

केन्द्रीय माध्यमिक शिक्षा बोर्ड
Central Board of Secondary Education

(परीक्षार्थी भरे To be filled in by the candidate)

परीक्षार्थी प्रश्न-पत्र के ऊपर लिखें कोड को दर्शाये गये बॉक्स में लिखें
Candidate should write code no. as written on the top of the question paper in this box

30/2

अतिरिक्त उत्तर-पुस्तिका (ओं) की संख्या
No. of supplementary answer-book (s) used

NIL

परीक्षा का नाम Name of the examination

AISSE

कक्षा Class

10

विषय Subject

MATHEMATICS

परीक्षा का दिन एवं तिथि

Day & Date of the Examination

MONDAY - 03/03/2014

उत्तर देने का माध्यम Medium of answering the paper

ENGLISH

किसी शारीरिक अक्षमता से प्रभावित हो तो सम्बन्धित वर्ग में ✓ का निशान लगायें

B D H S C

B = दृष्टिहीन, D = मूक व बधिर, H = शारीरिक रूप से विकलांग, S = स्पास्टिक C = डिस्लेक्सिक
If Physically challenged, tick the category

B = Blind, D = Deaf & Dumb, H = Physically Handicapped, S = Spastic, C = Dyslexic

क्या लेखन-लिपिक उपलब्ध करवाया गया : हाँ / नहीं
Whether writer provided : Yes / No.

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प्रमाणित किया जाता है कि मैंने/हमने इस उत्तर पुस्तिका का मूल्यांकन प्रश्न पत्र के समुचित सेट के अनुसार और पूर्णरूप से मूल्यांकन पद्धति के अनुसार किया है।
Certified that I/we have evaluated this answer-book according to the correct set of question paper and strictly as per the marking scheme.

प्रथम परीक्षक के हस्ताक्षर व संख्या

Signature & Number of First Examiner

E 0653408

द्वितीय परीक्षक के हस्ताक्षर व संख्या

Signature & Number of Second Examiner

जहाँ पर सामूहिक अंकन की व्यवस्था हो वहाँ सभी परीक्षकों के लिए हस्ताक्षर करना अनिवार्य है।
All the Examiners are required to sign where there is a provision of team marking.

प्रथम समन्वयकर्ता के हस्ताक्षर व संख्या

Signature & Number of First Co-ordinator

E 0663936

द्वितीय समन्वयकर्ता के हस्ताक्षर व संख्या

Signature & Number of Second Co-ordinator

मुख्य परीक्षक के हस्ताक्षर व संख्या, यदि जाँच की हो

Signature & Number of Head Examiner, if checked

H 004110

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SECTION A

1. (C) $\frac{1}{6}$ ✓

2. (B) $150\sqrt{3}$ ✓

3. (D) 90° ✓

4. (B) 3 ✓

5. (B) $10\sqrt{2}$ ✓

6. (A) 5 ✓

7. (C) 2cm ✓

8. (A) $\frac{1}{8}$ ✓

SECTION B

9. EA and EC are tangents from point E to the circle with centre O_1 .
 $EA = EC$ (1) | Lengths of tangents from an external point to the circle are equal |

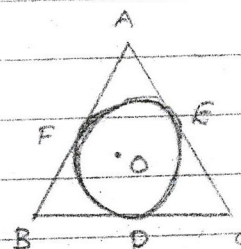
EB and ED are tangents from point E to circle with centre O_2 .
 $EB = ED$ (2) | Lengths of tangents from an external point to the circle are equal |

(1) + (2)

$$\Rightarrow EA + EB = EC + ED$$

$$\Rightarrow AB = CD \quad | \text{Proved} |$$

10. Given : A circle with centre O inscribed in an isosceles triangle with ~~base~~ $AB = AC$.
 To prove : $BD = DC$



Proof :

$AF = AE$ (1) Length of tangents from an external point to the circle are equal.

~~$AB = AC$~~ $BF = BD$ (2) Length of tangents from an external point to circle are equal.

$CD = EC$ (3) Length of tangents from an external point to circle are equal.

$AB = AC$ | given |

$AF + BF = AE + EC$ i.e.,

$BF = EC$ | since $AF = AE$ |

$BD = CD$ | from (2) and (3) |

11 (i) Even numbers occur in $(2,2) (2,4) (2,6) (4,2) (4,4) (4,6) (6,2) (6,4) (6,6)$

$P(\text{number of each die is even}) = \frac{9}{36} = \frac{1}{4}$

(ii) Sum of numbers are 5 in $(1,4) (2,3) (3,2) (4,1)$

$$P(\text{sum of numbers appearing on two dice is 5}) = \frac{4}{36} = \frac{1}{9}$$

$$12. \quad \text{SA of hemisphere} = 462 \text{ cm}^2$$

$$3\pi r^2 = 462$$

$$3 \times \frac{22}{7} \times r^2 = 462$$

$$r^2 = 49$$

$$r = 7 \text{ cm}$$

$$\text{Volume of hemisphere} = \frac{2}{3}\pi r^3$$

$$= \frac{2}{3} \times \frac{22}{7} \times 7 \times 7 \times 7$$

$$= \frac{2156}{3} \text{ cm}^3$$

13. The sequence goes like this,

$$110, 120, 130, \dots, 990$$

Since they have a common difference of

10, they form an A.P., $a = 110$, $a_n = 990$, $d = 10$

$$a_n = a + (n-1)d$$

$$990 = 110 + (n-1) \times 10$$

$$990 - 110 = (n-1) \times 10$$

$$880 = (n-1) \times 10$$

$$n-1 = 88$$

$$n = 89$$

There are 89 terms between 101 and 999 divisible by 2 and 5.

$$14. \quad a = 9, b = -3k, c = k$$

Since roots of the equation are equal

$$b^2 - 4ac = 0$$

$$(-3k)^2 - (4 \times 9 \times k) = 0$$

$$9k^2 - 36k = 0$$

$$k^2 - 4k = 0$$

$$k(k-4) = 0$$

$$k = 0 \text{ or } k = 4$$

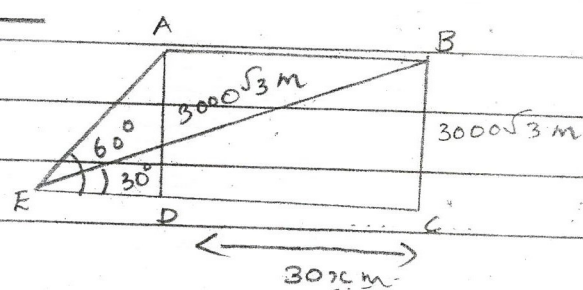
Since $k = 0$ is not possible for the equations, $k = 4$

SECTION C

$$15. \quad \angle AED = 60^\circ, \angle BEC = 30^\circ$$

$$AD = BC = 3000\sqrt{3} \text{ m}$$

Let the speed of the



$$\text{aeroplane} = x \text{ m/s}$$

$$\text{then } DC = 30 \times x$$

$$= 30x \text{ m} \quad \dots (1)$$

$\triangle AED$ is right angled,

$$\tan 60^\circ = \frac{AD}{DE}$$

$$\sqrt{3} = \frac{3000\sqrt{3}}{DE}$$

$$DE = 3000 \text{ m} \quad \dots (2)$$

$\triangle BEC$ is right angled

$$\tan 30^\circ = \frac{BC}{EC}$$

$$\frac{1}{\sqrt{3}} = \frac{3000\sqrt{3}}{DE + CD}$$

$$DE + CD = 3000 \times \sqrt{3} \times \sqrt{3}$$

$$3000 + 30x = 9000 \quad \text{from (1) and (2)}$$

$$30x = 6000$$

$$x = 200 \text{ m/s}$$

speed of plane is 200 m/s

16. side of cube, $a = 7\text{ cm}$

The diameter of the largest possible

sphere is 7 cm | same as side of cube |

Radius, $r = 7/2\text{ cm}$

Volume of the wood left = volume of cube - volume of sphere

$$\begin{aligned} &= a^3 - \frac{4}{3} \pi r^3 \\ &= 7 \times 7 \times 7 - \frac{4}{3} \times \frac{22}{7} \times \frac{7}{2} \times \frac{7}{2} \times \frac{7}{2} \\ &= 7 \times 7 \left(7 - \frac{11}{3} \right) \\ &= 7 \times 7 \left(\frac{21-11}{3} \right) \\ &= 7 \times 7 \times \frac{10}{3} \\ &= \frac{490}{3} \text{ cm}^3 \end{aligned}$$

17. width of ^{water in} canal = 6 m

Height of ^{water in} canal = 1.5 m

Length of water in canal is $1\text{ km} = 4\text{ km} = 4000\text{ m}$

Let the Base area of field be x

The height of standing water in the field = $\frac{8}{100}\text{ m}$

Volume of water in canal is 10 m³ water i.e. $\frac{1}{6}$ hours

= Volume of water in field

$$\frac{1}{6} \times 6 \times 1.5 \times 4000 = \text{Base area} \times \frac{8}{100}$$

$$15 \times 4000 = x \times \frac{8}{100}$$

$$x = 15 \times 500 \times 100 \text{ m}^2$$

$$= 750000 \text{ m}^2$$

18.

Area of trapezium = 24.5 cm^2

$$\frac{h(a+b)}{2} = 24.5, \text{ where } a = AD, b = BC$$

$$\frac{h(10+4)}{2} = 24.5$$

$$h \times 7 = 24.5$$

$$h = \frac{24.5}{7} = 3.5 \text{ cm}$$

$AB \perp AD$ | Given |

$\therefore AB$ is the height of the trapezium

$$h = AB = 3.5 \text{ cm}$$

But AB is the radius of the quadrant

Area of the shaded region = Area of trapezoid -

Area of quadrant

$$\Rightarrow 24.5 - \frac{1}{2} \times \frac{11}{7} \times 3.5 \times 3.5$$

$$\Rightarrow 24.5 - \frac{19.25}{2}$$

$$\Rightarrow \frac{49 - 19.25}{2}$$

$$\Rightarrow \frac{29.75}{2}$$

19. A(3, -3) and B(-2, 7)

on the x axis, the y coordinate is zero

So, let the point be (x, 0)

Let the ratio be k:1

$$(x, 0) = \left(\frac{-2k+3}{k+1}, \frac{7k-3}{k+1} \right)$$

$$\frac{7k-3}{k+1} = 0$$

$$7k-3=0 \Rightarrow k = \frac{3}{7}$$

$$\frac{-2k+3}{k+1} = x$$

$$\frac{-2 \times \frac{3}{1} + 3}{\frac{3}{1} + 1} = x$$

$$\frac{-\frac{6}{1} + 3}{\frac{10}{1}} = x$$

$$\frac{-6 + 3}{10} = x$$

$$\frac{-3}{10} = x$$

$$x = -\frac{3}{10}$$

The coordinates of the point is $(-\frac{3}{10}, 10)$

20. Area of the shaded region = Area of major sector AOB - Area of major sector COD

$$\Rightarrow \frac{360-60}{360} \times 22 \times 42 - \frac{360-60}{360} \times 22 \times 21$$

$$\Rightarrow \frac{300}{360} \times 22 \times 42 - \frac{300}{360} \times 22 \times 21$$

$$\Rightarrow 3465 \text{ cm}^2$$

$$21. \quad \frac{16}{x} - 1 = \frac{15}{x+1}$$

$$\frac{16}{x} - \frac{15}{x+1} = 1$$

$$16(x+1) - 15x = x^2 + x$$

$$16x + 16 - 15x = x^2 + x$$

$$x + 16 = x^2 + x$$

$$x^2 - 16 = 0$$

$$(x+4)(x-4) = 0$$

$$x+4=0, \quad x-4=0$$

$$x = -4, \quad x = +4$$

$$22. \quad a_2 + a_1 = 30$$

$$a+d + a+6d = 30$$

$$2a+7d = 30 \quad \dots (1)$$

$$(2 \times a_8) - 1 = a_{15}$$

$$(2(a+7d)) - 1 = a+14d$$

$$(2a+14d) - 1 = a+14d$$

$$2a+14d-1 = a+14d$$

$$2a-a=1$$

Substitute $a = 1$ in (1)

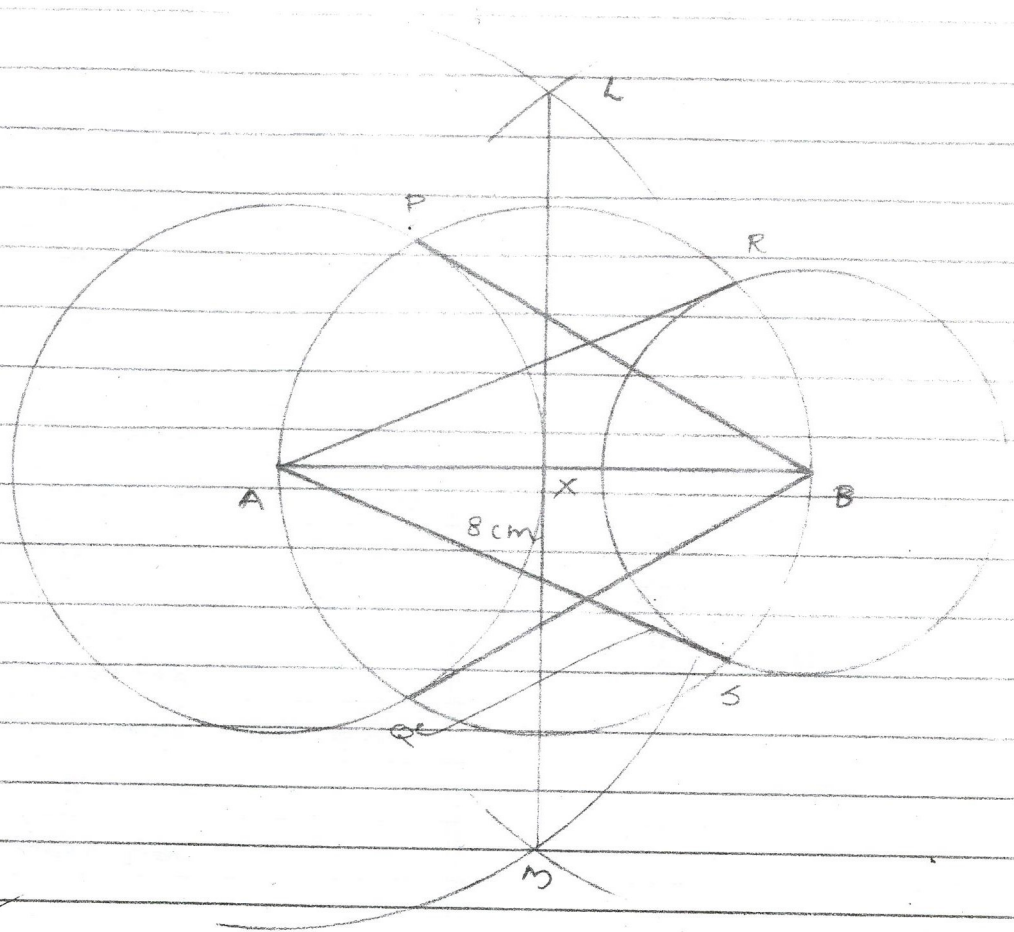
$$2a+7d = 30$$

$$2 \times 1 + 7d = 30$$

$$7d = 28$$

$$d = 4$$

The A.P. is 1, 5, 9, 13, 17, \dots



Step 1: Construct a line segment AB of 8cm length

Step 2: With A as centre, draw a circle of radius

4 cm

Step 3: With B as centre draw a circle of radius 3 cm

Step 4: Draw a perpendicular bisector of AB and let it intersect AB at X

Step 5: With X as centre and XA as radius, draw a circle.

Step 6: Let this circle intersect the circle with centre A at P and Q and the circle with B as centre at R and S respectively

Step 7: Join AR, AS, BP and BQ

∴ AR, AS, BP and BQ are the required tangents.

24.

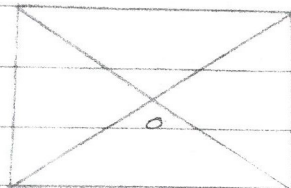
$$\begin{aligned}
 AC &= \sqrt{(5-2)^2 + (6+1)^2} \\
 &= \sqrt{3^2 + 7^2} \\
 &= \sqrt{9+49} \\
 &= \sqrt{58}
 \end{aligned}$$

A(2, -1)

B(5, -1)

D(2, 6)

C(5, 6)



$$\begin{aligned}
 BD &= \sqrt{(5-2)^2 + (-1-6)^2} \\
 &= \sqrt{3^2 + 7^2} \\
 &= \sqrt{9+49} \\
 &= \sqrt{58}
 \end{aligned}$$

Since $AC = BD = \sqrt{58} \text{ cm}$, the diagonals of rectangle ABCD are equal

$$\begin{aligned}
 \text{Midpoint of AC} &= \left(\frac{2+5}{2}, \frac{-1+6}{2} \right) \\
 &= \left(7/2, 5/2 \right)
 \end{aligned}$$

$$\begin{aligned}
 \text{Midpoint of BD} &= \left(\frac{2+5}{2}, \frac{6+(-1)}{2} \right) \\
 &= \left(7/2, 5/2 \right)
 \end{aligned}$$

Since the midpoint of diagonal AC = Midpoint of

diagonal $BD = (\frac{7}{2}, \frac{5}{2})$,
they bisect each other

SECTION D

25. Given : AB is a tangent to
circle with centre O. AB
touches the circle at P.
T and R are points on
the tangent AB.

To prove : $OP \perp AB$

Proof

$$OC = OP = OD \quad \text{radii of circle}$$

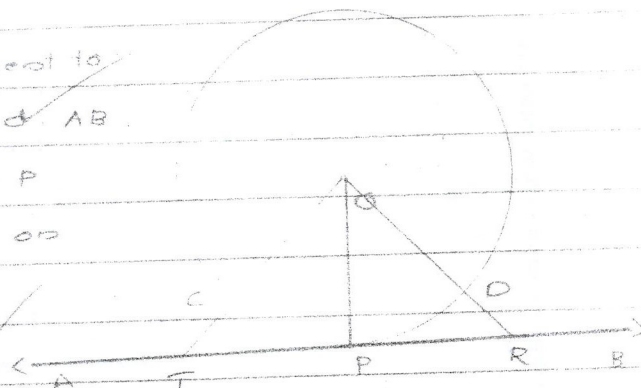
$$OC = OP$$

$$OC + CT > OP \quad \dots (1)$$

$$OD = OP$$

$$OD + DR > OP \quad \dots (2)$$

From (1) and (2), we can understand
that OP is shorter than any distance drawn



from the
towards the tangent ^{centre} OP is the shortest
distance. The shortest distance is the perpendicular
 $\therefore OP \perp AB$

It is proved that the tangent at any point of
circle is perpendicular to the radius through
the point of contact.

26. diameter of spherical marble = 1.4 cm

Radius, $r = 1.4/2 = 0.7 = 7/10$ cm

Diameter of cylindrical vessel = 7 cm

Radius, $R = 7/2$ cm

Let h be the rise in water level, then
Volume of 150 spherical marbles = Volume
of water risen.

$$\Rightarrow 150 \times \frac{4}{3} \times \pi \times \left(\frac{7}{10}\right)^3 = \pi \times \frac{1}{2} \times 7^2 \times h$$

$$\Rightarrow h = \frac{4 \times 7}{5}$$

$$\Rightarrow 28/5 = h$$

$$\Rightarrow h = 5.6 \text{ cm}$$

The rise in the level of water, $h = 5.6$ cm

27. Height of frustum, $h = 24\text{cm}$

$$r_1 = 20\text{cm}$$

$$r_2 = 8\text{cm}$$

$$\text{Volume of container} = \frac{1}{3} \times \frac{22}{7} \times (20^2 + 20 \times 8 + 8^2) \times 24$$

$$\Rightarrow \frac{1}{3} \times \frac{22}{7} \times (400 + 160 + 64) \times 24$$

$$\Rightarrow \frac{1}{3} \times \frac{22}{7} \times 624 \times 24$$

$$\Rightarrow \frac{22}{7} \times 624 \times 8 \text{ cm}^3$$

$$\Rightarrow \frac{22}{7} \times 624 \times 8 \times \frac{1}{1000} \text{ litres}$$

$$\text{Total cost} = \frac{22}{7} \times \frac{22}{7} \times \frac{1}{1000} \times 624 \times 8 \times \frac{1}{1000}$$

$$= \frac{66 \times 624 \times 8}{1000}$$

$$= 329.472$$

$$\Rightarrow \text{Rs } 329.472$$

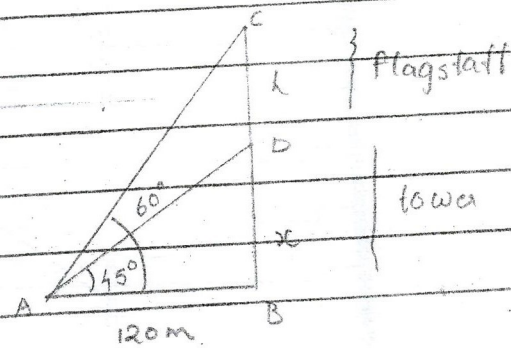
$$\Rightarrow \text{Rs } 329.5 \text{ [approximately]}$$

28. Height of flagstaff = $CD = h\text{m}$

Height of tower = $BD = x\text{m}$

$$\angle DAB = 45^\circ, \angle CAB = 60^\circ$$

$$AB = 120\text{m}$$



$\triangle ABD$ is right angled

$$\tan 45^\circ = 1$$

$$\frac{AD}{AB} = 1$$

$$x = AB = 120 \text{ m}$$

$\triangle ACB$ is right angled

$$\tan 60^\circ = \sqrt{3}$$

$$\frac{h+x}{120} = \sqrt{3}$$

$$h + 120 = 120\sqrt{3}$$

$$h = 120\sqrt{3} - 120$$

$$h = 120(\sqrt{3} - 1)$$

$$h = 120(1.73 - 1)$$

$$h = 120 \times 0.73$$

$$h = 87.6 \text{ m}$$

29. Let the speed of stream = x km/h

Then the speed of boat in upstream = $(18 - x)$ km/h

speed of boat in downstream = $(18 + x)$ km/h

According to the question,

$$\frac{24}{18-x} - \frac{24}{18+x} = 1$$

$$\frac{24(18+x) - 24(18-x)}{18^2 - x^2} = 1$$

$$432 + 24x - 432 + 24x = 324 - x^2$$

$$48x = 324 - x^2$$

$$x^2 + 48x - 324 = 0$$

$$x^2 + 54x - 6x - 324 = 0$$

$$x(x+54) - 6(x+54) = 0$$

$$(x+54)(x-6) = 0$$

$$x+54 = 0, x-6 = 0$$

$$x = -54, x = 6$$

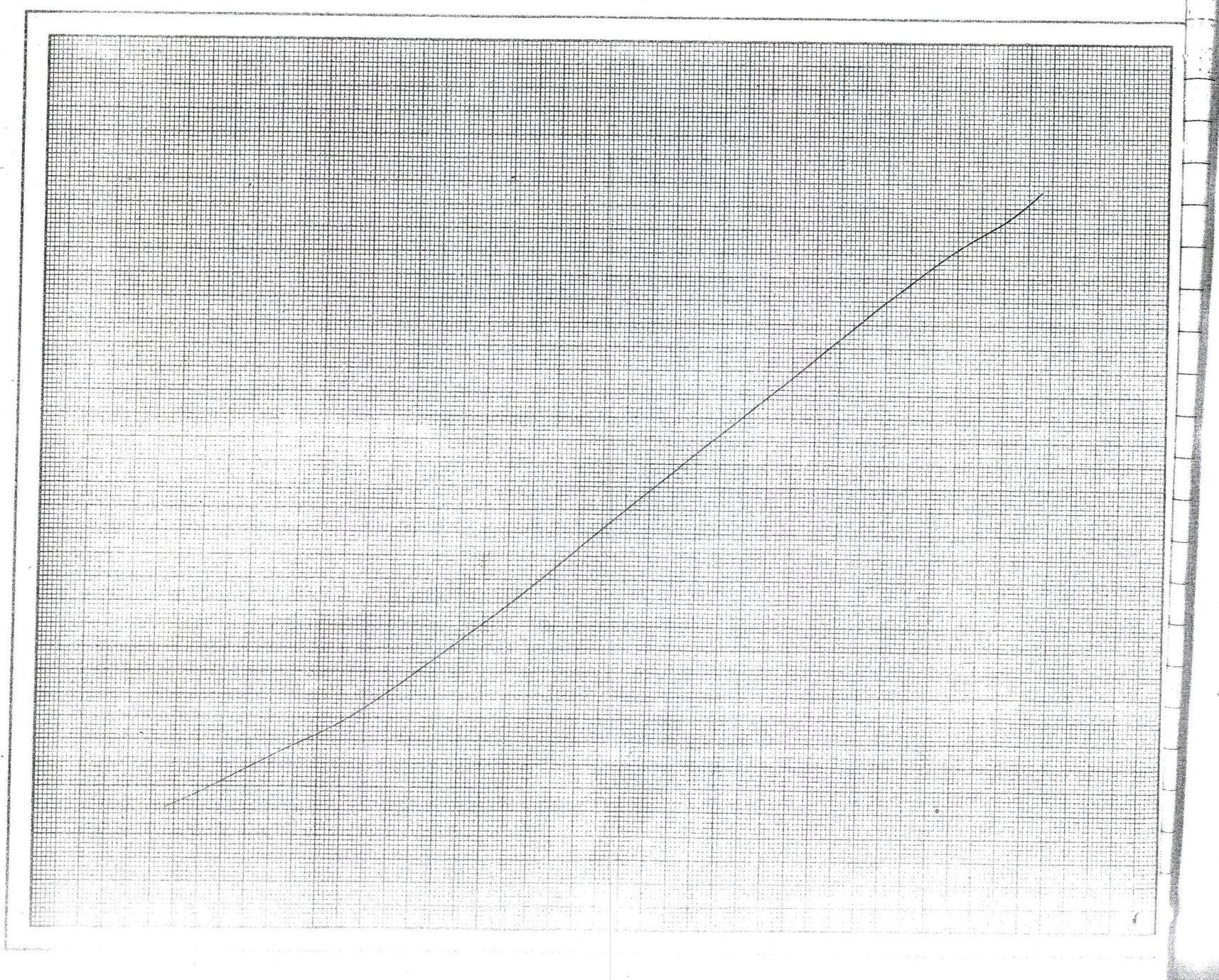
Since speed cannot be negative,

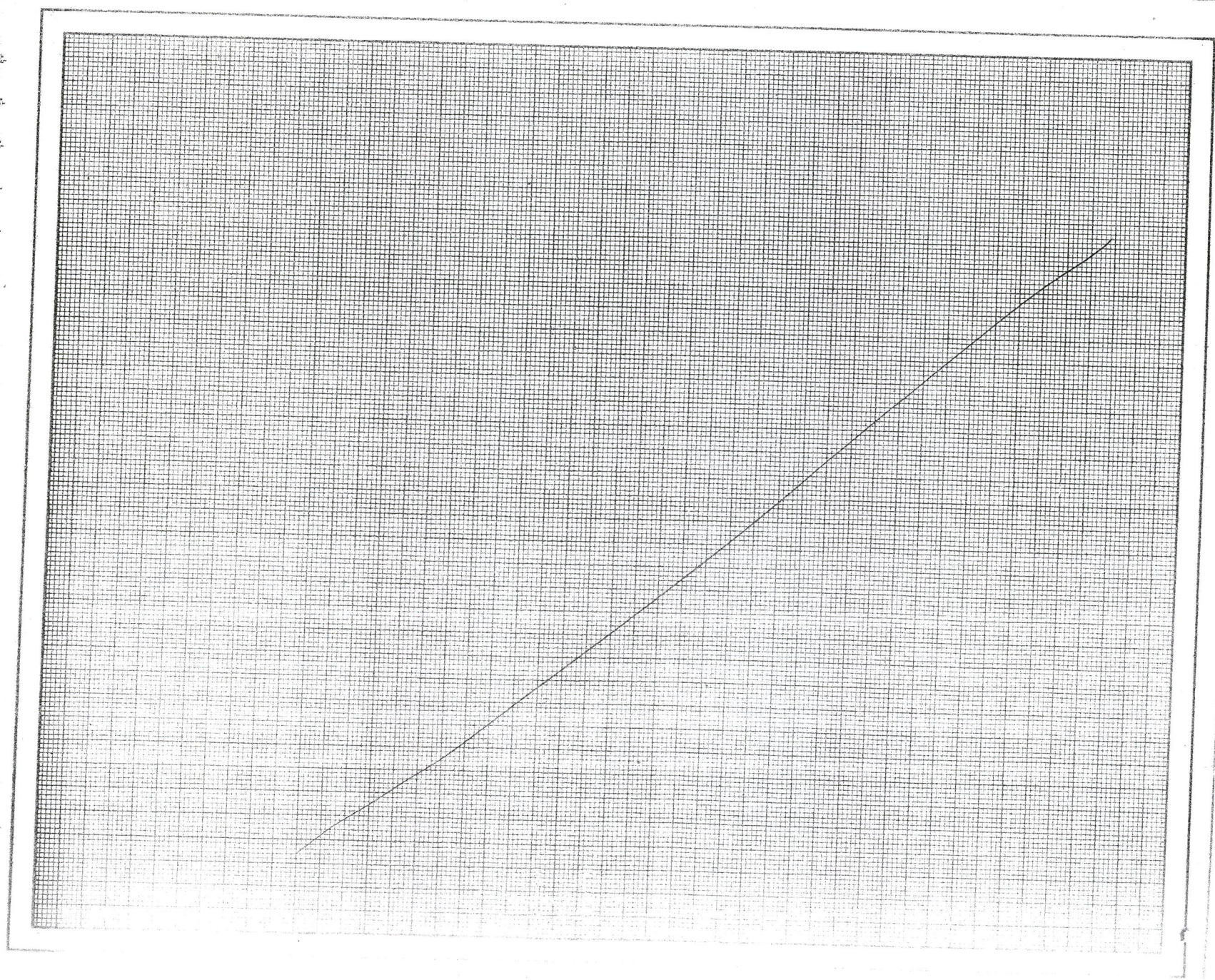
the speed of stream $x = 6 \text{ km/h}$

Q. The sequence of number of days is

$$2 \times 1, 2 \times 2, 2 \times 3, \dots, 2 \times 12$$

$$2, 4, 6, \dots, 24$$





~~The sequence forms an A.P. as the common difference is 2~~

~~The total number of trees planted by students~~

$$\text{~~}S_n = \frac{n}{2} \times (a + a_n)~~$$

$$\text{~~where } n=12, a=2, a_n=24~~$$

$$\text{~~}S_{12} = \frac{12}{2} \times (2+24)~~$$

$$\text{~~}= 6 \times 26~~$$

$$\text{~~}= 156~~$$

~~Ans.~~

30 The sequence of trees goes like this.

4, 8, 12, ... 48

They form an A.P. with common difference 4

The total number of trees planted by students 1 to 12 is given by

$$S_n = \frac{n}{2} \times (a + a_n)$$

$$\text{where } n=12, a=4, a_n=48$$

$$S_{12} = \frac{12}{2} \times (4+48)$$

$$= 6 \times 52 = 312$$

The value of environmental observation is shown by the students

$$3) \quad \frac{x-3}{x-4} + \frac{x-5}{x-6} = 10/3$$

$$\frac{(x-3)(x-6) + (x-4)(x-5)}{(x-4)(x-6)} = 10/3$$

$$\Rightarrow \frac{x^2 - 9x + 18 + x^2 - 9x + 20}{x^2 - 10x + 24} = 10/3$$

$$\Rightarrow 3(2x^2 - 18x + 38) = 10x^2 - 100x + 240$$

$$\Rightarrow 6x^2 - 54x + 114 = 10x^2 - 100x + 240$$

$$\Rightarrow 4x^2 - 46x + 126 = 0$$

$$\Rightarrow 2x^2 - 23x + 63 = 0$$

$$\Rightarrow 2x^2 - 14x - 9x + 63 = 0$$

$$\Rightarrow 2x(x-7) - 9(x-7) = 0$$

$$\Rightarrow (2x-9)(x-7) = 0$$

$$\Rightarrow 2x-9=0, x-7=0$$

$$\Rightarrow x = \frac{9}{2}, x = 1$$

32. i) No. of cards remaining = $52 - 3 \times 2$
 $= 52 - 6 = 46$

No. of red cards = $26 - 6 = 20$

$P(\text{a red colour}) = \frac{20}{46} = \frac{10}{23}$

ii) No. of queen = $4 - 2 = 2$

$P(\text{a queen}) = \frac{2}{46} = \frac{1}{23}$

iii) No. of ace = 4

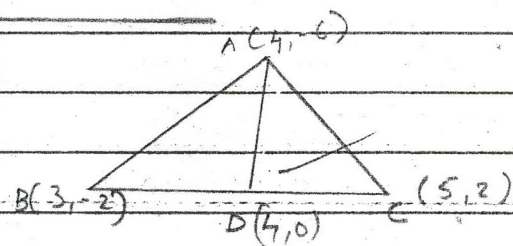
$P(\text{an ace}) = \frac{4}{46} = \frac{2}{23}$

iv) No. of face cards = $12 - 6 = 6$

$P(\text{a face card}) = \frac{6}{46} = \frac{3}{23}$

33. AD is the median of $\triangle ABC$ from vertex A

$D(x, y) = \left(\frac{3+5}{2}, \frac{-2+2}{2} \right) = (4, 0)$



$$\begin{aligned}
 \text{Area of } \triangle ADB &= \frac{1}{2} \times (4(0+2) + 4(-2+6) + 3(-6-0)) \\
 &= \frac{1}{2} \times (8 + 16 - 18) \\
 &= \frac{1}{2} \times 6 = 3 \text{ square units} \quad (1)
 \end{aligned}$$

$$\begin{aligned}
 \text{Area of } \triangle ACB &= \frac{1}{2} \times (4(0-2) + 4(2+6) + 5(-6-0)) \\
 &= \frac{1}{2} \times (-8 + 32 - 30) \\
 &= \frac{1}{2} \times -6 = -3
 \end{aligned}$$

Since area is positive,

$$\text{Area of } \triangle ACB = 3 \text{ square units} \quad (2)$$

From (1) and (2) Area of $\triangle ADB$ = Area of $\triangle ACB$

It is verified that median of $\triangle ABC$ divides it into two triangles of equal areas.

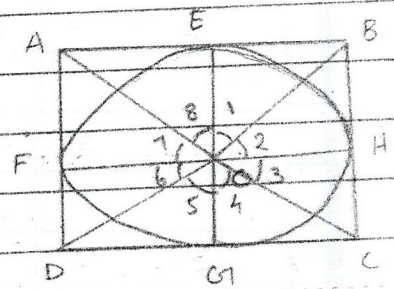
34. Given: A circle with centre O

is inscribed in a quadrilateral ABCD

In $\triangle AEO$ and $\triangle AFO$,

$OE = OF$ (radii of circle)

$\angle OEA = \angle OFA = 90^\circ$ (radii to tangents)



perpendicular to the line through the
point of contact is perpendicular
to the tangent

$$OA = OA \quad (\text{common side})$$

$$\triangle AEO \cong \triangle AFO \quad (\text{RHS rule})$$

$$\angle 7 = \angle 8 \quad \dots (1) \quad (\text{C.P.C.T.})$$

Similarly,

$$\angle 1 = \angle 2 \quad \dots (2)$$

$$\angle 3 = \angle 4 \quad \dots (3)$$

$$\angle 5 = \angle 6 \quad \dots (4)$$

$$\angle 1 + \angle 2 + \angle 3 + \angle 4 + \angle 5 + \angle 6 + \angle 7 + \angle 8 = 360^\circ \quad (\text{angle around a point is } 360^\circ)$$

$$2\angle 1 + 2\angle 3 + 2\angle 4 + 2\angle 5 = 360^\circ$$

$$\angle 1 + \angle 3 + \angle 4 + \angle 5 = 180^\circ$$

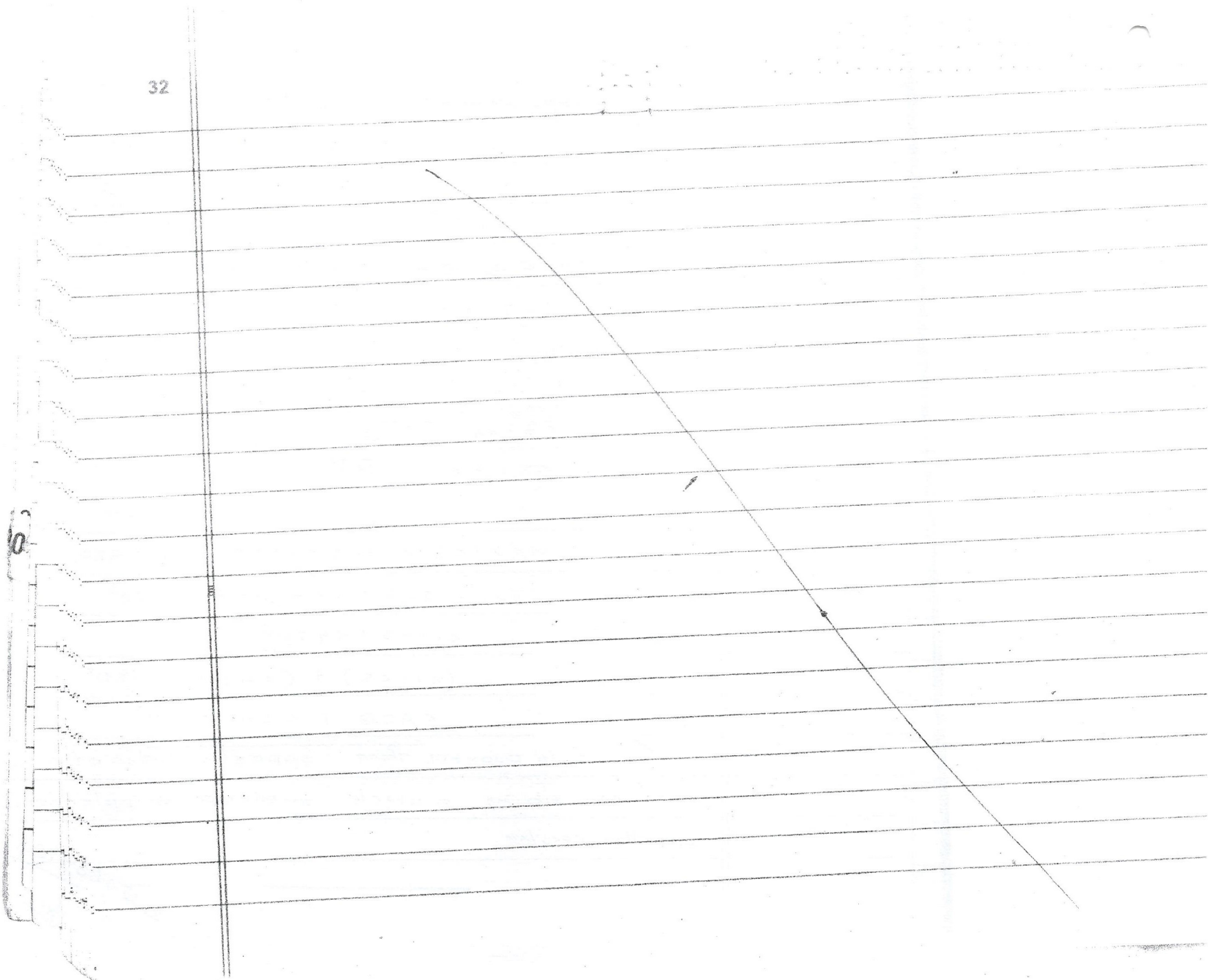
$$(\angle 1 + \angle 3) + (\angle 4 + \angle 5) = 180^\circ$$

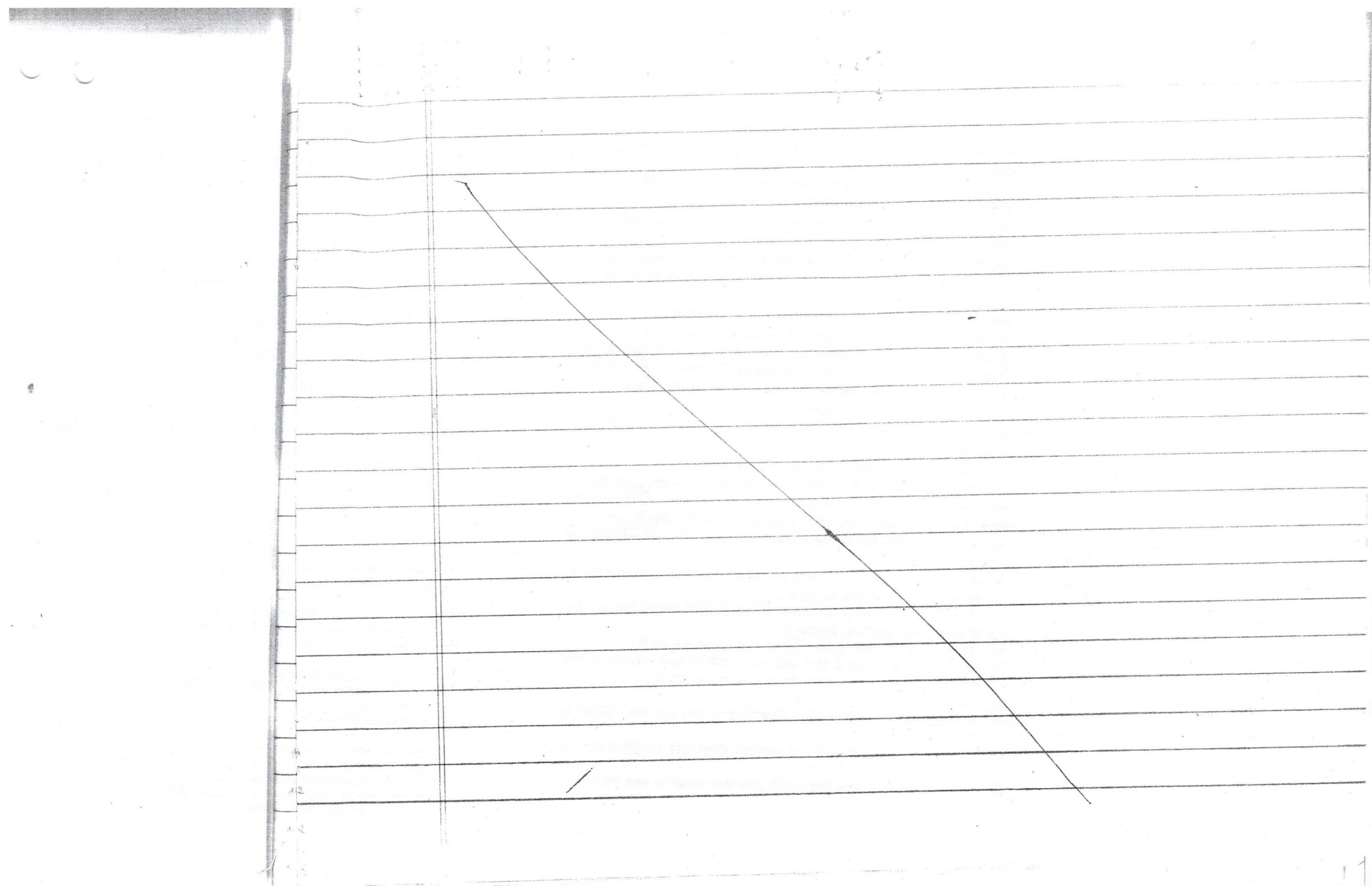
$$\angle AOB + \angle DOC = 180^\circ$$

✓ It is proved that opposite sides of a quadrilateral circumscribing a circle subtend supplementary angles at the centre.

✓ E0663936
✓ E0653408

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1. उत्तर-पुस्तिका लेते ही इसके पृष्ठ गिनकर देख लें कि इसमें कवर सहित 48 पृष्ठ हैं एवं सही क्रम में हैं।
2. उत्तर-पुस्तिका, पूरक उत्तर-पुस्तिका, ग्राफ पेपर, नक्शे आदि के ऊपर किसी भी स्थान पर (अन्दर अथवा बाहर) कोई विशेष चिह्न आदि न लगायें।
3. अपना अनुक्रमांक, नाम, विद्यालय का नाम व परीक्षा का स्थान किसी उत्तर में न लिखें।
4. अतिरिक्त उत्तर-पुस्तिका की क्रम संख्या उपस्थिति शीट पर लिखें।
5. उत्तर-पुस्तिका के प्रत्येक पृष्ठ के दोनों ओर तथा लाइन पर लिखें। बीच-बीच में पृष्ठ व्यर्थ ही खाली न छोड़कर अथवा अधिक चौड़ा हाशिया छोड़कर पृष्ठ नष्ट न करें।
6. उत्तर-पुस्तिका के पृष्ठों को मोड़े या फाड़े नहीं और बीच-बीच में व्यर्थ ही खाली न छोड़ें। इस उत्तर-पुस्तिका के भर जाने पर ही अतिरिक्त उत्तर-पुस्तिका मांगें और जब तक वह नहीं भर जाये तब तक अन्य अतिरिक्त उत्तर-पुस्तिका न मांगें।
7. अपने उत्तरों के आरम्भ में प्रश्न पत्र में दी हुई संख्या के अनुसार संख्या लिखें।
8. पूरे प्रश्न (अथवा प्रश्न के एक भाग) के समाप्त होने पर उत्तर के नीचे रेखा खींच दें।
9. यदि आपने ग्राफ पेपर, नक्शा अथवा अतिरिक्त उत्तर-पुस्तिका काम में ली हो तो उसे मुख्य उत्तर-पुस्तिका के साथ अच्छी प्रकार से नथी कर दें। परन्तु अपना अनुक्रमांक केवल मुख्य उत्तर-पुस्तिका पर दिये हुए स्थान पर ही लिखें। ग्राफ, नक्शे, अतिरिक्त उत्तर-पुस्तिका आदि पर अनुक्रमांक न लिखें।
10. केवल काली-नीली व नीली स्याही का ही प्रयोग करें।
11. रफ अथवा कच्चे काम आदि के लिए संबंधित पृष्ठ के दांयी ओर उचित हाशिया खींच लें बाद में उस काम को एक रेखा द्वारा काट दें।
12. उत्तर-पुस्तिका अपने सहायक निरीक्षक को दिये बिना परीक्षा भवन न छोड़ें।
13. यदि परीक्षा के दौरान, कोई परीक्षार्थी निम्नलिखित में से किसी भी हरकत में शामिल पाया जाता है तो यह मान लिया जाएगा कि परीक्षार्थी ने परीक्षाओं में अनुचित साधनों को अपनाया है और उसका परीक्षा परिणाम घोषित नहीं किया जाएगा। किन्तु उस पर अन्फेयर मीन्स (यू.एफ.एम.) अंकित कर दिया जाएगा :-
(क) यदि उसके पास संबंधित विषय की परीक्षा से सम्बन्ध कागज, पुस्तकें, नोट्स अथवा कोई अन्य सामग्री पायी गयी हो ;
(ख) यदि वह प्रत्यक्ष अथवा अप्रत्यक्ष रूप से किसी प्रकार की सहायता प्रदान कर रहा हो अथवा प्राप्त कर रहा हो या ऐसा करने का प्रयास कर रहा हो ;
(ग) यदि वह लिखने के लिए केन्द्र अधीक्षक द्वारा दी गई उत्तर-पुस्तिका के अतिरिक्त किसी अन्य प्रकार की सामग्री में प्रश्न अथवा उत्तर लिख रहा हो ;
(घ) यदि वह उत्तर-पुस्तिका अथवा पूरक उत्तर-पुस्तिका इत्यादि के पृष्ठ फाड़ रहा हो ;
(ङ) यदि वह परीक्षा केन्द्र में परीक्षा के दौरान परीक्षा स्टाफ के अतिरिक्त किसी अन्य व्यक्ति से सम्पर्क करने अथवा पत्र व्यवहार कर रहा हो या ऐसा करने का प्रयास कर रहा हो ;
(च) परीक्षा कक्ष से उत्तर-पुस्तिका बाहर ले जाने पर ;
(छ) परीक्षा संबंधी कोई अन्य अवांछनीय तरीकों अथवा साधनों का प्रयोग करने अथवा ऐसा करने का प्रयास करने पर ;
(ज) प्रश्न-पत्र अथवा उसका कुछ भाग बाहर भेजने अथवा उत्तर-पुस्तिका / पूरक उत्तर-पुस्तिका शीट अथवा इसका कुछ भाग बाहर भेजने पर ; और
(झ) परीक्षाओं के आयोजन से सम्बन्ध किसी कर्मचारी अथवा किसी परीक्षार्थी को धमकी देने पर।

1. Make sure that the answer-book contains 48 pages and are properly serialised in number (including title page) as soon as you receive it.
2. DO NOT make any special sign or mark in or outside the answer-book, supplementary answer-book, graph-paper, map etc.
3. DO NOT write your roll no., name of your school or place of examination in any of your answers.
4. You must write the supplementary answer-book serial no. in the attendance sheet.
5. Write on each ruled line on both sides and do not waste pages by leaving a wider margin.
6. DO NOT tear out or fold the pages of the answer-book and do not leave any page blank unnecessarily. No supplementary answer-book (s) should be asked for unless this answer-book / the previous supplementary answer-book is finished.
7. Number your answers according to their numbers in the question paper.
8. Draw a line when a question (or a part thereof) is finished.
9. Securely tag your answer-book with supplementary answer-book (s), graph-paper, map etc. if used by you, but DO NOT write your Roll No. on the supplementary answer-book, graph-paper, map etc.
10. Use only blue-black or royal-blue ink.
11. For rough calculation etc., appropriate margin on the right-hand side of the page may be drawn. The rough calculations etc. should be crossed out afterwards.
12. DO NOT leave the examination hall without handing over the answer-book to the Asstt. Supdt.
13. If during the course of examination, a candidate is found indulging in any of the following, he/she shall be deemed to have used unfair means at the examinations, and as such his/her result shall not be declared but shall be marked as UNFAIR MEANS (U.F.M.) :-
(a) having in possession papers, books, notes or any other material or information relevant to the examination in the paper concerned ;
(b) giving or receiving assistance directly or indirectly of any kind or attempting to do so ;
(c) writing questions or answers on any material other than the answer-book given by the Centre Superintendent for writing answers ;
(d) tearing of any page of the answer-book or supplementary answer-book etc ;
(e) contacting or communicating or trying to do so with any person, other than the Examination Staff, during the examination time in the examination centre ;
(f) taking away the answer-book out of the examination hall/room ;
(g) using or attempting to use any other undesirable method or means in connection with the examination ;
(h) smuggling out Question Paper or its part or smuggling out answer-book/supplementary answer-sheet or part thereof ; and
(i) threatening any of the officials connected with the conduct of the examinations or threatening of any of the candidates.