FIITJEE – JEE (Main)

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

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 300.
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.**

Forthcoming Exam – FTRE Test on 29th Dec. 2019

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 :_____

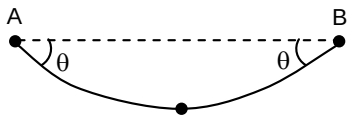
Batch :_____ **Date of Examination :** _____

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.**

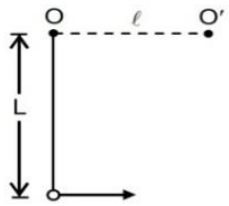
1. A rope of mass m hangs between two fixed points A and B at the same level, as shown in figure. The tension at the mid point of the chain



(A) mg (B) mg cot θ

(C) 2mg cot θ (D) $\frac{mg\cot\theta}{2}$

2. A particle is hanging from a fixed point O by means of a string of length L. There is a small nail O' in the same horizontal line with O at a distance ℓ (<L) from O. The minimum velocity with which particle should be projected from its lowest position in order that it may make a complete revolution round the nail.



(A) $\sqrt{3gL}$ (B) $\sqrt{3gL}$

(C) $\sqrt{g(5L-3\ell)}$ (D) $\sqrt{g(5\ell-3L)}$

3. A ball is thrown with speed v and angle of projection with horizontal is θ. If the coefficient of restitution between ball and horizontal plane is e then the distance travelled by the ball after long time will be

(A) $\frac{u^2\sin^2\theta}{g}\left(\frac{1}{1-e^2}\right)$ (B) $\frac{u^2\sin^2\theta}{g}\left(\frac{1}{1+e^2}\right)$ (C) $\frac{u^2\cos^2\theta}{g}\left(\frac{1}{1-e^2}\right)$ (D) None of these

4. A constant voltage is applied between the two ends of a uniform metallic wire. Some heat is produced in it. The heat developed is doubled if:
(A) Both the length and radius of the wire are halved.
(B) Both the length and radius of the wire are doubled.
(C) The radius of the wire is doubled.
(D) The length of the wire is doubled and the radius of the wire is halved.

5. Three identical particles of charges Q and mass m are placed such that they form an equilateral triangle of side ℓ. If they are released simultaneously. Then maximum speed attained by any one of the particles will be (Neglect gravity)

(A) $Q\sqrt{\frac{1}{2\pi\varepsilon_0 m\ell}}$ (B) $Q\sqrt{\frac{1}{6\pi\varepsilon_0 m\ell}}$ (C) zero (D) None of these

Space for rough work

6. A wire of length ℓ and resistance R is bend in form of ring the resistance between two points which is separated by angle θ

(A) $\frac{R}{4\pi^2}(2\pi-\theta)\theta$ (B) $\frac{R\ell}{4\pi^2}(2\pi-\theta)\theta$ (C) $R(2\pi-\theta)$ (D) $R\theta$

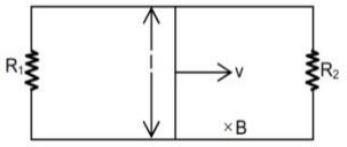
7. Two identical satellites A and B revolve round the earth in circular orbits at distance R and 3R from the surface of the earth (R = radius of the earth). The ratio of the linear momenta of A and B is

(A) 1 : 1 (B) 1: $\sqrt{2}$ (C) $\sqrt{2}$: 1 (D) 2 : 1

8. A rectangular loop with a slide wire of length l is kept in a uniform magnetic field as shown in figure. The resistance of slider is R. Neglecting self inductance of the loop find the current in the connector during its motion with a velocity v.

(A) $\frac{Blv}{R_1+R_2+R}$ (B) $\frac{Blv(R_1+R_2)}{R+(R_1+R_2)}$

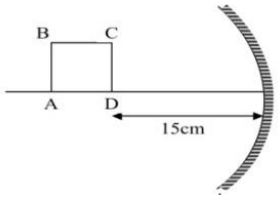
(C) $\frac{Blv(R_1+R_2)}{RR_1+RR_2+R_1R_2}$ (D) $Blv\left(\frac{1}{R_1}+\frac{1}{R_2}+\frac{1}{R_3}\right)$



9. A square ABCD of side 1 mm is kept at distance 15 cm in front of the concave mirror as shown in the figure. The focal length of the mirror is 10 cm. The length of the perimeter of its image will be:

(A) 8 mm (B) 2 mm

(C) 12 mm (D) 6 mm



10. The decay constant of a radioactive sample is λ. The half-life and mean-life of the sample are respectively given by:

(A) $1/\lambda$ and $(\ell n2)/\lambda$ (B) $(\ell n2)/\lambda$ and $1/\lambda$

(C) λ $(\ell n2)$ and $1/\lambda$ (D) $\lambda/(\ell n 2)$ and $1/\lambda$

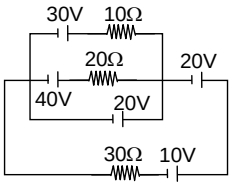
11. A cylindrical hall has a horizontal smooth floor. A ball is projected along the floor from A point on the wall in a direction making an angle θ with the radius through that point. The ball returns back to the initial point after two impacts with the wall. If the coefficient of restitution is e then $\tan^2\theta$ will be

(A) $\frac{1+e+e^2}{e^3}$ (B) $\frac{1+e}{e^2}$ (C) $\frac{e^2}{1+e}$ (D) $\frac{e^3}{1+e+e^2}$

12. Find the current through 30Ω resistor which is connected in the network as shown

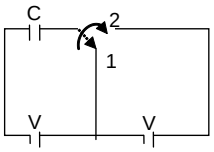
(A) 3A (B) 2A

(C) 1A (D) None



Space for rough work

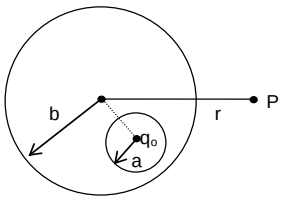
13. For the situation shown in figure. Switch is shifted from 1 to 2 at t = 0. The heat loss after a long time is



(A) CV^2 (B) $2CV^2$

(C) $\frac{1}{2}CV^2$ (D)None

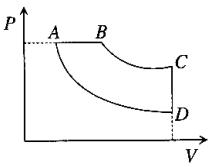
14. Spherical portion has been removed from spherical conducting sphere shown in figure. The electric field at point P is

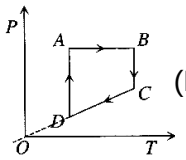


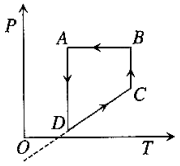
(A) $\frac{1}{4\pi \in_0}\frac{q_0}{(a+r)^2}$ (B) $\frac{1}{2\pi \in_0}\frac{q_0}{r^2}$

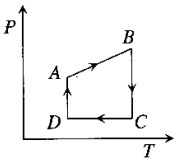
(C) $\frac{1}{4\pi \in_0}\frac{q_0}{(a+b)^2}$ (D) $\frac{1}{4\pi \in_0}\frac{q_0}{r^2}$

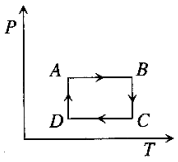
15. A cyclic process ABCD is shown in the following P-V diagram. Which of the following curves represents the same process?



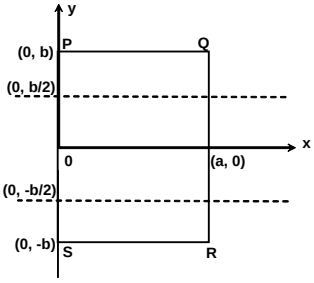
(A) 

(B) 

(C) 

(D) 

16. A uniform and constant magnetic field exists in a region as under $B_o\hat{i}$ for $y > \frac{b}{2}$; $-B_o\hat{i}$ for $y < -\frac{b}{2}$; zero for $-\frac{b}{2} \le y \le \frac{b}{2}$ Then the current that must be passing through the area enclosed by PQRS shown



(A) $\frac{2B_oa}{\mu_o}(-\hat{k})$ (B) $\frac{2B_oa}{\mu_o}(\hat{k})$

(C) $\frac{2B_ob}{\mu_o}(-\hat{k})$ (D) $\frac{2B_ob}{\mu_o}(\hat{k})$

17. The power radiated by a black body is P, and it radiates maximum energy around the wavelength λ_0. If the temperature of black body is now changed so that it radiates maximum energy around a wavelength $\frac{3\lambda_0}{4}$, the new power radiated by it will be

(A) $\frac{4}{3}P$ (B) $\frac{16}{9}P$ (C) $\frac{64}{27}P$ (D) $\frac{256}{81}.P$

Space for rough work

18. A photon collides with a stationary hydrogen atom in ground state. Energy of the colliding photon is 10.2eV. After a time interval of the order of micro sec. Another photon collides with same hydrogen atom with an energy of 15 eV. What will be observed by the detector?
(A) 2 photon of energy 10.2eV
(B) 2 photon of energy of 1.4 eV
(C) One photon of energy 10.2eV and an electron of energy 1.4eV
(D) One photon of energy 10.2eV and another photon of energy 15eV

19. A radioactive sample with half – life = T emits $\alpha-$particles. Its total activity is A_i at some time and A_t at a later time. The number of $\alpha-$particles emitted by the sample between these two points in time is :

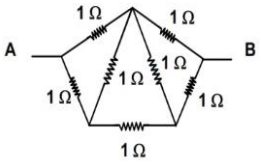
(A) $A_i - A_t$ (B) $\frac{T}{\ln 2}(A_i - A_t)$ (C) $\frac{\ln 2}{T}(A_i - A_t)$ (D) $\frac{T}{\ln 2}\left[\frac{1}{A_t} - \frac{1}{A_i}\right]$

20. In an ideal double slit experiment, when a glass plate (refractive index 1.5) of thickness t is introduced in the path of one of the interfering beams (wavelength λ), the intensity at the position where the central maximum occurred previously remains unchanged. The minimum thickness of the glass plate is:
(A) 2λ (B) $2\lambda/3$ (C) $\lambda/3$ (D) λ

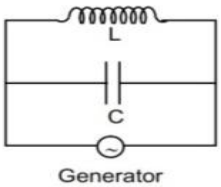
Section – A
Numerical based questions

21. A uniform solid hemisphere of radius r is joined to uniform solid right circular cone of base of radius r. Both have same density. The centre of mass of the composite solid lies on the common face. The height (h) of the cone is $\left(\sqrt{x}\right)r$. Find 'x'?

22. Effective resistance between A and B is x/7 Ω. Find the value of 'x'.

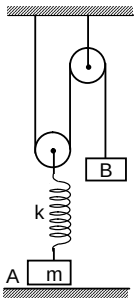


23. For the circuit shown in the figure, the current through the inductor is 0.6 A, while the current through the capacitor is 0.4 A. The current drawn from the generator is $\frac{x}{10}$ A . Find 'x'.



Space for rough work

24. Find the minimum mass of block B so that A leaves the surface when B is released from rest spring is initially at natural length (take m = 8 kg)



25. Refractive index of the material of a prism is $\sqrt{2}$ and its refracting angle is 30^0. One of the refracting surfaces of the prism is made a mirror inwards. A beam of monochromatic light entering the prism from the other face will retrace its path after reflection from the mirrored surface if its angle of incidence on the prism is $x \times 15°$ then find the value of 'x'.

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.**

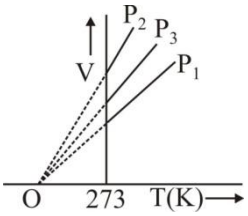
26 The normality of a solution of sodium hydroxide 100 mL of which contains 4 grams of NaOH is

(A) 0.1 (B) 40 (C) 1.0 (D) 0.4

27 The oxidation number of phosphorus in $Ba(H_2PO_2)_2$ is

(A) –1 (B) +1 (C) +2 (D)+3

28 The volume-temperature graph of a given mass of an ideal gas at constant pressure are shown below. What is the correct order of pressures



(A) $P_1 > P_3 > P_2$ (B) $P_1 > P_2 > P_3$

(C) $P_2 > P_3 > P_1$ (D) $P_3 > P_1 > P_3$

29 Which of the following combination of solutions does not make a buffer?

(A) $NaH_2PO_4 + Na_2HPO_4$ (B) $NaHCO_3 + H_2CO_3$

(C) $NaH_2PO_4 + Na_3PO_4$ (D) $KHCO_3 + K_2CO_3$

30 The fraction of total volume occupied by the atoms present in a simple cube is

(A) $\frac{\pi}{6}$ (B) $\frac{\pi}{3\sqrt{2}}$ (C) $\frac{\pi}{4\sqrt{2}}$ (D) $\frac{\pi}{4}$

31 Cyclopropane rearranges to form propene 

This follows first order kinetics The half life is 13.86 ×10^{-3} min. The initial concentration of cyclopropane is 16 M. What will be the concentration of cyclopropane after 27.72×10^{-3} min.

(A) 0.035 M (B) 4M (C) 3.5 M (D) .35 M

32 Ce(58) is a member of ;

(A) $s-$ block (B) $p-$ block (C) $d-$block (D) $f-$ block

33 Which of the following molecules has intramolecular H-bonding?

(A) Ortho-nitrophenol (B) Ortho-boric acid (C) Both (A) and (B) (D) none of these

34 Select the methanides from compound given below:

Al_4C_3 (I) Be_2C (II) MgC_2 (III) BaC_2 (IV)

(A) I only (B) I and IV (C) I and II (D) I, II, III & IV

35 When iodine is dissolved in CCl_4, the colour that results is :

(A) Brown (B) Blusish green (C) Violet (D) Colorless

36 The bonds present in borazole are:

(A) $12\sigma, 3\pi$ (B) $9\sigma, 6\pi$ (C) $6\sigma, 6\pi$ (D) $9\sigma, 9\pi$

Space for rough work

37 Select the correct order E.A.N:

(A) $[Cr(CO)_6] > [Cr(CO)_6]^{\ominus} > [Cr(CO)_6]^{\oplus}$ (B) $[Cr(CO)_6]^{+} > [Cr(CO)_6]^{\ominus} > [Cr(CO)_6]$

(C) $[Cr(CO)_6]^{\ominus} > [Cr(CO)_6] > [Cr(CO)_6]^{\oplus}$ (D) $[Cr(CO)_6]^{\ominus} = [Cr(CO)_6] > [Cr(CO)_6]$

38 A complex involving dsp^2-hybridization has:

(A) A square planar geometry (B) A tetrahedral geometry

(C) An octahedral geometry (D) Trigonal planar geometry

39 Which gives blood red colour with ammonium thiocyanate?

(A) Fe^{3+} (B) Fe^{2+} (C) Cu^{2+} (D) Cd^{2+}

40 When H_2O_2 is added to an acidified solution of $K_2Cr_2O_7$;

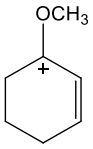
(A) Solution turns green due to formation of Cr_2O_3

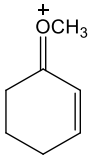
(B) A deep blue-violet colored compound $CrO(O_2)_2$

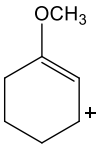
(C) Solution turns yellow due to formation of K_2CrO_4

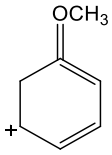
(D) Solution gives green ppt. of $Cr(OH)_3$ is formed

41 Which of the following structures is not a resonance structure of the others?

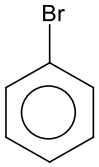
(A) 

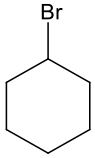
(B) 

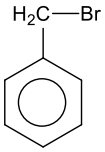
(C) 

(D) 

42 Compare rate of reaction with $Ag^{\oplus}NO_3^{-}$ or rate of S_{N^1} reaction

(i) 

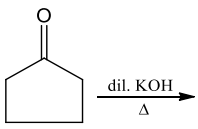
(ii) 

(iii) 

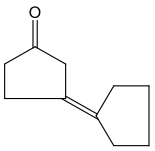
(A) i>ii>iii (B) ii>iii>i (C) iii>ii>i (D) iii>i>ii

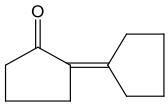
43 $Ph-\overset{18}{O}-CH_3 \xrightarrow{Conc.HI}$ Products of the reaction is:

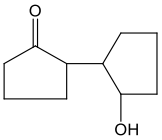
(A) $Ph-\overset{18}{O}H, CH_3-I$ (B) $Ph-I, CH_3-\overset{18}{O}H$ (C) $Ph-I, CH_3-I$ (D) $Ph-OH, CH_3I$

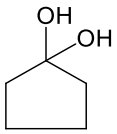
44 

(A) ; Product (A) is:

(A) 

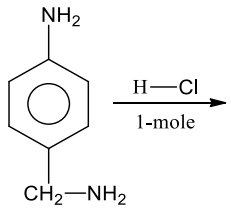
(B) 

(C) 

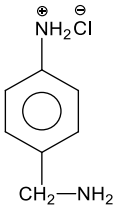
(D) 

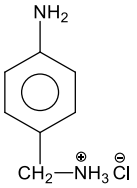
Space for rough work

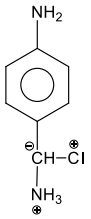
45

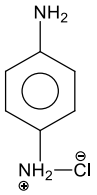


; Product formed in this reaction is:

(A) 

(B) 

(C) 

(D) 

Section – A
Numerical based questions

46. If $H_x[Pty_6]$, y is a monodentate charged ligand then find the out the value of x :

47. Glucose molecules reacts 'X' number of molecules of phenylhydrazine to yield osazone. The value of X is:

48. $aMnO_4^- + bC_2O_4^{2-} + cH^+ \longrightarrow d\,Mn^{2+} + e\,CO_2 + f\,H_2O$
What will be the value of (a + b - d) if the above reaction is balanced?

49. What is the pH of 0.2 M CH_3COONH_4 solution?
[Given K_a of CH_3COOH = K_b of NH_4OH = 10^{-5}]

50. K_{a_1} and K_{a_2} of a dibasic acid H_2XO_3 are respectively 10^{-6} and 10^{-10}. What is the pH of 0.001 M $NaHXO_3$ solution?

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 coefficient of t^8 in $\left(1+t^2\right)^{12}\left(1+t^{12}\right)\left(1+t^{24}\right)$ is ${}^mC_n$, then find the greatest value of m – n.
(A) 2 (B) 4 (C) 6 (D) 8

52. If f(x) = $\{x^2\}$, where {x} denotes the fractional part of x, then
(A) f(x) is continuous at x = 2 but not at x = –2
(B) f(x) is continuous at x = –2 but not at x = 2
(C) f(x) is continuous at x = –2 and x = 2
(D) f(x) is discontinuous at x = 2 and x = –2

53. Let r be the radius of circle passing through (0, 5) and (6, 1) and whose center lies on the line 12x + 5y = 25, then value of 3r is
(A) 12 (B) 13 (C) 14 (D) 15

54. Let z_k (k = 0, 1, 2, 3, 4, 5, 6) be the roots of the equation $(z+1)^7+(z)^7=0$, then $\sum_{k=0}^{6} \mathrm{Re}(z_k)$ is equal to
(A) 0 (B) $\frac{3}{2}$ (C) $-\frac{7}{2}$ (D) 7/2

55. If f is continuous on [0, 1] such that $f(x)+f\left(x+\frac{1}{2}\right)=1$ and $\int_0^1 f(x)\,dx=k$, then value of 2K is
(A) 0 (B) 1 (C) 2 (D) 3

56. If $f(x)=64x^3+\frac{1}{x^3}$ and α,β are the roots of $4x+\frac{1}{x}=2$, then
(A) $f(\alpha)=-64$ (B) $f(\beta)=-8$ (C) $f(\beta)=-16$ (D) $f(\alpha)=-24$

57. Let p and q be two statements, then $\sim(\sim p\wedge q)\wedge(p\vee q)$ is logically equivalent to
(A) q (B) p (C) $p\vee q$ (D) $p\wedge q$

58. If $\lim_{\theta\to 0}\left(\frac{1+a\cos\theta}{\theta^2}-\frac{b\sin\theta}{\theta^3}\right)=1$ and the value of a + b is – λ, then the value of λ is
(A) 2 (B) 4 (C) 6 (D) 8

59. If the system of equations $\lambda p+q+r=0, p+\lambda q+r=0, p+q+\lambda r=0$ has non-trivial solution, then the value of λ can be the roots of equation
(A) $x^3-3x+2=0$ (B) $x^3-x+2=0$ (C) $x^3+4x+1=0$ (D) $x^2-2x+2=0$

Space for rough work

60. A closet has 5 pairs of different types of shoes. The number of ways in which 4 shoes can be drawn from it such that there will be no complete pair is
(A) 200 (B) 160 (C) 40 (D) 80

61. The following data set has a mean 14.7 and a variance of 10.01.
18, 11, 12, a, 16, 11, 19, 14, b, 13, then possible value of 2a + b can be
(A) 33 (B) 46 (C) 64 (D) 55

62. If $S_n = 1 + \frac{1}{2} + \frac{1}{2^2} + ... + \frac{1}{2^{n-1}}, n \in N$, then least value of n such that $2 - S_n < \frac{1}{100}$ is
(A) 8 (B) 7 (C) 9 (D) 6

63. The shortest distance between the skew lines $\frac{x+3}{-4} = \frac{y-6}{3} = \frac{z}{2}$ and $\frac{x+2}{-4} = \frac{y}{1} = \frac{z-7}{1}$ is
(A) 3 (B) 6 (C) 7 (D) 9

64. If $\alpha + \beta = \frac{\pi}{2}, \alpha \neq \beta$ and $\beta + \gamma = \alpha$, then the value of $\frac{\tan\alpha - \tan\beta}{\tan\gamma}$ is
(A) 1 (B) 2 (C) 3 (D) –2

65. With usual notations in a triangle ABC, if $\angle A = \frac{\pi}{2}$ and $a + b + c = \Delta$, then $b + c - a$ is equal to
(A) 1 (B) 2 (C) 3 (D) 4

66. If f(x) is a differentiable function satisfying $f'(x) < 2 \text{ for all } x \in R \text{ and } f(1) = 2$, then greatest possible integral value of f(3) is
(A) 5 (B) 6 (C) 7 (D) 8

67. If $0 < x < \frac{\pi}{2}, \int \sqrt{1+\sec x}\, dx = 2\sin^{-1}\left(a\sin\frac{x}{b}\right) + C$, where C is an arbitrary constant, then ordered pair (a,b) is
(A) $\left(1, \sqrt{2}\right)$ (B) $\left(\sqrt{2}, 1\right)$ (C) $\left(\sqrt{2}, 2\right)$ (D) $\left(2, \sqrt{2}\right)$

68. If C_1, C_2 are arbitrary constants then general solution of the differential equation $\frac{d^2y}{dx^2} = e^{-3x}$ can be expressed as
(A) $y = 9e^{-3x} + c_1x + c_2$ (B) $y = -3e^{-3x} + c_1x + c_2$
(C) $y = 3e^{-3x} + c_1x + c_2$ (D) $y = \frac{e^{-3x}}{9} + c_1x + c_2$

Space for rough work

69. If A is a diagonal matrix of non-positive entries and order 3 such that $A^2 = I$, then
(A) There may exist some diagonal element in A which is zero.
(B) Value of |A| is –1
(C) A^{-1} does not exist
(D) |3 adj 2A| = –1728

70. $X = \{1,2,3,4,.....10\}$ and $A \subset X ; B \subset X$; where $P \subset Q$ denotes that P is subset of $Q(P \neq Q)$. Then number of ways of selecting ordered pair of sets A and B such that $A \cup B \subset X$.

(A) $4^{10} - 3^{10}$ (B) 3^{10} (C) $\frac{4^{10} - 3^{10}}{2}$ (D) $\frac{3^{10} - 1}{2}$

Section – A
Numerical based questions

71. The tangent to $y = ax^2 + bx + \frac{7}{2}$ at $(1, 2)$ is Parallel to the normal at the point (–2, 2) on the curve $y = x^2 + 6x + 10$ then the value of 2(a – b) is

72. Let a, b, c, are three distinct real numbers such that the lines ax+by+c =0, bx+cy+a=0 and cx + ay + b = 0 are concurrent and the line $3x + 2y - \lambda = 0$ passes though their point of intersection, then value of λ is

73. A 10 digit numbers is chosen with odd digits. If the probability that no two consecutive digits are same is $\left(\frac{4}{\lambda}\right)^{\mu}$, then the value of $(\mu - \lambda)$ is

74. If f'(3) = 2, then the value of $\lim_{h \to 0} \frac{f(3+h^2) + f(3-h^2) - 2f(3)}{2h^2}$ is

75. The number of values of x in the interval $\left[0, \frac{7\pi}{2}\right]$ satisfying the equation $6\sin^2 x + \sin x - 2 = 0$ is

Space for rough work

FIITJEE – JEE (Mains)

Batches: 12th Studying & 12th Pass

Mock Test – III

QP Code:

ANSWER KEY

SECTION – I (PHYSICS)

PART-A

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

PART-C

21.	**3**	22.	**8**	23.	**2**	24.	**2**
25.	**3**						

SECTION – II (CHEMISTRY)

PART-A

26.	C	27.	B	28.	A	29.	C
30.	A	31.	B	32.	D	33.	A
34.	C	35.	C	36.	A	37.	C
38.	A	39.	A	40.	B	41.	D
42.	C	43.	A	44.	B	45.	B

PART-C

46.	2	47.	3	48.	**5**	49.	**7**
50.	**8**						

SECTION – III (MATHEMATICS)

PART-A

51.	**D**	52.	**D**	53.	**B**	**5**4.	**C**
55.	**B**	56.	**C**	57.	**B**	58.	**B**
59.	**A**	60.	**D**	61.	**B**	62.	**A**
63.	**D**	64.	**B**	65.	**D**	66.	**A**
67.	**C**	68.	**D**	69.	**B**	70.	**A**

PART-C

71.	**7**	72.	**5**	73.	**4**	74.	**0**
75.	**7**						