

# JEE MAIN-08

TEST CODE

DJS-1

10

Mission **JEE**

# DRONA 1.0

## JEE

**DURATION: 3 Hours**

**DATE: 27-09-2026**

**M. MARKS: 300**

### TEST SYLLABUS

**Physics:** Friction and NLM

**Chemistry:** Isomerism

**Mathematics:** Trigonometric ratio & identities, Trigo. Equation, Quadratic Equation

#### General Instruction

1. Read each question carefully before answering.
2. The test is of 180 Minutes duration and the maximum marks is 300 & total Questions 75.
3. The question paper consists of 3 Sections (Section A: Physics, Section B: Chemistry, Section C: Mathematics).
4. Each Sections contains 2 Parts (PART-I & PART-2) Part-I, contains 20 Single Choice Questions and Part-II contains 5 Integer Type Questions.
5. Part-I Each question has 4 choices (A), (B), (C) and (D), out of which ONLY ONE CHOICE is correct.
6. Part-II The answer of each question is either an integer or a decimal value upto two digits.

#### Marking Scheme

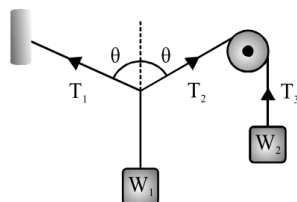
1. Part-I: + 4 for correct answer, -1 (negative marking) for incorrect answer, 0 for all other cases.
2. Part-II: + 4 for correct answer, -1 (negative marking) for incorrect answer, 0 for all other cases.

### SECTION-A PHYSICS

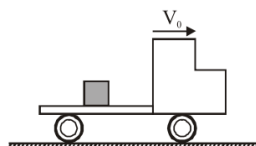
#### PART-I

##### Single Choice Questions

1. In the following figure, the pulley is massless and frictionless. The relation between  $T_1$ ,  $T_2$  and  $T_3$  will :-

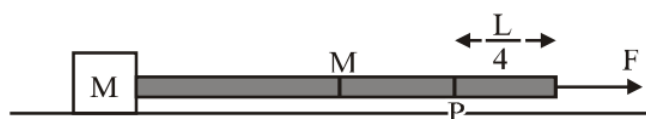


- (a)  $T_1 = T_2 \neq T_3$       (b)  $T_1 \neq T_2 = T_3$       (c)  $T_1 \neq T_2 \neq T_3$       (d)  $T_1 = T_2 = T_3$
2. An iron block of mass  $m = 500$  kg is kept at the back of a truck moving at a speed  $v_0 = 90$  km h<sup>-1</sup>. The driver applies the brakes and slows down to a speed of  $v = 54$  km h<sup>-1</sup> in 10 s. What constant force acts on the block during this time if the block not slide on the truck-bed :

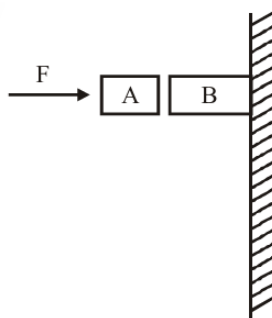


- (a) -500 N      (b) -300 N      (c) -400 N      (d) None of these

3. A sphere is accelerated upwards with the help of a cord whose breaking strength is five times its weight. The maximum acceleration with which the sphere can move up without cord breaking is :  
 (a)  $4g$  (b)  $3g$  (c)  $2g$  (d)  $g$
4. In a tug of war contest, two men pull on a horizontal rope at the two ends. The winner :-  
 (a) exerts a force on the rope which is greater than the tension  
 (b) exerts greater force on the ground  
 (c) exerts greater force on the rope  
 (d) none of the above
5. A block of mass  $M$  is pulled by a uniform chain of mass  $M$  tied to it by applying a force  $F$  at the other end of the chain. The tension force at a point located at a distance of one-fourth of the chain's length from the free end of chain will be:-



- (a)  $\frac{7F}{8}$  (b)  $\frac{4F}{5}$  (c)  $\frac{3F}{4}$  (d)  $\frac{6F}{7}$
6. 80 railway wagons all of same mass  $5 \times 10^3$  kg are pulled by an engine with a force of  $4 \times 10^5$  N. The tension in the coupling between 30th and 31st wagon from the engine is :-  
 (a)  $400 \times 10^4$  N (b)  $32 \times 10^4$  N (c)  $20 \times 10^4$  N (d)  $25 \times 10^4$  N
7. A boy standing on a weighing machine notices his weight as 400 N. When he suddenly jumps upward, the weight shown by the machine becomes 600 N. The acceleration with which the boy jumps up is :-  
 ( $g = 10 \text{ m/s}^2$ )  
 (a)  $5 \text{ ms}^{-2}$  (b)  $3.4 \text{ ms}^{-2}$  (c)  $6 \text{ ms}^{-2}$  (d)  $9.8 \text{ ms}^{-2}$
8. Given in the figure are two blocks A and B of weight 20 N and 100 N, respectively. These are being pressed against a wall by a force  $F$  as shown. If the coefficient of friction between the blocks is 0.1 and between block B and the wall is 0.15 if blocks stay at rest then the frictional force applied by the wall on block B is:

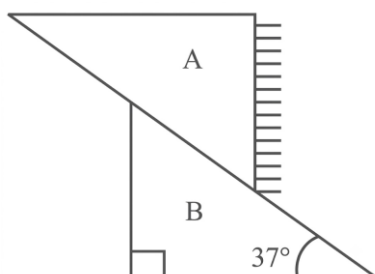


- (a) 120 N (b) 150 N (c) 100 N (d) 80 N
9. A rocket is fired vertically from the earth with an acceleration of  $2g$ , where  $g$  is the gravitational acceleration. On an inclined plane inside the rocket, making an angle  $\theta$  with the horizontal, a point object of mass  $m$  is kept. The minimum coefficient of friction  $\mu_{\min}$  between the mass and the inclined surface such that the mass does not move is :  
 (a)  $\tan 2\theta$  (b)  $\tan \theta$  (c)  $3\tan \theta$  (d)  $2\tan \theta$

10. A given object takes  $n$  times more time to slide down a  $45^\circ$  rough inclined plane as it takes to slide down a perfectly smooth  $45^\circ$  incline. The coefficient of kinetic friction between the object and the incline is :

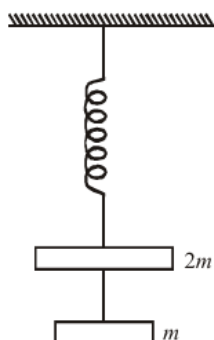
(a)  $\sqrt{1 - \frac{1}{n^2}}$  (b)  $1 - \frac{1}{n^2}$  (c)  $\frac{1}{2-n^2}$  (d)  $\sqrt{\frac{1}{1-n^2}}$

11. If the acceleration of block A is  $5 \text{ m/s}^2$ , then, acceleration of block B is:



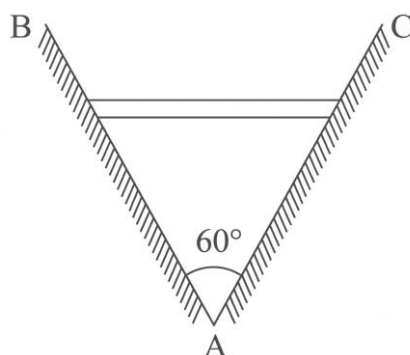
(a)  $5 \text{ m/s}^2$  (b)  $10 \text{ m/s}^2$  (c) Zero (d)  $6.67 \text{ m/s}^2$

12. The string between blocks of mass  $m$  and  $2m$  is massless and inextensible. The system is suspended by a massless spring as shown. If the string is cut find the magnitudes of accelerations of mass  $2m$  and  $m$  (immediately after cutting)



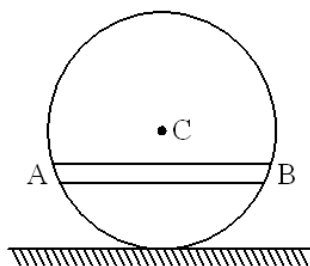
(a)  $g, g$  (b)  $g, \frac{g}{2}$  (c)  $\frac{g}{2}, g$  (d)  $\frac{g}{2}, \frac{g}{2}$

13. The smooth rod of mass  $10 \text{ kg}$  is in the equilibrium of walls which are fixed. Find the force exerted by wall AB on the rod.

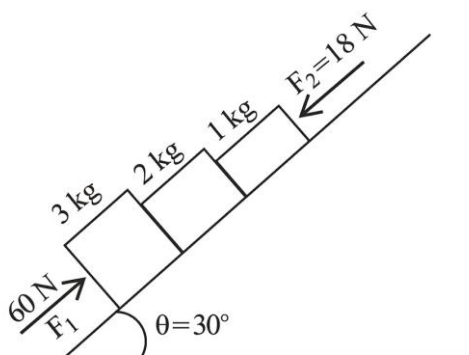


(a)  $100 \text{ N}$  (b)  $50 \text{ N}$  (c)  $50\sqrt{3} \text{ N}$  (d)  $100\sqrt{3} \text{ N}$

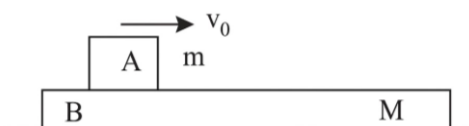
14. A smooth rod of mass 1 kg is in equilibrium ins: a hollow fixed sphere such that  $\angle ACB = 120^\circ$ . F the normal reaction on the rod at end A.



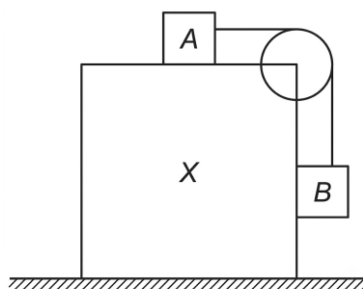
- (a) 20 N (b)  $10\sqrt{3}$  N (c) 10 N (d)  $5\sqrt{3}$  N
15. In the diagram shown, the normal reaction force between 2 kg and 1 kg is (Given  $g = 10 \text{ ms}^{-2}$ ) (Consider the surface, to be smooth):



- (a) 25 N (b) 39 N (c) 6 N (d) 10 N
16. The masses of blocks A and B are  $m$  and  $M$  respectively. Between A and B, there is a constant frictional force  $F$  and B can slide on a smooth horizontal surface. A is set in motion with velocity while B is at rest. What is the distance moved by A relative to B before they move with the same velocity?

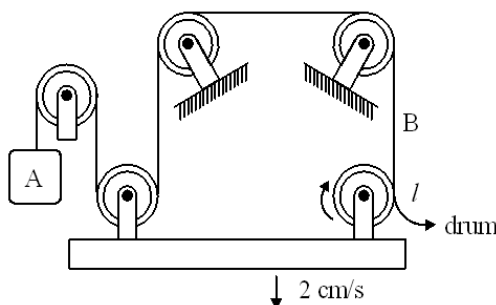


- (a)  $\frac{mMv_0^2}{F(m-M)}$  (b)  $\frac{mMv_0^2}{2F(m-M)}$  (c)  $\frac{mMv_0^2}{F(m+M)}$  (d)  $\frac{mMv_0^2}{2F(M+m)}$
17. Consider a system of blocks X, A and B as shown in the figure. The blocks A and B have equal mass and are connected by a massless string through a massless pulley. The coefficient of friction between block A and X or B and X is 0.5. If block X moves on the horizontal frictionless surface what should be its minimum acceleration such that blocks A and B remain stationary. ( $g$  = acceleration due to gravity.)



- (a)  $\frac{g}{3}$  (b)  $3g$  (c)  $\frac{g}{4}$  (d)  $\frac{3g}{4}$

18. Find the distance moved by the block A in 2 s, if hoisting drum fixed in the plank wraps string 1 cm/s. The plank is moving downward with a speed of 2 cm/s.

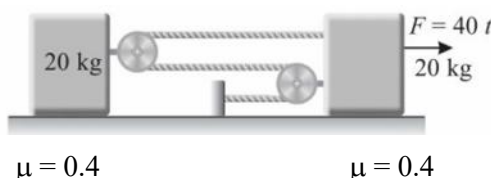


- (a) 10 cm      (b) 7 cm      (c) 14 cm      (d) 12 cm
19. A body of mass 1 kg is moving with a velocity  $10 \text{ ms}^{-1}$  due to a constant force on a horizontal rough surface having coefficient of kinetic friction 0.4. If the constant force is removed, the body comes to rest in a time (Acceleration due to gravity =  $10 \text{ ms}^{-2}$ )
- (a) 2.5 s      (b) 4 s      (c) 0.4 s      (d) 0.25 s
20. A body of mass  $m$  is kept on a rough horizontal surface (coefficient of friction =  $\mu$ ). Horizontal force is applied on the body, but it does not move. The resultant of normal reaction and the frictional force acting on the object is given  $F$ , where  $F$  is
- (a)  $|F| = mg + \mu mg$       (b)  $|F| = \mu mg$       (c)  $|F| \leq mg\sqrt{1 + \mu^2}$       (d)  $|F| = mg$

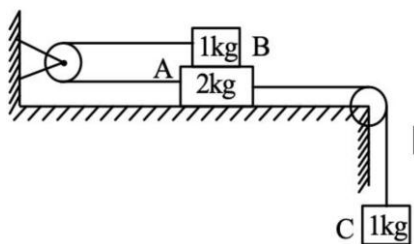
## PART-II

### Numerical Type Questions

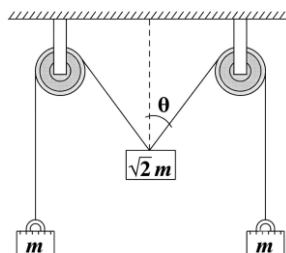
21. A package is at rest on a conveyor belt which is initially at rest. The belt is started and moves to the right for 1.3 s with a constant acceleration of  $2 \text{ m/s}^2$ . The belt then moves with a constant deceleration and comes to stop after a total displacement of 2.2 m. The coefficient of friction between the package and the belt are  $\mu_s = 0.35$  and  $\mu_k = 0.25$ . Determine the displacement of the package relative to the belt as the belt comes to stop. Take  $g = 10 \text{ m/s}^2$
22. Two identical blocks each having a mass of 20 kg are connected to each other by a light inextensible string as shown and are placed over a rough  $F = 40t$  surface. Pulleys are connected to the blocks. Find the product of both blocks acceleration after one second after the application of the time varying force of  $40t \text{ N}$ , where  $t$  is in second.



23. Friction coefficient between any two surfaces in contact is 0.5 . Pulleys and strings are frictionless. Find the friction between blocks A and B (in newton)



24. The pulleys and strings shown in the figure are smooth and of negligible mass. For the system to remain in equilibrium, the angle  $\theta$  in degree should be

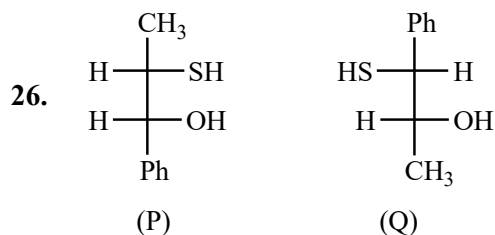


25. A block of mass 5 kg is kept on a horizontal floor having coefficient of friction 0.09 . Two mutually perpendicular horizontal forces of 3 N and 4 N act on this block. The acceleration of the block is ( o. x )  $\text{m/s}^2$ . Find value of  $x$  ( $g = 10 \text{ m/s}^2$ )

## SECTION-B CHEMISTRY

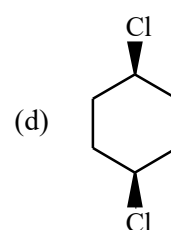
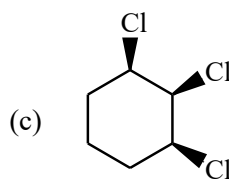
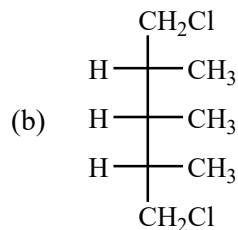
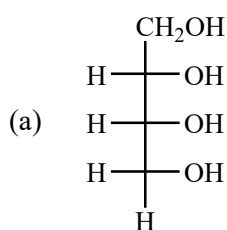
### PART-I

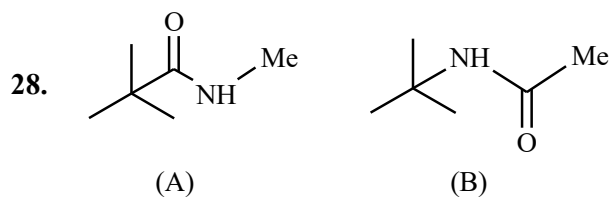
#### Single Choice Questions



[P] and [Q] are

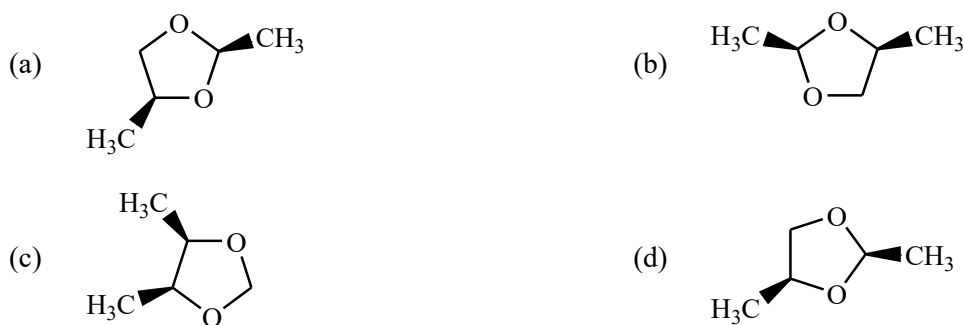
- (a) Enantiomers (b) Diastereomers  
 (c) Configurational isomers (d) Constitutional isomers
27. Identify the not meso compound(s)





- (a) They are metamers (b) They are functional isomers  
(c) Both (a) & (b) (d) They are not isomers

29. Find the compound which is not rotate PPL light?



30. Which of the following compounds is chiral?

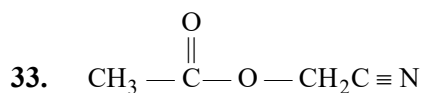


31. The IUPAC name of  $\text{CH}_2=\text{CH}-\text{CH}=\text{CH}-\underset{\text{CH}=\text{CH}_2}{\underset{|}{\text{CH}}}-\text{C}\equiv\text{CH}$  is

- (a) 3-ethenyl-4, 8-heptadien-1-yne (b) 5-ethenyl-1, 3-heptadien-6-yne  
(c) 2-ethynyl-1, 4, 6-heptatriene (d) 5-ethynyl-1, 3, 6-heptatriene

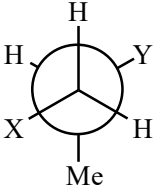
32. The IUPAC name of  $\text{CH}_3-\overset{\text{OH}}{\underset{\text{CCl}_3}{\underset{|}{\text{C}}}}-\text{CH}_3$  is

- (a) 2-trichloromethyl-2-propanol (b) 2-hydroxy-2-trichloromethylpropane  
(c) 1, 1, 1-trichloro-2-hydroxy-2-methylpropane (d) 1, 1, 1-trichloro-2-methyl-2-propanol



The IUPAC name of above organic compound is

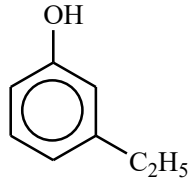
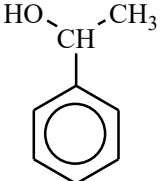
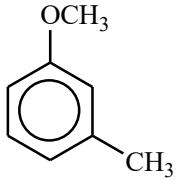
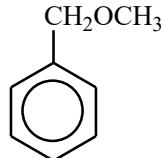
- (a) 2-acetyloxyethanenitrile (b) 2-acetoxymethyl cyanide  
(c) methyl cyanoethanoate (d) cyanomethyl ethanoate

34. Newmann projection representation of  $\text{CH}_3-\text{CH}_2-\underset{\text{CH}_3}{\text{CH}}-\text{Et}$  about  $\text{C}_2-\text{C}_3$  is . Then X & Y are

respectively:

- (a) Me, Et (b) H, Et (c) Et, H (d) Et, Me
35. Position isomer of tert-butyl alcohol is
- (a) Butyl alcohol (b) Sec-butyl alcohol (c) Iso-butyl alcohol (d) None of these
36. Which of the following does not exist as a pair of function isomer?

- (a)  $\text{CH}_3\text{COOCH}_3$  and  $\text{CH}_3\text{CH}(\text{OH})\text{CHO}$  (b)  $\text{CH}_2=\text{C}=\text{CH}-\text{CH}_3$  and 
- (c)  $\text{CH}_3-\underset{\text{O}}{\underset{\parallel}{\text{C}}}-\text{CH}_3$  and  $\text{CH}_3\text{CH}_2\text{CHO}$  (d)  $\text{CH}_3\text{CH}_2\text{CHO}$  and  $\text{CH}_3\text{CH}_2\text{CH}_2\text{OH}$

37. (I)  (II)  (III)  (IV) 

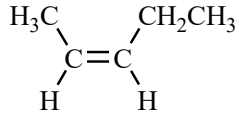
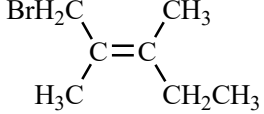
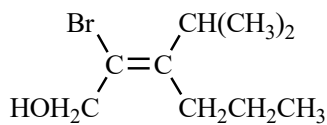
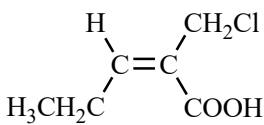
Considering above compounds, which of the following statements are correct?

- (A) I, II and III are functional isomers.  
 (B) I and II are position isomers but not functional isomers.  
 (C) III and IV are chain isomers.  
 (D) III and IV are metamers.
- Choose the most appropriate answer from the options given below.
- (a) Both A and D (b) Both C and D (c) Both A and C (d) Both B and D

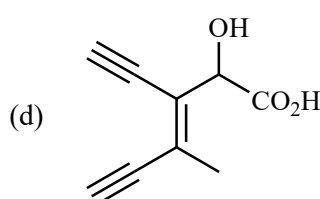
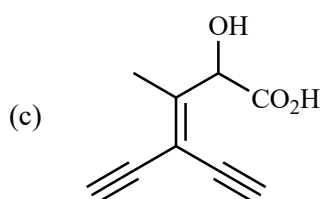
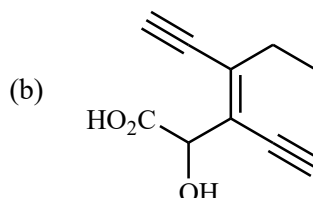
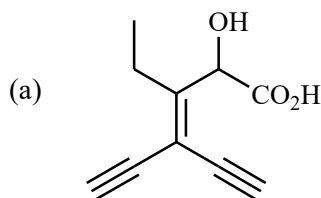
38. Which of the following is incorrect for *cis*-but-2-ene relation to *trans*-but-2-ene?

- (a) I<sup>st</sup> has higher dipole moment (b) I<sup>st</sup> has higher boiling point  
 (c) I<sup>st</sup> has higher melting point (d) All of the above

39. Which of the following compounds has Z-configuration

- (i)  (ii) 
- (iii)  (iv) 
- (a) (i) and (iii) (b) (ii) and (iv) (c) (i) and (iv) (d) (ii) and (iii)

40. Which of the following exhibits geometrical isomerism?
- (a)  $\text{CH}_3\text{CH}=\text{C}=\text{CHCH}_3$  (b)  $\text{CH}_3\text{CH}=\text{C}=\text{C}=\text{CHCH}_3$   
 (c)  $\text{CH}_3\text{CH}=\text{C}=\text{C}=\text{CH}_2$  (d)  $(\text{CH}_3)_2\text{CH}=\text{C}=\text{C}=\text{C}(\text{CH}_3)_2$
41. What is the maximum number of methyl group possible for  $\text{C}_8\text{H}_{18}$ ?
- (a) Eight (b) Seven (c) Six (d) Five
42. *Cis* hex-3-ene is also written as
- (a) *Z* hex-3-ene (b) *E* hex-3-ene  
 (c) Both are correct (d) None of the two is correct
43. How many structural isomers are possible for the compound having molecular formula  $\text{C}_3\text{H}_5\text{Br}_3$ ?
- (a) Five (5) (b) Four (4) (c) Six (6) (d) Eight (8)
44. Which one of the following structures has the IUPAC name 3-ethynyl-2-hydroxy-4-methylhex-3-en-5-ynoic acid?

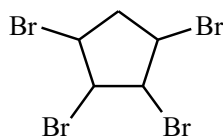


45. Which one of the following molecules does not show stereoisomerism?
- (a) 3-Ethylhex-3-ene (b) 3, 4-Dimethylhex-3-ene  
 (c) 3-Methylhex-1-ene (d) 4-Methylhex-1-ene

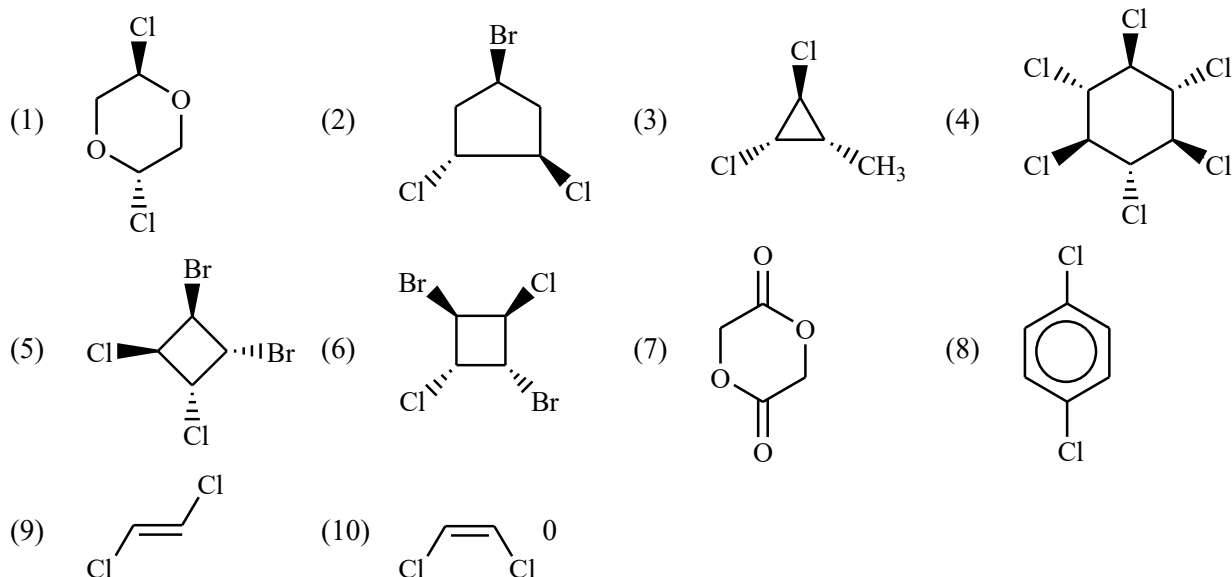
## PART-II

### Numerical Type Questions (46-50)

46. Find the number of geometrical isomers of



47. Find the number of stereoisomers of following  
 $\text{CH}_3\text{CH}(\text{Br})\text{CH}(\text{Br})\text{CH}(\text{Br})\text{CH}_3$
48.  $\text{C}_5\text{H}_{12}\text{O}$  number of alcohol [including stereoisomer]
49. Find the number of [MF  $\text{C}_5\text{H}_{10}$ ] cyclic isomer. (including stereoisomer).
50. Select that compound which have pos or cos both.



## SECTION-C MATHEMATICS

### PART-I

#### Single Choice Questions

51. If the quadratic equation  $x^2 - 4x + (k + 1) = 0$  has non-real (imaginary) roots, then the range of values for  $k$  is:  
 (a)  $k < 3$  (b)  $k > 3$  (c)  $k > 4$  (d)  $k < 4$
52. For what values of  $a$  does the equation  $x^2 + ax + 4 = 0$  possess equal roots?  
 (a)  $a = 4$  or  $a = -4$  (b)  $a = 2$  or  $a = -2$   
 (c)  $a = 8$  or  $a = -8$  (d)  $a = 16$  or  $a = -16$
53. The angle  $10^\circ 42' 30''$  converted into radians is equal to:  
 (a)  $\frac{171\pi}{2880}$  rad (b)  $\frac{43\pi}{720}$  rad (c)  $\frac{257\pi}{4320}$  rad (d)  $\frac{257\pi}{2160}$  rad
54. If  $x_1$  and  $x_2$  are the roots of the quadratic equation  $3x^2 - ax + 2a - 1 = 0$ , then the value of  $x_1^3 + x_2^3$  is:  
 (a)  $\frac{a^3 - 18a^2 + 9a}{27}$  (b)  $\frac{a^3 - 18a + 9}{27}$  (c)  $\frac{a^3 - 18a^2 + 9}{27}$  (d)  $\frac{a^3 - 18a^2 + 9a}{9}$
55.  $\tan\left(\frac{p\pi}{4}\right) = \cot\left(\frac{q\pi}{4}\right)$  if:  
 (a)  $p + q = 0$  (b)  $p + q = 2n + 1$  (c)  $p + q = 2n$  (d)  $p + q = 2(2n + 1)$
56. For  $-90^\circ < A < 90^\circ$ , the value of the expression  $\sqrt{\frac{1 - \sin A}{1 + \sin A}}$  is equal to :  
 (a)  $\sec A + \tan A$  (b)  $\operatorname{cosec} A - \cot A$  (c)  $\sec A - \tan A$  (d)  $\tan A - \sec A$
57. If  $\tan \theta = \frac{1}{\sqrt{7}}$ , then the value of  $\frac{\operatorname{cosec}^2 \theta - \sec^2 \theta}{\operatorname{cosec}^2 \theta + \sec^2 \theta}$  is equal to:  
 (a)  $\frac{1}{2}$  (b)  $\frac{1}{4}$  (c)  $\frac{3}{7}$  (d)  $\frac{3}{4}$
58. The value of the product  $\tan 10^\circ \tan 20^\circ \tan 30^\circ \tan 40^\circ \tan 50^\circ \tan 70^\circ \tan 80^\circ$  is equal to:  
 (a) 1 (b)  $\sqrt{3}$  (c)  $\frac{1}{3}$  (d)  $\frac{1}{\sqrt{3}}$
59. If  $\alpha$  and  $\beta$  are the roots of the quadratic equation  $x^2 + px + q = 0$ , then the quadratic equation whose roots are  $(\alpha - \beta)^2$  and  $(\alpha + \beta)^2$  is :  
 (a)  $x^2 - (2p^2 - 4q)x + p^2(p^2 - 4q) = 0$  (b)  $x^2 - (2p^2 + 4q)x + p^2(p^2 - 4q) = 0$   
 (c)  $x^2 - (2p^2 - 4q)x + p^2(p^2 + 4q) = 0$  (d)  $x^2 - (p^2 - 4q)x + p^2(p^2 - 4q) = 0$

60. The number of solutions of the trigonometric equation  $2\sin^2 \theta + \sin^2 2\theta = 2$  in the interval  $\theta \in (-\pi, \pi)$  is:  
 (a) 4 (b) 6 (c) 8 (d) 2
61. Find the range of values of  $k$  for which one root of the quadratic equation  $x^2 - (k+1)x + k^2 + k - 8 = 0$  exceeds 2 and the other root is less than 2  
 (a)  $k \in (2, 3)$  (b)  $k \in (-3, 2)$  (c)  $k \in (-2, 2)$  (d)  $k \in (-2, 3)$
62. If  $\cos \theta = \frac{-3}{5}$  and  $\pi < \theta < \frac{3\pi}{2}$ , then the value of  $\tan\left(\frac{\theta}{2}\right)$  is equal to :  
 (a) 2 (b)  $\frac{1}{2}$  (c)  $-\frac{1}{2}$  (d) -2
63. If  $\tan A = \frac{1}{2}$  and  $\tan B = \frac{1}{3}$ , then the value of  $\tan(2A + B)$  is equal to:  
 (a) 2 (b)  $\frac{1}{2}$  (c) 1 (d) 3
64. For what value of  $a$  do the equations  $x^2 + ax + 1 = 0$  and  $x^2 + x + a = 0$  have exactly one root in common?  
 (a)  $a = 1$  (b)  $a = -2$  (c)  $a = 2$  (d)  $a = -1$
65. The number of solutions of the equation  $\tan x \cdot \tan\left(x + \frac{\pi}{3}\right) \cdot \tan\left(x + \frac{2\pi}{3}\right) = \sqrt{3}$  in the interval  $[0, 2\pi]$  is:  
 (a) 3 (b) 6 (c) 9 (d) 4
66. The minimum value of the quadratic function  $y = 4x^2 - 16x + 15$  is :  
 (a) 1 (b) -1 (c) 2 (d) -2
67. The value of the expression  $\cos \frac{\pi}{11} + \cos \frac{3\pi}{11} + \cos \frac{5\pi}{11} + \cos \frac{7\pi}{11} + \cos \frac{9\pi}{11}$  is equal to:  
 (a) 1 (b)  $-\frac{1}{2}$  (c) 0 (d)  $\frac{1}{2}$
68. If  $\sin \theta + \csc \theta = 2$ , then the value of  $\sin^{100} \theta + \operatorname{cosec}^{100} \theta$  is equal to:  
 (a) 100 (b) 0 (c)  $2^{100}$  (d) 2
69. For what values of  $k$  is the inequality  $x^2 - (k-3)x - k + 6 > 0$  valid for all real  $x$ ?  
 (a)  $k \in (-3, 5)$  (b)  $k \in (-5, 3)$   
 (c)  $k \in (-3, 3)$  (d)  $k \in (-5, 5)$
70. The general solution of the trigonometric equation  $\cos \theta + \sin \theta = \cos 2\theta + \sin 2\theta$  is ( $n \in \mathbb{Z}$ ):  
 (a)  $\theta = 2n\pi$  or  $\theta = \frac{2n\pi}{3} + \frac{\pi}{6}$  (b)  $\theta = n\pi$  or  $\theta = \frac{n\pi}{3} + \frac{\pi}{6}$   
 (c)  $\theta = 2n\pi$  or  $\theta = \frac{2n\pi}{3} - \frac{\pi}{6}$  (d)  $\theta = 2n\pi + \frac{\pi}{4}$

## PART-II

### Numerical Type Questions (71-75)

71. If the difference between the roots of the quadratic equation  $2x^2 - (a+1)x + (a-1) = 0$  is equal to their product, find the sum of all possible real values of  $a$ .
72. If  $A = \cos \frac{\pi}{9} \cos \frac{4\pi}{9} \cos \frac{16\pi}{9}$  and  $B = \cos \frac{2\pi}{9} \cos \frac{8\pi}{9} \cos \frac{32\pi}{9}$ , then the value of  $\left| \frac{1}{16AB} \right|$  is equal to:
73. If  $2 + \sqrt{3}$  is a root of the quadratic equation  $x^2 + bx + c = 0$ , where  $b, c \in \mathbb{Q}$ , find the value of  $|b + c|$ .
74. If  $M$  and  $m$  denote the maximum and minimum values of the expression  $f(\theta) = \cos^2 \theta - 6\sin \theta \cos \theta + 3\sin^2 \theta + 2$ , then the value of  $M + m$  is equal to:
75. Find the number of integral values of  $k$  for which the trigonometric equation  $3\sin x + 4\cos x = k + 1$  has at least one real solution for  $x$ .

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**ROUGH WORK**