FIITJEE – JEE (Main)

Batches: 12th Studying & 12th Pass
PHYSICS, CHEMISTRY & MATHEMATICS
Mock Test – IV
QP Code: 126466

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:

A. General Instructions

1. Immediately fill in the particulars on this page of the Test Booklet with *Blue / Black Ball Point Pen. Use of pencil is strictly prohibited.*
2. The Answer Sheet is kept inside this Test Booklet. When you are directed to open the Test Booklet, take out the Answer Sheet and fill in the particulars carefully.
3. The test is of **3 hours** duration.
4. The Test Booklet consists of 75 questions. The maximum marks are 30**0**.
5. This question paper contains **Three Parts**.
6. Part-**I** is Physics, Part-**II** is Chemistry and Part-**III** is Mathematics.
7. Each Part has only one section: Section - A.
8. Rough spaces are provided for rough work inside the question paper. No additional sheets will be provided for rough work.
9. Blank Papers, clip boards, log tables, slide rule, calculator, cellular phones, pagers and electronic devices, in any form, are not allowed.
10. Use ***Blue / Black Ball Point Pen only*** for writing particulars / marking responses on ***Side-1*** and ***Side-2*** of the Answer Sheet. ***Use of pencil is strictly prohibited.***
11. No candidate is allowed to carry any textual material, printed or written, bits of papers, pager, mobile phone, any electronic device, etc. except the Admit Card inside the examination hall / room.
12. On completion of the test, the candidate must hand over the Answer Sheet to the Invigilator on duty in the Room / Hall. ***However, the candidates are allowed to take away this Test Booklet with them.***
13. **Do not fold or make any stray marks on the Answer Sheet.**

B. Marking Scheme For All Three Parts.

(i) **Section-A (01 – 20, 26 – 45, 51 – 70)** *contains 60 multiple choice questions which have* ***only one correct answer****. Each question carries* ***+4 marks*** *for correct answer and* ***–1 mark*** *for wrong answer.*

Section-A (21 – 25, 46 – 50, 71 – 75) *contains 15* Numerical based questions, the answer of which maybe positive or negative numbers or decimals and each question carries **+4 marks** for correct answer. **There is no negative marking.**

Name of the Candidate (in Capital Letters) :_____

Enrolment Number :_____

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

PART – I: PHYSICS

Section – A: Single Correct Answer Type

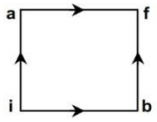
This section contains **20 multiple choice questions.** Each question has 4 choices (A), (B), (C) and (D), out of which **ONLY ONE is correct.**

1. A Carnot engine, having an efficiency of η = 1/10 as heat engine, is used as a refrigerator. If the work done on the system is 10 J, the amount of energy absorbed from the reservoir at lower temperature is
   (A) 99 J (B) 90 J (C) 1 J (D) 100 J

2. The potential at a point x (measured in m) due to some charges situated on the x-axis is given by: $V(x) = 20/(x^2-4)$ volt. The electric field E at x = 4 m is given by:
   (A) 5/3 V/m and in the –ve x direction (B) 5/3 V/m and in the +ve x direction
   (C) 10/9 V/m and in the –ve x direction (D) 10/9V/m and in the +ve x direction

3. If g_E and g_M are the accelerations due to gravity on the surfaces of the earth and the moon respectively and if Millikan's oil drop experiment could be performed on the two surfaces, one will find the ratio electronic charge on the moon to be electronic charge on the earth
   (A) 1 (B) zero (C) g_E / g_M (D) g_M / g_E

4. When a system is taken from a state i to state f along the path iaf, it is found that Q = 50 cal and W = 20 cal. Along the path ibf Q = 36 cal. W along the path ibf is
   (A) 6 cal (B) 16 cal (C) 66 cal (D) 14 cal



5. The half-life period of a radioactive element X is same as the mean life time of another radioactive element Y. Initially they have the same number of atoms. Then
   (A) X will decay faster that Y (B) Y will decay faster than X
   (C) Y and X have same decay rate initially (D) X and Y decay at same rate always

6. Carbon, silicon and germanium have four valence electrons each. At room temperature which one of the following statements is most appropriate?
   (A) the number of free conduction electrons is significant in C but small in Si and Ge
   (B) the number of free conduction electrons is negligibly small in all the three
   (C) the number of free electrons for conduction is significant in all the three
   (D) the number of free electrons for conduction is significant only in Si and Ge but small in C

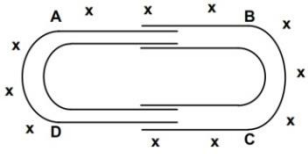
Space for rough work

7. A long solenoid has 200 turns/cm and carries a current i. the magnetic field at its centre is 6.28×10^{-2}Wb/m^2. Another long solenoid has 100 turns/cm and it carries a current i/3. The value of the magnetic field at its centre is

(A) 1.05×10^{-2}Wb/m^2 (B) 1.05×10^{-5}Wb/m^2

(C) 1.05×10^{-3}Wb/m^2 (D) 1.05×10^{-4}Wb/m^2

8. One conducting U-tube can slide inside another as shown in figure, maintaining electrical contacts between the tubes. The magnetic field B is perpendicular to the plane of the figure. If each tube moves towards the other at a constant speed v, then the emf induced in the circuit in terms of B, ℓ and v, where ℓ is the distance between the arms of each tube, will be



(A) Bℓv (B) Bℓv (C) zero (D) 2B ℓv

9. A charged particle moves in a uniform magnetic field perpendicular to it, with a radius of curvature 4 cm. On passing through a metallic sheet it looses half of its kinetic energy, then the radius of curvature of the particle is

(A) 2 cm (B) 4 cm (C) 8 cm (D) 2$\sqrt{2}$ cm

10. Two massive particles of masses M & m (M > m) are separated by a distance ℓ. They rotate with equal angular velocity under their gravitational attraction. The linear speed of the particle of mass m is

(A) $\sqrt{\frac{GMm}{(M+m)\ell}}$ (B) $\sqrt{\frac{GM^2}{(M+m)\ell}}$ (C) $\sqrt{\frac{GM^2}{\ell}}$ (D) $\sqrt{\frac{Gm^2}{(M+m)\ell}}$

11. In an L-C circuit, C = 1F, L = 4H, at time t = 0, charge in the capacitor is 4C and it is decreasing at a rate of $\sqrt{5}$ C/s. Choose the correct statements.

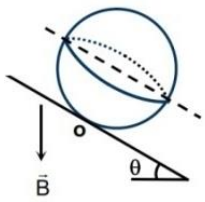
(A) maximum charge in the capacitor can be 6C
(B) maximum charge in the capacitor can be 8C
(C) charge in the capacitor will be maximum after time 2 $\sin^{-1}(2/3)$ sec
(D) None of these

12. If one mole of a monoatomic gas (γ= 5/3) Is mixed with one mole of a diatomic gas (γ= 7/5), the value of γ for the mixture is

(A) 1.40 (B) 1.5 (C) 1.53 (D) 3.07

Space for rough work

13. In the figure shown a coil of single turn is wound on a sphere of radius r and mass m. The plane of the coil is parallel to the inclined plane and lies in the equatorial plane of the sphere. If sphere is in rotational equilibrium the value of B is (current in the coil is i)



(A) $\frac{mg}{\pi ir}$ (B) $\frac{mg\sin\theta}{\pi i}$

(C) $\frac{mgr\sin\theta}{\pi i}$ (D) None of these

14. Find the position of centre of mass of a uniform disc of radius R from which a hole of radius r is cut out from the right part of the disc. The centre of the hole is at a distance R/2 from the centre O of the disc.

(A) $\frac{Rr^2}{2\left(R^2-r^2\right)}$ towards right of O (B) $\frac{Rr^2}{2\left(R^2-r^2\right)}$ towards left of O

(C) $\frac{2Rr^2}{\left(R^2+r^2\right)}$ towards right of O (D) $\frac{2Rr^2}{\left(R^2+r^2\right)}$ towards left of O

15. For a given speed, a projectile has the same range R for two angles of projection. If t_1 and t_2 are the times of flight in the two cases then

(A) $t_1t_2 \propto R^2$ (B) $t_1t_2 \propto R$ (C) $t_1t_2 \propto \frac{1}{R}$ (D) $t_1t_2 \propto \frac{1}{R^2}$

16. A boy sitting on the topmost berth in the compartment of a train which is just going to stop on a railway station, drops an apple aiming at the open hand of his brother sitting vertically below his hands at a distance of about 2 meter. The apple will fall
(A) Precisely on the hand of his brother
(B) slightly away from the hand of his brother in the direction of motion of the train.
(C) slightly away from the hand in the direction opposite to the direction of motion of the train.
(D) None of the above

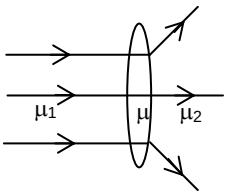
17. A block of mass m is placed on a smooth wedge of inclination θ. The whole system is accelerated horizontally so that the block does not slip on the wedge. The force exerted by the wedge on the block (g is acceleration due to gravity) will be
(A) mg cosθ (B) mg sinθ (C) mg (D) mg/cosθ

18. In YDSE if intensities of light from two slits are in the ratio of 1:4, the ratio of the intensities at minimum and maxima will be
(A) 1:2 (B) 1:3 (C) 1:4 (D) 1:9

Space for rough work

19. A potential difference of 40 kV is applied across an X-ray tube. The minimum wavelength of X-rays generated (in angstrom is)
(A) 0.62 (B) 1.24
(C) 0.31 (D) 6.2

20. A parallel lens of light falls an a convex lens. The path of the ray is shown in figure



(A) $\mu_1 > \mu > \mu_2$ (B) $\mu_1 < \mu < \mu_2$
(C) $\mu_1 = \mu < \mu_2$ (D) $\mu_1 = \mu > \mu_2$

Section – A
Numerical based questions

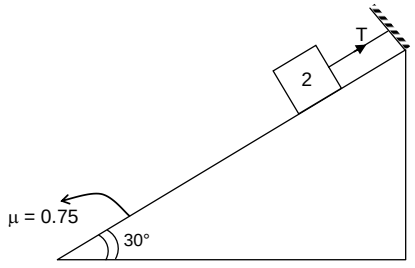
21. A long straight wire of radius a carries a steady current i. The current is uniformly distributed across its cross- section. The ratio of the magnetic field at a/2 and 2a is

22. The focal lengths of objective and eyepiece of an astronomical telescope are 20 cm and 5 cm respectively. The magnifying power of the telescope in normal adjustment is _____.

23. A radioactive isotope remains $\frac{1}{16}$th of its initial value after 6 days. The half life of the isotope is _____ days.

24. The current amplification factor of a transistor is α = 0.95. Find the collector current (in mA) in a common emitter amplifier if base current is 0.3 mA.

25. The tension 'T' in the string shown in figure is _____ N.



Space for rough work

PART – II: CHEMISTRY

Section – A: Single Correct Answer Type

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

26 In a hydrogen atom, the electron is at a distance of 4.768Å from the nucleus. The angular momentum of the electron is:

(A) $\frac{3h}{2\pi}$ (B) $\frac{h}{2\pi}$ (C) $\frac{h}{\pi}$ (D) $\frac{2h}{\pi}$

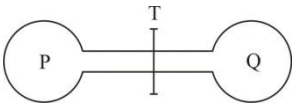
27 

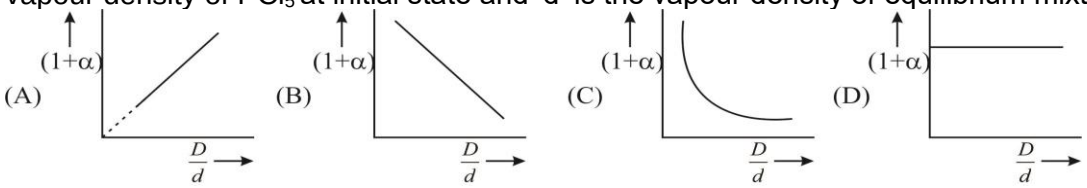
Figure shows two spherical containers P and Q connected by tap T. P contains an ideal gas at pressure 5×10^5 Nm^{-2} and temperature 300K. Q contains same gas at pressure $2\times10^5 Nm^{-2}$ and temperature 400K. If the tap is opened the final pressure becomes $m\times10^5$ Nm^{-2}. What is the value of m? The volume of Q is four times the volume of P.

(A)1.4 (B) 1.8 (C) 2.4 (D) 2.8

28. The standard enthalpy of formation of NH_3 is –46kJ mol^{-1}. If the enthalpy of formation of H_2 from its atoms is – 435 kJ mol^{-1} and that of nitrogen is –712 kJ mol^{-1} , the approximate average bond enthalpy of N–H bond in NH_3 is:

(A) $+1056kJ\ mol^{-1}$ (B) $-1102kJ\ mol^{-1}$ (C) $-964kJ\ mol^{-1}$ (D) $+352kJ\ mol^{-}$

29. For the dissociation of PCl_5 (g), the variation of $(1+\alpha)$ against $\left(\frac{D}{d}\right)$ is represented as: where 'D' is the vapour density of PCl_5 at initial state and 'd' is the vapour density of equilibrium mixture,



30. First three nearest neighbor distance for body centred cubic lattice with edge-length(l) are:

(A) $\sqrt{2}\ l, l, \sqrt{3}\ l$ (B) $\frac{1}{\sqrt{2}}, l, \sqrt{3}\ l$ (C) $\frac{\sqrt{3}\ l}{2}, l, \sqrt{2}l$ (D) $\frac{\sqrt{3}l}{2}, l, \sqrt{3}\ l$

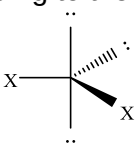
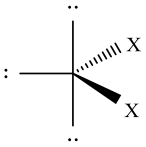
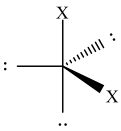
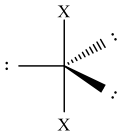
31. Half-lives of a first order and a zero order reaction are same. Then the ratio of the initial rates of first order reaction to that of the zero order reaction is :

(A) $\frac{1}{0.693}$ (B) 2×0.693 (C) 0.693 (D) $\frac{2}{0.693}$

Space for rough work

32. The coagulating power of an electrolyte for blood decreases in the order:
(A) Na^+, Al^{3+} , Ba^{2+} (B) $PO_4^{3-}, SO_4^{2-}, Cl^-$ (C) Al^{3+}, Ba^{2+}, Na^+ (D) $Cl^-, SO_4^{2-}, PO_4^{3-}$

33. The correct order of I.E.$_2$. is:
(A) $Na > F > O > N$ (B) $O > F > Ne > N$ (C) $Ne > O > F > N$ (D) $O > Ne > F > N$

34. According to the VSEPR theory, The most stable arrangement is:
(A)  (B)  (C)  (D) 

35. Select pair of compounds in which both have different hybridization but have same molecular geometry:
(A) BF_3, BrF_3 (B) ICl_2^- , $BeCl_2$ (C) BCl_3, PCl_3 (D) PCl_3, NCl_3

36. The solubility of metal halides depends on their nature, lattice enthalpy and hydration enthalpy of the individual ions. Amongst fluorides of alkali metals, the lowest solubility of LiF in water is due to:
(A)Ionic hydration enthalpy of lithium ion (B) High lattice enthalpy
(C)high hydration enthalpy of lithium ion (D) Low ionisation enthalpy of lithium atom

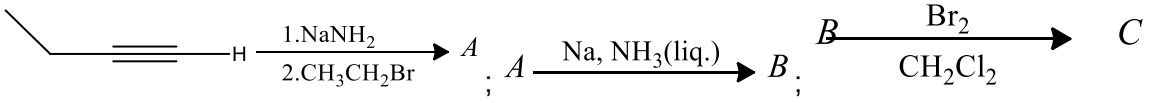
37. The cyclotrimetaphosphoric acid is:
(A) $(HPO_3)_3$ and contains $9\sigma - bonds$ (B) $H_3P_3O_6$
(C) $(HPO_3)_3$ and contains 15σ bonds (D) $H_3P_3O_9$ and contains 18σ bonds

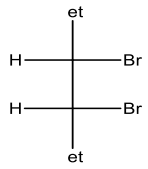
38. Which of the following is not optically active?
(A) $\left[Co(en)_3\right]^{3+}$ (B) $\left[Cr(Ox)_3\right]^{3-}$ (C) $cis - \left[CoCl_2(en)_2\right]^+$ (D) $trans - \left[CoCl_2(en)_2\right]^+$

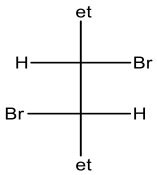
39. The purest variety of iron is called
(A)Cementite (B) Wrought iron (C)Pig iron (D) Steel

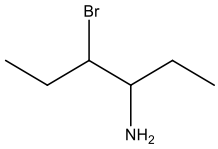
Space for rough work

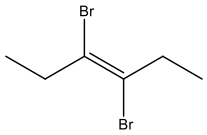
40. What is the final product, C, of the following reaction sequence?



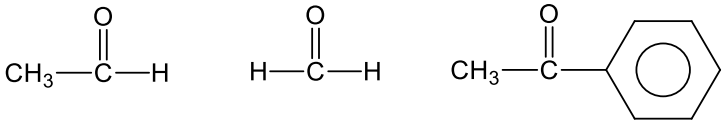
(A) 

(B) 

(C) 

(D) 

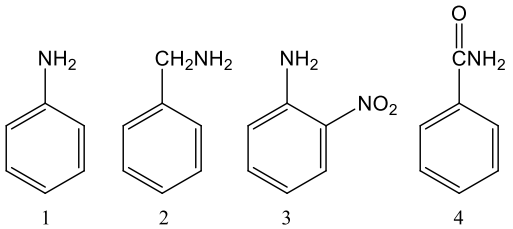
41. Correct order of reactivity of following compounds towards Grignard reagent?



(I) (II) (III)

(A) $I > II > III$ (B) $II > I > III$
(C) $II > III > I$ (D) $I > III > II$

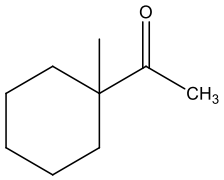
42. Rank of the following compounds in order of increasing basic strength (Weakest →Strongest):

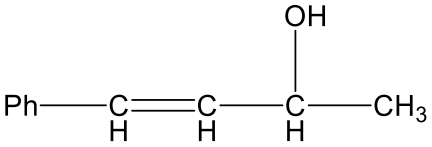


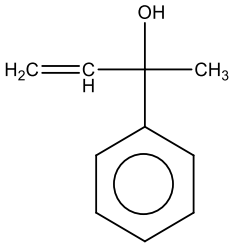
(A) $4<2<1<3$ (B) $4<3<1<2$ (C) $4<1<3<2$ (D) $2<1<3<4$

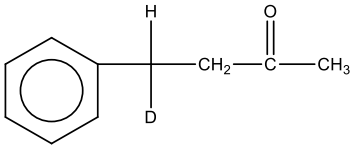
43. Rapid interconversion of α D- glucose $\beta - D$ -glucose in solution is known as:
(A) Recemization (B) asymmetric induction
(C) Fluxional isomerization (D) mutarotation

44. Which of the following is incapable to show iodoform test?

(A) 

(B) 

(C) 

(D) 

Space for rough work

45. Which of the following is not the addition homopolymer
(A) Teflon (B) Buna-S (C) PVC (D) PAN

Section – A
Numerical based questions

46. How many total no. of atoms are present in the heaviest interhalogen compound containing iodine and fluorine?

47. The specific conductance of a conductometric cell is 2×10^{-2} ohm^{-1} cm^{-1}. What will be the cell constant of the cell in cm^{-1} unit when its resistance is 100 ohm?

48. The osmotic pressure of 0.1 M monobasic acid with pH 2.0 at 25°C is

49. If the standard half cell reduction potentials are 0.522 V for Cu^{+}/Cu and 0.3402 V for Cu^{2+}/Cu. The standard half cell reduction potential for Cu^{+}/Cu^{2+} is

50. $X(g) \rightleftharpoons Y(g) + Z(s)$
The equilibrium concentrations of X and Y in the above reaction are same, i.e. 2 mol L^{-1} each. How many moles of 'X' can be added at equilibrium so that the equilibrium concentration of Y becomes 2.5 mol L^{-1}?

space for rough work

PART – III: MATHEMATICS

Section – A: Single Correct Answer Type

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

51. If the d.rs of two lines are given by the equations $l+m+n=0$ and $l^2+m^2-n^2=0$ then the d.rs of one of the two lines are
(A) 0,0,–1 (B) 0, 1, –1 (C) 1, 0, 1 (D)1, 0, 0

52. If the d.rs of OA and OB are $1,-1,-1$ *and* $2,-1,1$ then the d.cs of the line perpendicular to both OA and OB are
(A) 0, 1, –1 (B) –2,–3,1
(C) $\frac{-2}{\sqrt{14}},\frac{-3}{\sqrt{14}},\frac{1}{\sqrt{14}}$ (D) $\frac{2}{\sqrt{14}},\frac{3}{\sqrt{14}},\frac{1}{\sqrt{14}}$

53. A plane which passes through the point (3,2,0) and the line $\frac{x-4}{1}=\frac{y-7}{5}=\frac{z-4}{4}$ is
(A) $x-y+z=1$ (B) $x+y+z=5$ (C) $x-2y-z=1$ (D) $2x-y+z=5$

54. $P(A)=\frac{3}{8},P(B)=\frac{1}{3}\&\ P(A\cap B)=\frac{1}{4}$ then $P(\bar{A}\cap\bar{B})=\frac{1}{4}$ equals
(A) 5/12 (B)7/24 (C)13/24 (D)17/24

55. The probability that the birthdays of 6 boys will fall exactly in 3 calendar months is
(A) $\frac{^{12}C_3\times(3^6-3)}{12^6}$ (B) $\frac{^{12}C_3\times 3^6}{12^6}$ (C) $\frac{^{12}C_3\times 192}{12^6}$ (D) $\frac{^{12}C_3\times 540}{12^6}$

56. In triangle ABC, Coordinates of the two vertices B and C are (2, 0) and (8, 0) respectively. The third vertex A is varying in such a way that $4\tan\frac{B}{2}\tan\frac{C}{2}=1$. Then locus of A is
(A) $\frac{(x-5)^2}{25}+\frac{y^2}{9}=1$ (B) $\frac{(x-5)^2}{16}+\frac{y^2}{25}=1$
(C) $\frac{(x-5)^2}{25}+\frac{y^2}{16}=1$ (D) $\frac{(x-5)^2}{25}-\frac{y^2}{9}=1$

57. The value of $\cos^2 10^\circ+\cos^2 15^\circ+\cos^2 20^\circ+.....+\cos^2 365^\circ=$
(A) 34 (B)36 (C)35 (D)37/2

Space for rough work

58. If $x^2+y^2+z^2=r^2$ and $\tan\alpha=\frac{xy}{zr},\tan\beta=\frac{yz}{xr},\tan\gamma=\frac{zx}{yr}$ then $\alpha+\beta+\gamma=$

(A) π/4 (B) π/2
(C) π/3 (D) π

59. If $f(x)$ is an odd periodic continuous function with period 2, then $f(4)=$

(A) 0 (B) 2
(C) 4 (D) – 4

60. If $\begin{vmatrix}\cos(A+B) & -\sin(A+B) & \cos 2B\\ \sin A & \cos A & \sin B\\ -CosA & \sin A & \cos B\end{vmatrix}=0$ then B =

(A) $n\pi$ (B) $(2n+1)\pi$

(C) $(2n+1)\frac{\pi}{2}$ (D) $2n\pi$

61. If t_1 and t_2 are the roots of the equation $t^2+\lambda t+1=0$. Where λ is an arbitrary constant. Then the line joining the points $(at_1^2,2at_1)$ and $(at_1^2,2at_2)$ always passes through a fixed point

(A)(a, 0) (B)(–a, 0)
(C)(0, a) (D)(0, –a)

62. If $\frac{x}{a}+\frac{y}{b}=1$ is a variable line where $\frac{1}{a^2}+\frac{1}{b^2}=\frac{1}{c^2}$ (c-constant). The locus of the foot of the perpendicular drawn from origin on the line $\frac{x}{a}+\frac{y}{b}=1$ then

(A) $x^2+y^2=c^2$ (B) $x^2+y^2=2c^2$

(C) $x^2+y^2=\frac{c^2}{2}$ (D) $x^2+y^2=\frac{1}{c^2}$

63. $f(x+y)=f(x)\times f(y)$ for all x and y, $f(1)=2$, then area enclosed by $3|x|+2|y|\le 8$ is

(A) f(5)square units (B)f(6) square units
(C)f(6)/3 square units (D) f(4)square units

Space for rough work

64. If $p, x_1, x_2, x_3 ..... \& \ q, y_1, y_2, y_3 ....$ form two infinite A.P's with common difference a and b respectively then the locus of $P(\alpha, \beta)$ where $\alpha = \frac{x_1 + x_2 + ... + x_n}{n}, \beta = \frac{y_1 + y_2 + ... + y_n}{n}$

(A) $a(x-p) = b(y-1)$ (B) $p(x-a) = q(y-b)$

(C) $p(x-p) = b|x-q|$ (D) $b(x-p) = a(y-q)$

65. If z_1 and z_2 are lying on $|z-3| \le 4$ and $|z-1| + |z+1| = 3$ respectively then range of $|z_1 - z_2|$ is

(A) $[0, \infty]$ (B) $[0,1]$

(C) $\left[0, \frac{17}{2}\right]$ (D) $\left[0, \frac{3}{2}\right]$

66. Domain of the function $f(x) = \sqrt{\sin^{-1}(2x) + \frac{\pi}{6}}$

(A) $\left[\frac{-1}{4}, \frac{1}{2}\right]$ (B) $\left[\frac{-1}{2}, \frac{1}{2}\right]$

(C) $\left(\frac{-1}{2}, \frac{1}{2}\right)$ (D) $\left[\frac{-1}{4}, \frac{1}{4}\right]$

67. $\int \frac{x^4 + 1}{1 + x^6} dx =$

(A) $\tan^{-1} x - \tan^{-1}(x^3) + c$ (B) $\tan^{-1} x - \frac{1}{3}\tan^{-1}(x^3) + c$ (C)

$\tan^{-1} x + \tan^{-1}(x^3) + c$ (D) $\tan^{-1} x + \frac{1}{3}\tan^{-1}(x^3) + c$

68. $f(x) = \frac{x}{\sin x} \& g(x) = \frac{x}{\tan x}$ where $0 < x \le 1$. Then in this interval

(A) f(x) and g(x) both are increasing (B)f(x) is decreasing and g(x) is increasing

(C)f(x) is increasing and g(x) is decreasing (D)none of the above

Space for rough work

69. $f(x) = x^4 - 10x^3 + 35x^2 - 50x + c$ where c is a constant. the number of real roots of $f'(x) = 0$ and $f''(x) = 0$ are respectively

(A) 1 , 0
(B) 3 , 2
(C) 1 , 2
(D) 3 , 0

70. $\sum_{r=1}^{n} t_r = \frac{1}{12} n(n+1)(n+2)$ then value $\sum \frac{1}{t_r}$

(A) $\frac{2n}{n+1}$
(B) $\frac{n-1}{(n+1)!}$
(C) $\frac{4n}{(n+1)}$
(D) $\frac{3n}{(n+2)}$

Section – A
Numerical based questions

71. If P is a point $(2,4)$ on the parabola $y^2 = 8x$ and PQ is a focal chord, the coordinate of the mirror image of Q with respect to tangent at P are given by (α,β) then $(\beta - \alpha)$ is

72. If $y = a\log|x| + bx^2 + x$ has its extremum values at $x = -1$ and $x = 2$ then a + b

73. If $5\{x\} = x + [x]$ and $x - [x] = \frac{1}{2}$ (where {x} and [x] are functional an integral part of x) then 'x' is

74. The area of the figure bounded by two branches of the curve $(y-x)^2 = x^3$ and the straight line x = 1 is

75. In ΔABC, $3\sin A + 4\cos B = 6$ and $3\cos A + 4\sin B = 1$ then, the measure of an angle C in degrees, is

Space for rough work