Question Paper Booklet Code **B**

PART - I : GENERAL ENGLISH

1. When your friend is in need of money and you don't have any money to help him, how do you express your inability?
   (1) I can never help you
   (2) It is none of your business
   (3) Get away from here
   (4) I am very sorry, I don't have either

2. What are the features of a one act play?
   (1) Focus on one incident (2) Minimal characters
   (3) Both (1) and (2) (4) Fantasy

3. Identify the positive quality / qualities given below.
   a) haughty
   b) trusting
   c) idealistic
   d) cautious
   (1) (a) and (c) (2) (d) only
   (3) (a), (b) and (c) (4) (b), (c) and (d)

4. The boy was rewarded for his _____ performance.
   (Fill in the blank with right collocation)
   (1) outraging (2) forgettable
   (3) outstanding (4) allocating

5. 'Oh, what a surprise!' What kind of expression is this?
   (1) Excitement (2) Annoyance
   (3) Dejection (4) Grief

6. 'It is such a delightful moment in my life _____'
   Which category does this expression best fits in?
   (1) Conversation (2) Diary entry
   (3) Biographical sketch (4) Both (1) and (2)

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7. 'Pranam Guruji! I have a wish to present before you'. The sentence above can be the opening remarks of _____.
   (1) A speech (2) An essay
   (3) A conversation (4) A formal letter

8. She had always been bad _____ languages.
   (Choose the right preposition)
   (1) in (2) at
   (3) by (4) of

9. Madan has a little sister. She is in Class 2.
   (Combine the sentences using Relative clause 'Who')
   (1) Madan who has a little sister is in Class 2.
   (2) Madan has a little sister who is in Class 2.
   (3) Madan has a little sister who she is in Class 2.
   (4) Who is Madan's little sister?

10. Which of the following words come first in a dictionary?
   (1) repeat (2) repel
   (3) receive (4) reality

11. I saw my father's face lighting up with contentment.
   What is the synonym of the underlined word?
   (1) satisfaction (2) consent
   (3) connection (4) displeasure

12. You may take left and go straight to reach the post office.
   (1) Giving directions (2) Expressing possibility
   (3) Refusing help (4) Giving permission

13. Which qualities do you find in Wangari Maathai?
   (1) Environmentalist (2) Nobel prize winner
   (3) Feminist (4) All the above

14. The anecdote of Socrates teaches us that _____ can lead to success.
   (1) a weak desire (2) a burning desire
   (3) air to breathe (4) drowning in water

15. He found the world of Apu so fascinating that he saw all three films in one sitting.
(Choose the appropriate antonym for the underlined word)
(1) boring (2) curious
(3) wonderful (4) irregular

16. What is the one word substitute for 'A film that gives facts about something'?
(1) didactic (2) documentary
(3) aesthetics (4) portal

17. The speaker's / writer's personal opinion is expressed in _____
(1) A Diary entry (2) Informal letter
(3) Job application (4) Both (1) and (2)

18. We have experienced that animals are endangered in the poem 'Or will the Dreamer Wake'. This can be best explained as 'Extinction of Wild Life' in the form of _____.
(1) A speech (2) A message
(3) Biography (4) A statement.

19. Raju may recover within a couple of days.
(1) Suggestion (2) Possibility
(3) Offer (4) Statement

20. What is the theme behind the lesson 'The Journey?'
(1) Human relations (2) Unity
(3) Personality development (4) Bio-diversity

21. To Roberge, Ray was not _____
(1) a famous director (2) screenplay writer
(3) a living museum piece (4) an artist

22. Pick out the Rhyming words from the following.
(1) boo-boo (2) zig-zag
(3) hanky-panky (4) tick-tock

23. The man reversed the car.
(Change into Passive Voice)
(1) The car reverses by the man.
(2) The car was reversed by the man.
(3) The car may be reversed by the man.
(4) The man was reversed by the car.

24. It's time you _____ seriously about your future.
(Choose the right verb from the options given below)
(1) thought
(2) think
(3) may have thought
(4) will think

25. Pick out the word with wrong spelling.
(1) departed
(2) absolutly
(3) detractors
(4) dialogue

26. Ramya will announce the news.
(Change into Passive Voice)
(1) The news will announce Ramya.
(2) The news will announced by Ramya.
(3) The news was announced by Ramya.
(4) The news will be announced by Ramya.

27. The course of a person's life is presented in
(1) a message
(2) a situation
(3) a biography
(4) a formal letter

28. What does it mean when Wangari Maathai said, "When we plant a tree, we plant hope".
(1) Trees are the source of life for future generations.
(2) The planting of exotic species can retain water for vegetation.
(3) We can cut down the old trees and plant new ones.
(4) We may plant a tree and hope only in the rural areas.

29. Which qualities in Nick won him the Australian young Citizen of the year award?
(1) his unsuccessful attempt to suicide
(2) his love and respect for parents
(3) his bravery and perseverance
(4) lack of purpose in life

30. I have cut my finger. The underlined phrase is in _____ tense.
(1) Present tense
(2) Present Perfect tense
(3) Past tense
(4) Past Perfect tense

ANDHRA PRADESH RESIDENTIAL JUNIOR COLLEGES COMMON ENTR
TEST-2021
HALL TICKET

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31. I want this parcel to be sent right away
Find the meaning of the word underlined according to the context.
(1) immediately (2) completely
(3) appropriately (4) faraway

32. Suresh, who studies class 6, has left the school just now?
(What type of clause is the underlined part?)
(1) Defining relative clause (2) Non-defining relative clause
(3) Adverbial clause (4) Verb phrase

33. Which of the following is necessary for a conversation?
(1) A theme / issue (2) Two or more people
(3) A resolution (4) All the above

34. The poem 'Once Upon a Time' is
(1) A father's emotions (2) A conversation
(3) A message (4) A speech

35. Abel was in distress to see his daughters dividing his property. How could he express his inner feelings?
(1) through a description (2) through a diary entry
(3) through a letter to friend (4) all the above

36. When your friend receives a gold medal in sports, what would you say?
(1) Oh my God! (2) How disgusting!
(3) What a miracle! (4) Congratulations!

37. Mr. Rao is interested in travelling. I think he can suggest you the best places of visit.
(1) Expressing opinion (2) Expressing gratitude
(3) Complaining (4) Expressing adequacy

38. What was the author's motto in presenting the story 'What is My Name?'
(1) to bring out the identify of women
(2) to remove orthodoxy
(3) to confine the women to household chores
(4) to forget their name and continue a dependent life

39. Which of the following incidents make 'The Brave Potter', a funny story?
(1) The Potter drinks some palm-wine to feel better.
(2) The King declared the Potter his Army General.
(3) The Potter's wife brought the letter of the enemy king to the Emperor.
(4) The Potter hung on the back of the horse like a sack of rice praying God for his life.

40. It doesn't seem delicate, somehow to own your father's slippers.
(Find the antonym of the underlined word)
(1) smooth
(2) tender
(3) awesome
(4) horrible

41. Identify the Greek words from the following.
a) thesis
b) species
c) erratum
d) crisis
(1) (a), (b), (c)
(2) (a), (c), (d)
(3) (a), (b), (d)
(4) (c) only

42. There are many mistakes in your answer. Rewrite everything.
(Combine the sentences using 'since')
(1) Since there are many mistakes in your answer, rewrite everything.
(2) There are many mistakes in your answer since rewrite everything.
(3) There are since many mistakes in your answer, rewrite everything.
(4) Since there are many mistakes in your answer, so rewrite everything.

43. I do not have enough clothes for my journey.
In the above sentence 'enough' acts as _____
(1) an adverb
(2) an adjective
(3) a noun
(4) a verb

44. The context / subject is the necessary element for a _____
(1) Diary entry
(2) A speech
(3) A description
(4) All the above

45. Which of the following is the most important element for a diary entry?
(1) the mood of the writer
(2) formal greetings
(3) note making of an incident
(4) address of the writer

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(46-50) Read the following passage and choose the correct answer to the question that follows.

One day, a father of a rich family took his young son on a trip to the country side to show him how poor, people can be. They spent a day and a night in the farm of a very poor family. When they got back from the trip, the father asked his son, "How was the trip?"

'Very good, Dad!' said the son.

'Did you see how poor people can be?' the father asked.

'Yeah!' 'And what did you learn?' asked father.

The son answered, "I saw that we have a dog at home, and they have four. We have a pool that reaches to the middle of the garden, they have a creek that has no end. We have imported lamps in the garden, they have the stars. Our patio reaches the front yard, they have a whole horizon." The boy's father was speechless. His son added, "Thanks Dad, for showing me how poor we are!".

Everything depends on the way we look at things. Our positive attitude and true spirit, makes us feel we have everything.'

46. What did the father want to show his young son?
(1) every nice thing in the World
(2) the country side
(3) how a city life is better than country life
(4) how poor, people can be at the country side

47. What was the son's feeling after their return from the trip?
(1) He felt tired
(2) He was speechless
(3) He liked the trip
(4) He felt angry upon his father

48. What did the boy learn about the country side during his stay?
(1) People are very poor at country side.
(2) People at country side are much more happier than the rich families.
(3) People own big houses.
(4) The country people have sleepless nights.

49. What was mainly focused in the passage?
(1) The difference between natural and artificial life
(2) The similar features in father and son
(3) How rude was a father to his son?
(4) How disobedient was a son towards his father?

50. What can make us feel rich and happy?
(1) dependent life
(2) a stay at country side
(3) a positive attitude and true spirit
(4) imported lamps, a dog and a patio

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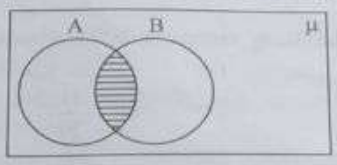
94. Which of the following sets the shaded part is representing?
క్రింది వానిలో ఏ సమితులు షేడ్ చేయబడిన ప్రాంతాన్ని సూచిస్తున్నాయి?



i) $A-(A-B)$ ii) $A \cap B$ iii) $A-B$

Correct option is
సరియైన సమాధానం

(1) (i), (iii) (2) (i), (ii)
(3) (ii), (iii) (4) All (అన్నీ)

95. Let $P=\left\{5,\pi,\sqrt{3},-3,8+\sqrt{3},\frac{6}{7},\frac{1}{\sqrt{2}}\right\}$ and Q is the subset of P which contains all the elements from it which are irrational numbers then n(Q) =

$P=\left\{5,\pi,\sqrt{3},-3,8+\sqrt{3},\frac{6}{7},\frac{1}{\sqrt{2}}\right\}$ అనుకొనుము. Q అనునది P యొక్క ఉపసమితి మరియు Q లో, P లో గల అన్ని కరణీయ సంఖ్యలు మూలకాలుగా ఉంటే n(Q) =

(1) 3 (2) 5 (3) 4 (4) 2

96. If $A = \{\sin0°, \cos60°, \tan45°, \operatorname{cosec}30°\}$ and $B = \{\cot90°, \sin30°, \cot45°, \sec30°\}$ then $A \cap B =$ _____

$A = \{\sin0°, \cos60°, \tan45°, \operatorname{cosec}30°\}$ మరియు $B = \{\cot90°, \sin30°, \cot45°, \sec30°\}$ అయితే $A \cap B =$ _____

(1) $\left\{0,\frac{1}{2},1\right\}$ (2) $\left\{0,\frac{1}{2},\frac{\sqrt{3}}{2},1,2\right\}$

(3) {2} (4) $\left\{\frac{\sqrt{3}}{2}\right\}$

$A=\{0,\frac{1}{2},1,\frac{2}{\sqrt{3}}\}$

$B=\{0,\frac{1}{2},1,\frac{2}{\sqrt{3}}\}$

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54. If $\frac{2}{x}+\frac{3}{y}=13$ and $\frac{5}{x}-\frac{4}{y}=-2$ then the solution is

$\frac{2}{x}+\frac{3}{y}=13$ మరియు $\frac{5}{x}-\frac{4}{y}=-2$ అనే సమీకరణాల సాధన

(1) $\left(\frac{-1}{2},\frac{-1}{3}\right)$ (2) $\left(\frac{-1}{2},\frac{1}{3}\right)$ (3) $\left(\frac{1}{3},\frac{1}{2}\right)$ (4) $\left(\frac{1}{2},\frac{1}{3}\right)$

55. If $ax+by=a^2-b^2$ and $bx+ay=0$ then the value of '$x-y$' is

$ax+by=a^2-b^2$ మరియు $bx+ay=0$ అయితే $x-y$ విలువ

(1) a^2-b^2 (2) $b-a$ (3) $a+b$ (4) a^2+b^2

56. $\frac{1+2+3+\ldots+n}{1+3+5+\ldots+(2n-1)}=$ _____

(1) $\frac{n}{2}$ (2) $\frac{n+1}{2n}$ (3) $\frac{n-1}{2n}$ (4) $\frac{2}{n}$

57. Graphically $y+2=0$ represents a line

(1) parallel and below to x-axis at a distance of 2 units from x-axis
(2) parallel and left side to y-axis at a distance of 2 units from y-axis
(3) parallel and above to x-axis at a distance of 2 units from x-axis
(4) parallel and right side to y-axis at a distance of 2 units from y-axis

రేఖాచిత్ర పరంగా $y+2=0$ అను సమీకరణం సూచించు సరళరేఖ

(1) x-అక్షం నుండి 2 యూనిట్ల దూరంలో x-అక్షానికి సమాంతరంగా దిగువ వైపు ఉంటుంది
(2) y-అక్షం నుండి 2 యూనిట్ల దూరంలో y-అక్షానికి సమాంతరంగా ఎడమ వైపు ఉంటుంది
(3) x-అక్షం నుండి 2 యూనిట్ల దూరంలో x-అక్షానికి సమాంతరంగా ఎగువ వైపు ఉంటుంది
(4) y-అక్షం నుండి 2 యూనిట్ల దూరంలో y-అక్షానికి సమాంతరంగా కుడివైపున ఉంటుంది

58. If $\frac{1}{x+2},\frac{1}{x+3},\frac{1}{x+5}$ are in A.P. then $x=$ _____

$\frac{1}{x+2},\frac{1}{x+3},\frac{1}{x+5}$ అనునది A.P. లో ఉంటే $x=$ _____

(1) 5 (2) 3 (3) 1 (4) 2

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59. If $18, a, b, -3$ are in A.P. then $a^2 - 2ab + b^2 =$ _____
$18, a, b, -3$లు A.Pలో ఉంటే $a^2 - 2ab + b^2 =$ _____
(1) 441 (2) 121 (3) −74 (4) 49

60. If $\log p, \log q, \log r$ are in A.P. then $q^2 - pr =$ _____
$\log p, \log q, \log r$ లు A.Pలో ఉంటే $q^2 - pr =$ _____
(1) 0 (2) 1 (3) −1 (4) pqr

61. The angles of a right angled triangle are in A.P. and the smallest angle is 30° then the ratio of its sides which are opposite to that angles and in ascending order.
ఒక లంబకోణ త్రిభుజంలోని మూడు కోణాలు A.P. లో కలవు మరియు వాటిలో అతిచిన్న కోణం 30° అయితే ఆ కోణాలకు ఎదురుగా ఉన్న భుజాలు అరోహణ క్రమంలో ఉన్నప్పుడు వాటి నిష్పత్తి
(1) $\sqrt{2} : 1 : 2$ (2) $1 : 2 : \sqrt{3}$
(3) $1 : \sqrt{3} : 2$ (4) $1 : 2 : 3$

62. If origin is the centroid of a triangle, whose vertices are $(3, 2), (-6, y)$ and $(3, -2)$ then $y =$ _____
$(3, 2), (-6, y)$ $(3, -2)$ శీర్షాలుగా గలిగిన త్రిభుజం యొక్క గురుత్వకేంద్రం మూలబిందువు అయితే $y =$ _____
(1) 0 (2) 3 (3) 2 (4) 6

63. The ratio in which the line segment joining $P(x_1, y_1)$ and $Q(x_2, y_2)$ is divided by x-axis is
$P(x_1, y_1)$ మరియు $Q(x_2, y_2)$ బిందువులను కలుపు రేఖాఖండాన్ని x- అక్షం విభజించు నిష్పత్తి
(1) $-y_1 : y_2$ (2) $y_1 : y_2$ (3) $x_1 : x_2$ (4) $-x_1 : x_2$

64. The distance between the points $(a\cos\theta, 0), (0, a\sin\theta)$, where $a > 0$ is
$(a\cos\theta, 0), (0, a\sin\theta)$ బిందువుల మధ్య దూరం $(a > 0)$
(1) a (2) $\sqrt{a}$ (3) 1 (4) a^2

65. In ΔABC, D(1, 3), E(−2, 7), F(2, −5) are the midpoints of the sides BC, AC and A respectively, then the area of ΔABC = _____ sq. units.
ΔABCలో D(1, 3), E(−2, 7), F(2, −5),అనునవి వరుసగా BC, AC మరియు AB భుజాలకు మ బిందువులయితే ΔABC వైశాల్యం _____ చ.యు.
(1) 10 (2) 20 (3) 30 (4) 40

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66. If 'h' is the altitude of an equilateral triangle then its area is _____ (sq.units)
ఒక సమబాహు త్రిభుజం యొక్క ఎత్తు 'h' అయితే దాని వైశాల్యం _____ (చ.యూనిట్లు)

(1) $\frac{h^2}{3}$ (2) $\frac{h^2}{\sqrt{3}}$ (3) $\frac{h}{\sqrt{3}}$ (4) $\frac{h}{3}$

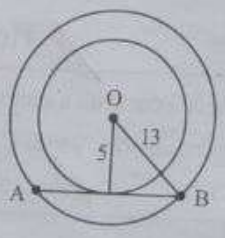
67. In a rhombus ABCD, AB = 4 cm, then $AC^2 + BD^2$ = _____ cm^2.
ABCD రాంబస్‌లో AB = 4 సెం.మీ. అయితే $AC^2 + BD^2$ = _____ చ. సెం.మీ.

(1) 80 (2) 72 (3) 64 (4) 32

68. ABC is a right triangle right angled at 'C'. Given BC = a = 4 cm, CA = b = 3 cm and 'p' be the length of perpendicular from 'C' on AB then p = _____ cm.
లంబకోణ త్రిభుజం ABC లో లంబకోణ శీర్షము 'C' వద్ద కలదు. BC = a = 4 సెం.మీ, CA = b = 3 సెం.మీ. మరియు శీర్షము 'C' నుండి AB కి గీచిన లంబము పొడవు 'p' అని ఇవ్వబడిన, p = _____ సెం.మీ.

(1) 5 (2) $\frac{15}{4}$ (3) $\frac{20}{3}$ (4) $\frac{12}{5}$

69. 'O' is the centre of the two concentric circles radii 13 cm, 5 cm. If AB is a tangent of inner circle, where A, B are two points on the outer circle, then AB = _____ cm.
13 సెం.మీ, 5 సెం.మీ. వ్యాసార్ధాలుగా గలిగిన రెండు ఏక కేంద్ర వృత్తాల కేంద్రం 'O' మరియు AB అంతర వృత్తంనకు స్పర్శరేఖ. A, B లు బాహ్య వృత్తంపై రెండు బిందువులు అయితే AB = _____ సెం.మీ.



(1) 11 (2) 12 (3) 22 (4) 24

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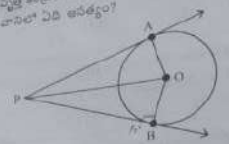
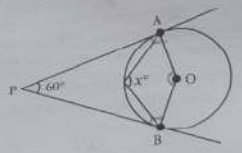
70. From the below following figure, 'O' is the centre of the circle. 'P' is an external point and PA, PB are two tangents drawn from P to the circle. Then which of the following is false?
కింది పటం నుండి, 'O' వృత్త కేంద్రం దాని బాహ్యంలో ఒక బిందువు P నుండి వృత్తానికి గీచిన స్పర్శరేఖలు PA, PB అయితే క్రింది వానిలో ఏది అసత్యం?



(1) PA = PB
(2) OA = OB
(3) $\angle OAP = \angle OBP = 90°$
(4) $\angle POA = \angle POB = 60°$

71. 'O' is the centre of the circle and PA, PB are two tangents drawn from the extemal point 'P' then $x°$ = _____
'O' వృత్త కేంద్రం మరియు బాహ్యబిందువు 'P' నుండి దానికి గీచిన స్పర్శరేఖలు PA, PB లు అయితే $x°$ = _____



(1) 60° (2) 100° (3) 110° (4) 120°

72. The area of sector, whose radius is 7 cm with a sector angle 72° _____
సెక్టారు కోణం 72°తో 7 సెం.మీ. వ్యాసార్ధంగా గల సెక్టారు వైశాల్యం
(1) 30.8 cm^2 (2) 28.8 cm^2 (3) 154 cm^2 (4) 88 cm^2

73. $\frac{2\tan 30°}{1+\tan^2 30°} =$
(1) sin 60° (2) cos 60° (3) tan 60° (4) sin 30°

Question Paper Booklet Code **B**

PART - II : MATHEMATICS

51. Assertion (A) : If α, β, γ are the zeroes of the polynomial $p(x)$ such that $\alpha+\beta+\gamma=3$, $\alpha\beta+\beta\gamma+\gamma\alpha=-10$ and $\alpha\beta\gamma=-24$ then $p(x)=x^3-3x^2-10x+24$.

Reason (R) : The graph of the cubic polynomial, whose zeroes are all real, intersects the x-axis atmost three distinct points.

Now, choose the correct answer

(1) Both Assertion and Reason are true and Reason is supporting the Assertion.
(2) Both Assertion and Reason are true but Reason is not supporting the Assertion.
(3) Assertion is true but Reason is false.
(4) Assertion is false but Reason is true.

వ్యాఖ్యానం(A) : $p(x)$ అనే బహుపదికి α, β, γ లు శూన్యాలు మరియు $\alpha+\beta+\gamma=3$, $\alpha\beta+\beta\gamma+\gamma\alpha=-10$, మరియు $\alpha\beta\gamma=-24$ అయితే $p(x)=x^3-3x^2-10x+24$.

కారణం(R) : ఒక మనబహుపది యొక్క శూన్యాలు అన్నీ వాస్తవాలు అయితే దాని రేఖాచిత్రం x-అక్షాన్ని గరిష్ఠంగా మూడు విభిన్న బిందువుల వద్ద ఖండిస్తుంది.

ఇవ్వబడు సరియైన సమాధానాన్ని ఎన్నుకొనుము.

(1) వ్యాఖ్యానం, కారణం రెండూ సత్యమే. కారణం, వ్యాఖ్యానాన్ని సమర్థిస్తుంది.
(2) వ్యాఖ్యానం, కారణం రెండూ సత్యమే. కానీ, కారణం, వ్యాఖ్యానాన్ని సమర్థించదు.
(3) వ్యాఖ్యానం సత్యం, కానీ కారణం అసత్యం.
(4) వ్యాఖ్యానం అసత్యం, కానీ కారణం సత్యం.

52. If $(x+y, x-y)=\left(\log_2^8, \log_{10}^{10}\right)$ then the value of $2x-3y-1$ is

$(x+y, x-y)=\left(\log_2^8, \log_{10}^{10}\right)$ అయితే $2x-3y-1$ యొక్క విలువ

(1) $\sin 90^\circ$ (2) $\cos 90^\circ$
(3) $\tan 90^\circ$ (4) $\sin 30^\circ$

53. If the system of equations $3x+y=1$ and $(2k-1)x+(k-1)y=2k+1$ are inconsistent th
$k=$ _____

$3x+y=1$ మరియు $(2k-1)x+(k-1)y=2k+1$ అనే రేఖీయ సమీకరణాల వ్యవస్థ అసంగతమం
$k=$ _____

(1) 1 (2) 0
(3) -1 (4) 2

Question Paper Booklet Code **B**

80. The mean of 13 scores is 8. If one of the scores 20 is deleted from them, the average of the remaining scores is _____

13 పరిశీలనాంశాల సగటు 8. ఆ పరిశీలనాంశాల నుండి ఒక పరిశీలనాంశం 20 ని తొలగించగా, మిగిలిన రాశుల సగటు _____

(1) 11 (2) 10 (3) 14 (4) 7

81. The range of the maximum and minimum values of $\sin\theta$, where $0° \le \theta \le 90°$ is _____

$0° \le \theta \le 90°$ అయినపుడు $\sin\theta$ యొక్క గరిష్ఠ, కనిష్ఠ విలువల వ్యాప్తి _____

(1) 0 (2) -2 (3) -1 (4) 1

82. If the mode of the data 3, 1, 4, 3, 5, 7, 3, 9, 3 is $x + 1$, then the value of $2x^2 + 3x + 1$ is _____

3, 1, 4, 3, 5, 7, 3, 9, 3 అనే దత్తాంశం యొక్క బాహుళకం $x + 1$ అయితే $2x^2 + 3x + 1$ యొక్క విలువ _____

(1) 11 (2) 13 (3) 6 (4) 15

83. If the mean of $x, \frac{1}{x}$ is 'k' then the mean of $x^3, \frac{1}{x^3}$ is _____

$x, \frac{1}{x}$ ల సగటు 'k' అయితే $x^3, \frac{1}{x^3}$ ల సగటు _____

(1) k^3 (2) $k^3 + 3$ (3) $k(4k^2 - 3)$ (4) $\left(\frac{k^3 - 3}{2}\right)k$

84. If $P(E) - P(\overline{E}) = \frac{2}{3}$ then find P(E)

$P(E) - P(\overline{E}) = \frac{2}{3}$ అయితే P(E) ను కనుగొనుము.

(1) $\frac{1}{3}$ (2) $\frac{5}{6}$ (3) $\frac{1}{6}$ (4) $\frac{2}{3}$

85. In a single throw of two dice, the probability of getting a total of 11 on the two top faces of the dice is _____

రెండు పాచికలను ఒకేసారి దొర్లించినపుడు, వాటి పైముఖాలపై వచ్చు సంఖ్యల మొత్తం 11 అగుటకు సంభావ్యత _____

(1) $\frac{1}{9}$ (2) $\frac{1}{18}$ (3) $\frac{1}{12}$ (4) $\frac{35}{36}$

Question Paper Booklet Code **B**

86. Which of the following cannot be the probability of an event?
క్రింది వానిలో ఏది ఒక ఘటన యొక్క సంభావ్యత ఐగుటకు సాధ్యం కాదు?

(1) $\frac{2}{3}$ (2) 1.0 (3) -1.5 (4) 15%

87. The centroid of the triangle whose vertices are $\left(\log_{10}^{10}, \log_{10}^{100}\right), \left(\log_4^{4^2}, \log_8^{8^3}\right)$ and $\left(\log_5^1, \log_5^{\frac{1}{25}}\right)$ is

$\left(\log_{10}^{10}, \log_{10}^{100}\right), \left(\log_4^{4^2}, \log_8^{8^3}\right)$ మరియు $\left(\log_5^1, \log_5^{\frac{1}{25}}\right)$ బిందువులు శీర్షాలుగా గలిగిన త్రిభుజ గురుత్వకేంద్రం

(1) $\left(\frac{2}{3}, 3\right)$ (2) (1, 1) (3) (0, –1) (4) $\left(\frac{4}{3}, \frac{7}{3}\right)$

88. If $\log_{10}^{\left[98+\sqrt{x^2-12x+36}\right]} = 2$ then $x =$

(1) 2 or 4 (2) 4 or 8 (3) 8 or 16 (4) –4 or 8

$\log_{10}^{\left[98+\sqrt{x^2-12x+36}\right]} = 2$ అయితే $x =$

(1) 2 లేదా 4 (2) 4 లేదా 8 (3) 8 లేదా 16 (4) –4 లేదా 8

89. If $a = 16$ and $b = 9$ then how many of the following are rational?

$\sqrt{a+b}, \sqrt{ab}, \sqrt{a-b}, \sqrt{\frac{a}{b}}$

$a = 16$ మరియు $b = 9$ అయితే ఈ క్రింది వానిలో ఎన్ని అకరణీయ సంఖ్యలు అవుతాయి?

$\sqrt{a+b}, \sqrt{ab}, \sqrt{a-b}, \sqrt{\frac{a}{b}}$

(1) 1 (2) 2 (3) 3 (4) 4

Question Paper Booklet Code B

90. $\log_5\sqrt{5\sqrt{5\sqrt{5\sqrt{5}\ldots\infty}}} =$ _____

(1) 5 (2) 1 (3) 25 (4) $\frac{1}{2}$

91. If $x = 0.\overline{23}$ and $y = 0.\overline{2}$ then the value of $p - q$, where $x + y$ is written in the form $\frac{p}{q}$ $(q \neq 0, p, q \in \mathbb{Z}$ and GCD of p, q is 1)

$x = 0.\overline{23}, y = 0.\overline{2}$ అయినపుడు $x + y$ ను $\frac{p}{q}$ $(q \neq 0, p, q \in \mathbb{Z}, p, q$ ల గ.సా.భా 1) రూ
వ్రాసినప్పుడు $p - q$ విలువ

(1) 55 (2) 6
(3) -6 (4) 16

92. Which of the following statement is false, where set A and set B are equal?
సమితి A మరియు సమితి B లు సమానమైన, ఈ క్రింది వానిలో ఏ ప్రవచనం అసత్యం?

(1) $n(A) = n(B)$ (2) $A = B$
(3) $B - A = \phi$ (4) $A - B = A$

93. If $A = \{x : x^2 - 5x + 6 = 0\}, B = \{x : x^2 - x - 6 = 0\}$ then find the correct matchin
$A = \{x : x^2 - 5x + 6 = 0\}, B = \{x : x^2 - x - 6 = 0\}$ అయిన క్రింది వానిలో సరియైన జతప
కనుగొనుము.

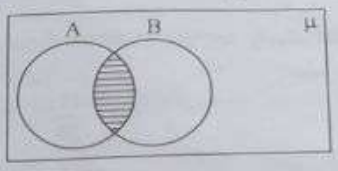
i)	$A \cup B$	p)	$\{-2\}$
ii)	$A \cap B$	q)	$\{2\}$
iii)	$A - B$	r)	$\{-2, 2, 3\}$
iv)	$B - A$	s)	$\{3\}$

(1) (i) → (r), (ii) → (s), (iii) → (q), (iv) → (p)
(2) (i) → (s), (ii) → (q), (iii) → (p), (iv) → (r)
(3) (i) → (p), (ii) → (q), (iii) → (r), (iv) → (s)
(4) (i) → (r), (ii) → (s), (iii) → (p), (iv) → (q)

$x^2 - x - 6$ $AB = -3, +3$ $x^2 - 5x + 6$
$x^2 - 3x + 2x - 6$ $A = +3, -2$ $x^2 - 2x - 3x + 6$
$x(x-3) - 2(x+3)$ $A = x(x-2) - 3(x$
$x \to$ $+2, +2$

Question Paper Booklet Code **B**

94. Which of the following sets the shaded part is representing?
క్రింది వానిలో ఏ సమితులు షేడ్ చేయబడిన ప్రాంతాన్ని సూచిస్తున్నాయి?



i) $A-(A-B)$ ii) $A \cap B$ iii) $A-B$

Correct option is
సరియైన సమాధానం

(1) (i), (iii) (2) (i), (ii)
(3) (ii), (iii) (4) All (అన్నీ)

95. Let $P=\left\{5,\pi,\sqrt{3},-3,8+\sqrt{3},\frac{6}{7},\frac{1}{\sqrt{2}}\right\}$ and Q is the subset of P which contains all the elements from it which are irrational numbers then n(Q) =

$P=\left\{5,\pi,\sqrt{3},-3,8+\sqrt{3},\frac{6}{7},\frac{1}{\sqrt{2}}\right\}$ అనుకొనుము. Q అనునది P యొక్క ఉపసమితి మరియు Q లో, P లో గల అన్ని కరణీయ సంఖ్యలు మూలకాలుగా ఉంటే n(Q) =

(1) 3 (2) 5 (3) 4 (4) 2

96. If A = {sin0°, cos60°, tan45°, cosec30°} and B = {cot90°, sin30°, cot45°, sec30°} then $A \cap B =$ _____

A = {sin0°, cos60°, tan45°, cosec30°} మరియు B = {cot90°, sin30°, cot45°, sec30°} అయితే $A \cap B =$ _____

(1) $\left\{0,\frac{1}{2},1\right\}$ (2) $\left\{0,\frac{1}{2},\frac{\sqrt{3}}{2},1,2\right\}$

(3) {2} (4) $\left\{\frac{\sqrt{3}}{2}\right\}$

Question Paper Booklet Code **B**

97. If α and β are the zeroes of the polynomial $x^2 + 5x + 6$ then $\frac{1}{\alpha} + \frac{1}{\beta} =$

$x^2 + 5x + 6$ అను బహుపది యొక్క శూన్యాలు α మరియు β అయితే $\frac{1}{\alpha} + \frac{1}{\beta} =$

(1) $\frac{5}{6}$ (2) $\frac{11}{30}$

(3) $\frac{6}{5}$ (4) $\frac{-5}{6}$

98. If '-4' is a zero of the polynomial $x^2 - x - (2 + 2k)$ then $k =$ _____

$x^2 - x - (2 + 2k)$ అను బహుపదికి ఒక శూన్యం '-4' అయితే $k =$ _____

(1) 9 (2) 3

(3) -9 (4) 6

99. The distance between the two intersecting points of x-axis and the graph of $p(x) = x^2 - 3x - 4$ is _____ units.

x-అక్షం మరియు $p(x) = x^2 - 3x - 4$ అను బహుపది రేఖాచిత్రాల రెండు ఖండన బిందువుల మధ్య దూరం _____ యూనిట్లు.

(1) 2 (2) 3

(3) 4 (4) 5

100. Find the quotient of $\frac{x^4 - 8x}{x^2 + 2x + 4}$.

$\frac{x^4 - 8x}{x^2 + 2x + 4}$ యొక్క భాగఫలం కనుగొనండి.

(1) $x^2 + 2x + 1$ (2) $x^2 - 2x + 1$

(3) $x(x - 2)$ (4) $x^2 + 2$

$x^2 + 2x + 5x + 6$

$x(x+2) + 3($

Question Paper Booklet Code **B**

74. Which of the following are true?
క్రింది వానిలో ఏవి సత్యం?
i) $\sin^2\theta = 1 - \cos^2\theta$
ii) $\sec^2\theta = 1 + \tan^2\theta$
iii) $\operatorname{cosec}^2\theta = 1 - \cot^2\theta$
(1) (i), (iii) (2) (ii), (iii) (3) (i), (ii) (4) (i), (ii), (iii)

75. $\cos^2 1° + \cos^2 2° + \cos^2 3° + \ldots + \cos^2 89° + \cos^2 90° =$ _____
(1) $45\frac{1}{2}$ (2) 0 (3) $44\frac{1}{2}$ (4) 1

76. If $\tan x° = \sin 45° \cdot \cos 45° + \sin 30°$ then $x° =$ _____
$\tan x° = \sin 45° \cdot \cos 45° + \sin 30°$ అయితే $x° =$ _____
(1) 45° (2) 90° (3) 0° (4) $\frac{1}{2}$

77. At a particular time, if the length of the shadow of a tower of height 20 mtrs is $20\sqrt{3}$ mtrs, then the angle of elevation of the Sun is
ఒక నిర్దిష్ట సమయంలో, 20 మీటర్ల పొడవు గల టవర్ యొక్క నీడ పొడవు $20\sqrt{3}$ మీ. ఉన్నట్లయితే, ఆ సమయంలో సూర్యునితో ఊర్ధ్వకోణం
(1) 30° (2) 45° (3) 60° (4) 90°

78. A ladder 15 m long just reaches the top of a vertical wall. If the ladder makes an angle of 60° with the wall, then the height of the wall is _____ metres.
15 మీ. పొడవుగల నిచ్చెన గోడ పైభాగాన్ని సరిగ్గా తాకుతూ, గోడతో 60° కోణం చేయుచున్నది. అయితే గోడ ఎత్తు _____ మీటర్లు.
(1) $15\sqrt{3}$ (2) $\frac{15\sqrt{3}}{2}$ (3) $\frac{15}{2}$ (4) 15

79. The median of first 8 prime numbers is _____
మొదటి 8 ప్రధాన సంఖ్యల మధ్యగతం _____
(1) 11 (2) 7 (3) 9 (4) 13