(C) 

(D) 

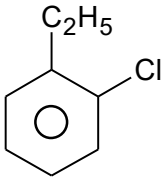
14. Which will convert $CH_3CH_2CH_2COOH$ to a chiral compound?
(A) $CH_3CH_2NH_2$ (B) $LiAlH_4/HCl$
(C) Cl_2/ red P (D) $CH_3CH_2OH/Conc.H_2SO_4$

15. $(X) \xrightarrow[Liq.NH_3]{KNH_2} Products$
Which(X) will form maximum number of monosubstituted products in the above reaction?

(A) 

(B) 

(C) 

(D) 

Space For Rough Work

16. $CH_3-\underset{\underset{O}{\diagup\diagdown}}{CH}-CH_2 \xrightarrow{HCl(excess)} Product$

Which is the product of above reaction?

(A) $CH_3-\underset{\underset{OH}{|}}{CH}-CH_2-Cl$ (B) $CH_3-\underset{\underset{Cl}{|}}{CH}-CH_2-OH$

(C) $CH_3-\underset{\underset{Cl}{|}}{CH}-CH_2-Cl$ (D) $CH_3-\underset{\underset{OH}{|}}{CH}-CH_2-OCl$

17. With which of the following reagent, phenol forms the product having the lowest molar mass?

(A) Br_2/CS_2 (B) Zn dust/Δ (C) $CHCl_3/KOH$ (D) CH_2N_2

18. Aqueous solution of which compound has the lowest pH value?

(A) CH_3COOH (B) CH_3COOCH_3 (C) CH_3COCl (D) CH_3CONH_2

19. Which of the following reaction cannot form pure $CH_3CH_2CH_2NH_2$?

(A) $CH_3CH_2CN \xrightarrow{LiAlH_4}$ (B) $CH_3CH_2CH_2Cl \xrightarrow{NH_3}$

(C) $CH_3CH_2CH_2NO_2 \xrightarrow{LiAlH_4}$ (D) $CH_3CH_2CH_2CONH_2 \xrightarrow{Br_2/KOH}$

20. $CH_3\underset{\underset{CH_3}{|}}{CH}CH_2\underset{\underset{CH_3}{|}}{CH}NH_2 \xrightarrow[(ii)\ Ag_2O/H_2O]{(i)\ CH_3I(excess)} Products$

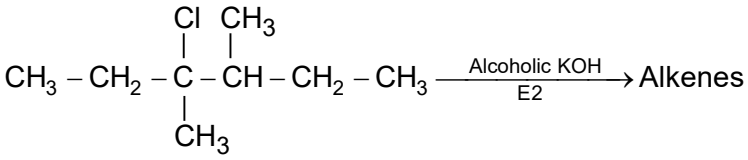
The major product of above reaction is

(A) $CH_3\underset{\underset{CH_3}{|}}{C}=CHCH_2CH_3$ (B) $CH_3\underset{\underset{CH_3}{|}}{CH}CH_2CH=CH_2$

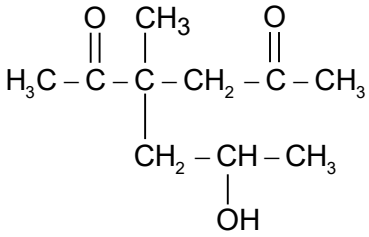
(C) $CH_3\underset{\underset{CH_2}{||}}{C}CH_2CH_2CH_3$ (D) $CH_3\underset{\underset{CH_3}{|}}{CH}CH=CHCH_3$

Space For Rough Work

PART-B
Numerical Type

1. 

How many alkene(s) is/are formed in above reaction considering stereoisomerism?

2. 

How many maximum number of moles of iodoform is formed when one mole of the above compound reacts with I_2 in presence of hot NaOH solution?

3. (A) is the smallest alkene that can show 12 hyperconjugation structures, ozonolysis of (A) forms two moles of a carbonyl compound(B). How many hydrogen atom(s) is/are present in (B)?

4. $2X \xrightarrow{\text{Conc.NaOH}} CH_3OH + HCOONa$

What is the molar mass of (X) in g mol^{-1} unit?

5. How many maximum moles of CH_3I can be absorbed by one mole of $H_2NCH_2CH_2CH_2CH_2NH_2$?

Space For Rough Work

Mathematics

PART – A

Straight Objective Type

This part contains **20 multiple choice questions.** Each question has 4 choices (A), (B), (C) and (D), out of which **ONLY ONE** is correct.

1. A binary relation R on $N \times N$ is defined as follows:
$(a,b)R(c,d)$ if $a \le c$ or $b \le d$
Consider the following propositions:
• P : R is reflexive
• Q : R is transitive
Which one of the following statements is TRUE?
(A) Both P and Q are true (B) P is true and Q is false
(C) P is false and Q is true (D) Both P and Q are false

2. Let F be a real valued invertible function such that $f\left(\frac{3x-5}{x+2}\right) = 100x + 13, x \neq 2$. Then find the value of $f^{-1}(2013)$.
(A) 2013 (B) $\frac{6034}{2015}$ (C) $\frac{5}{2}$ (D) None of these

3. Domain of $f(x) = \frac{1}{\sqrt{|[|x|-1]|-5}}$, (where [·] denotes greatest integer function) is
(A) [0, 7) (B) $(-\infty, -7] \cup [7, \infty)$ (C) (0, 1) (D) (–2, 5)

4. $\lim_{x \to I} \frac{e^{\{x\}} - \{x\} - 1}{\{x\}^2}$, where {.} denotes fractional part of x, if it exists (I is an integer).
(A) $\frac{1}{2}$ (B) 1 (C) e – 2 (D) does not exist

5. Which one of the following functions is continuous for all real x but has at least one point where it is not differentiable?
(A) $f(x) = \frac{|x|}{x}$ (B) $f(x) = \tan x$ (C) $f(x) = x^{1/3}$ (D) $f(x) = e^{-x}$

Space For Rough Work

6. The points on the curve $y^3+3x^2=12y$ where the tangent is vertical, is (are):

(A) $\left(\pm\frac{4}{\sqrt{3}},-2\right)$ (B) $\left(\pm\sqrt{\frac{11}{3}},1\right)$ (C) (0, 0) (D) $\left(\pm\frac{4}{\sqrt{3}},2\right)$

7. If $\sqrt{3}+i=(a+ib)(c+id)$, then $\tan^{-1}\left(\frac{b}{a}\right)+\tan^{-1}\left(\frac{d}{c}\right)$ has the value

(A) $\frac{\pi}{3}+2n\pi, n\in I$ (B) $n\pi+\frac{\pi}{6}, n\in I$ (C) $n\pi-\frac{\pi}{3}, n\in I$ (D) $2n\pi-\frac{\pi}{3}, n\in I$

8. $\lim\limits_{x\to\frac{\pi}{3}}\frac{\tan^3 x-3\tan x}{\cos\left(x+\frac{\pi}{6}\right)}=$

(A) 24 (B) –24 (C) $\frac{1}{24}$ (D) $-\frac{1}{24}$

9. If f(x) and g(x) be two given functions with all real numbers as their domain, then $h(x)=(f(x)+f(-x))(g(x)-g(-x))$. is

(A) always an odd function
(B) an odd function only when both the f and g are odd
(C) an odd function only when f is even and g is odd
(D) none of these

10. If $f(x)=\begin{cases}x+\alpha, & x<3\\ 4, & x=3\\ 3x-5, & x>3\end{cases}$ is continuous $x=3$, then the value of α is

(A) 1 (B) 2
(C) 3 (D) No real values of α is possible

11. If $f(1)=3, f'(1)=2, f''(1)=4$ and let $g(x)=f^{-1}(x)$, then $g''(3)$ is equal to

(A) 1 (B) $-\frac{1}{2}$ (C) –2 (D) None of these

Space For Rough Work

12. If $f(x)$ satisfies the relation $f(x)+f(x+4)=f(x+2)+f(x+6)$ for all x, then the period of $f(x)$ is

(A) 4 (B) 6 (C) 8 (D) 12

13. A function $f:R\to R$ satisfies the condition $x^2f(x)+f(1-x)=2x-x^4$. Then f(x) is :

(A) $-x^2-1$ (B) $-x^2+1$ (C) x^2-1 (D) $-x^4+1$

14. If $y=\frac{1}{t^2+t-2}$ where $t=\frac{1}{x-1}$, then the number of points of discontinuities of $y=f(x), x\in R$ is

(A) 1 (B) 2 (C) 3 (D) infinite

15. The equation $2\tan x+5x-2=0$ has

(A) no solution in $\left[0,\frac{\pi}{4}\right]$ (B) at least one real solution in $\left[0,\frac{\pi}{4}\right]$

(C) two real solution in $\left[0,\frac{\pi}{4}\right]$ (D) None of these

16. If $f(x)$ is differentiable everywhere, then :

(A) $|f|$ is differentiable everywhere (B) $|f|^2$ is differentiable everywhere

(C) $f|f|$ is not differentiable at some point (D) $f+|f|$ is differentiable everywhere

17. $f(x)=(\sin^{-1}x)^2.\cos\left(\frac{1}{x}\right)$ if $x\neq 0; f(0)=0$, $f(x)$ is:

(A) continuous no where in $-1\le x\le 1$ (B) continuous everywhere in $-1\le x\le 1$

(C) differentiable no where in $-1\le x\le 1$ (D) Nothing can be said in general

18. Let $f(x)$ be defined in $[-2,2]$ by $f(x)=\begin{cases}\max\left(\sqrt{4-x^2},\sqrt{1+x^2}\right) & , \ -2\le x\le 0\\ \min\left(\sqrt{4-x^2},\sqrt{1+x^2}\right) & , \ 0<x\le 2\end{cases}$, then $f(x)$:

(A) is continuous at all points (B) is not continuous at more than one point.

(C) is not differentiable only at one point (D) is not differentiable at more than one point

19. The number of points at which the function $f(x)=\max.\{a-x, a+x, b\}, -\infty<x<\infty, \ 0<a<b$ cannot be differentiable is:

(A) 1 (B) 2 (C) 3 (D) none of these

Space For Rough Work

20. Let $f(x)=x-x^2$ and $g(x)=\begin{cases}\max f(t), 0\le t\le x, & 0\le x\le 1\\ \sin \pi x, & x>1\end{cases}$, then in the interval $[0, \infty)$

(A) $g(x)$ is everywhere continuous except at two points

(B) $g(x)$ is everywhere differentiable except at two points

(C) $g(x)$ is everywhere differentiable except at x = 1

(D) none of these

PART-B
Numerical Type

1. If $f(x)=\begin{cases}\left(\frac{1}{x}-\frac{2}{e^{2x}-1}\right), & x\neq 0\\ k, & x=0\end{cases}$ be a continuous functions at x = 0, then k is equal

2. Let $f\left(\frac{x+y}{2}\right)=\frac{f(x)+f(y)}{2}$, for all real x and y. Also f'(0) = -1 & f(0) = 1 then $|f(2)|$ is equal to

3. Let the set of all relation R on the set $\{a,b,c,d,e,f\}$, such that R is reflexive and symmetric, and R contains exactly 10 elements be denoted by S.

4. Let $f(x)=\frac{ax^2+bx+c}{x+1}$ such that $\lim_{x\to 0} f(x)=2$ and $\lim_{x\to\infty} f(x)=1$. Find the value of $(a+b+c)$.

5. The value of $a+b+c$ so that $\lim_{x\to 0}\frac{ae^x-b\cos x+ce^{-x}}{x\sin x}=2$ is

Space For Rough Work

FIITJEE INTERNAL TEST

BATCHES: PANINI426-G1 & PANINI426XII-1

Phase – V

PHYSICS, CHEMISTRY & MATHEMATICS

JEE MAIN-PHASE

Paper Code 101010

ANSWER KEY

SECTION – I
(PHYSICS)
PART – A

1.	C	2.	A	3.	B	4.	B
5.	B	6.	C	7.	A	8.	A
9.	A	10.	C	11.	C	12.	C
13.	B	14.	A	15.	C	16.	A
17.	A	18.	B	19.	D	20.	B

PART – B

1.	0.50	2.	8	3.	2	4.	0.25
5.	4.5						

SECTION – II
(CHEMISTRY)
PART – A

1.	C	2.	C	3.	B	4.	B
5.	C	6.	D	7.	C	8.	C
9.	D	10.	C	11.	D	12.	B
13.	C	14.	C	15.	B	16.	C
17.	B	18.	C	19.	B	20.	B

PART – B

1.	8	2.	3	3.	6	4.	30
5.	6						

SECTION – III
(MATHEMATICS)
PART – A

1.	B	2.	C	3.	B	4.	D
5.	C	6.	D	7.	B	8.	B
9.	A	10.	A	11.	B	12.	C
13.	B	14.	C	15.	B	16.	B
17.	B	18.	D	19.	B	20.	C

PART – B

1.	1	2.	1	3.	105(bonus)	4.	3
5.	4						