

I. Choose the correct answer: $6 \times \frac{1}{2} = 3$

1. LED stands for _____.
 - a) Light Emitter Diode
 - b) Least Emitter Diode
 - c) Light Emitting Diode
 - d) Least Emitting Diode
2. _____ is the SI unit of power.
 - a) Watt
 - b) Volt
 - c) Ampere
 - d) Joule
3. The resistivity of Chromium is _____.
 - a) $6.84 \times 10^{-8} \Omega m$
 - b) $12.9 \times 10^{-8} \Omega m$
 - c) $1.6 \times 10^{-8} \Omega m$
 - d) $7.84 \times 10^{-8} \Omega m$
4. Waves produced during an earthquake are called _____ waves.
 - a) audible
 - b) ultrasonic
 - c) infrasonic
 - d) none of the above
5. Velocity of sound in the atmosphere of a planet is 500ms^{-1} .
The minimum distance between the sources of sound and the obstacle to hear the echo should be _____.
 - a) 17m
 - b) 20m
 - c) 25m
 - d) 50m
6. Where will you create category of blocks?
 - a) Block Palette
 - b) Block menu
 - c) Script area
 - d) Sprite

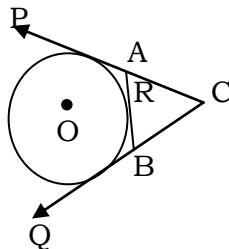
II. Answer any five in brief: $5 \times 2 = 10$

7. What happens to the resistance as the conductor is made thicker?
8. Match the following:
 - a) Electric Current - ohm meter
 - b) Potential difference - Kilowatt hour
 - c) Specific resistance - Ampere
 - d) Electrical energy - Volt
 - Watt
9. Draw a diagram to show three resistors are connected in series.
10. An electrical iron is carrying 2A at 120V. Find the resistance of the device?

11. Two observers are stationed in two boats 4.5km apart. A sound signal sent by one under water, reaches the other after 3 seconds. What is the speed of sound in the water?
 12. We cannot talk to one another on the surface of moon. Why?
 13. Write any two differences between sound and light waves.
- III. Answer any five in detail: $5 \times 4 = 20$
14. State two conditions necessary for hearing an echo.
 15. Write about the effect of density in sound.
 16. If air temperature can reach 50°C then what is the velocity of sound in air at that temperature? ($V_0 = 33/\text{ms}^{-1}$)
 17. Write a short note on mega phone.
 18. a) What is meant by electric current?
b) Which instrument is used to measure the electric current?
How should it be connected in a circuit?
 19. Define one watt.
 20. A car battery supplies 48J of energy at 12V over a certain period of time. Determine the charge moved during this period.
- IV. Answer any one in detail: $1 \times 7 = 7$
21. Draw and write in detail about resistors connected in parallel.
 22. a) What do you understand by the term ultrasonic vibration?
b) State any five uses of ultrasonic vibrations?
 23. A source of sound is moving with a velocity of 50ms^{-1} towards a stationary listener. The Listener measures the frequency of the source as 1000 Hz. What will be the apparent frequency of the source when it is moving away from the listener after crossing him? (velocity of sound in the medium is 330ms^{-1})

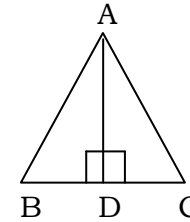
I. Choose the correct answer: 10x¹/₂=5

- If the slope of the line PQ is $\frac{1}{\sqrt{3}}$ then slope of the perpendicular bisector of PQ is _____.
 a) $\sqrt{3}$ b) $-\sqrt{3}$ c) $\frac{1}{\sqrt{3}}$ d) 0
- If (5,7), (3,P) and (6,6) are collinear, then value of P is _____.
 a) 3 b) 6 c) 9 d) 12
- If A is a point on the Y-axis whose ordinate is 8 and B is a point on the X-axis whose abscissa is 5 then the equation of the line AB is
 a) $8x + 5y = 40$ b) $8x - 5y = 40$ c) $x = 8$ d) $y = 5$
- When proving that a quadrilateral is a trapezium, it is necessary to show
 a) two sides are parallel
 b) two parallel and two non-parallel sides
 c) opposite sides are parallel
 d) all sides are of equal length
- In figure CP and CQ are tangents to a circle with centre at O. ARB is another tangent touching the circle at R. If CP=11cm and BC=7cm, then the length of BR is _____.
 a) 6cm b) 5cm c) 8cm d) 4cm

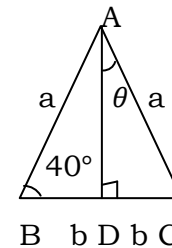


- If in ΔABC , $DE \parallel BC$. $AB=3.6$ cm, $AC=2.4$ cm and $AD=2.1$ cm then the length of AE is
 a) 1.4cm b) 1.8cm c) 1.2cm d) 1.05cm

7. In the adjacent figure $\angle BAC=90^\circ$ and $AD \perp BC$ then



- BD.CD=BC² b) AB.AC=BC² c) BD.CD=AD² d) AB.AC=AD²
- Two circles of radius 8.2cm and 3.6cm touch each other externally, the distance between their centres is
 a) 1.8cm b) 4.1cm c) 4.6cm d) 11.8cm
- In the given diagram θ is _____.
 a) 50° b) 30° c) 45° d) 60°



- The areas of two similar triangles are 16cm² and 36cm² respectively. If the altitude of the first triangle is 3cm, then the corresponding altitude of the other triangle is _____.
 a) 6.5cm b) 6cm c) 4cm d) 4.5cm

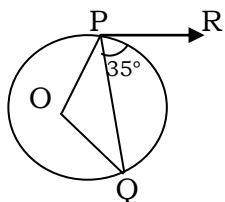
II. Answer any five of the following: 5x2=10

- State Menelaus Theorem.
- Say True or False:
 - Can we draw two tangents parallel to each other on a circle?
 - Can we draw two tangents perpendicular to each other on a circle?
- Find the value of 'a' if the points (2,3), (4,a) and (6,-3) are collinear.
- The line 'P' passes through the points (3,-2) (12,4) and the line Q passes through the points (6,-2) and (12,2). Is P parallel to Q?
- Find the intercept made by the line $3x-2y-6=0$

16. Find the slope of the line which is perpendicular to $2x-3y+8=0$
17. A straight line passes through $(1,2)$ and has the equation $y-2x-k=0$. Find K.
18. Find the equation of the line having slope 3 and y-intercept 4.
- II. Answer any four of the following: $4x+4=16+1$
19. Find the equation of a line passing through the point of intersection of lines $4x+7y-3=0$ and $2x-3y+1=0$ that has equal intercepts on the axes.
20. Find the equation of the line passing through $(6,-2)$ and perpendicular to the line joining the points $(6,7)$ and $(2,-3)$.
21. Show that in a triangle, the medians are concurrent.
22. If the points $A(-3,9)$, $B(a,b)$ and $(4,5)$ are collinear and if $a+b=1$ then find 'a' and 'b'.
23. A quadrilateral has vertices at $A(-4,-2)$, $B(5,-1)$, $C(6,5)$ and $D(-7,6)$. Show that the midpoints of its sides form a parallelogram.
24. State and prove alternate segment theorem. (5)
- IV. Answer the following: $1 \times 8 = 8$
25. Take a point which is 11cm away from the centre of a circle of radius 4cm and draw the two tangents to the circle from that point.

I. Choose the correct answer: $10x^{1/2}=5$

- Centroid is the _____ of the medians.
 - point of contact
 - point of concurrence
 - centre
 - point on triangle
- In the given figure if PR is tangent to the circle at P and O is the centre of the circle, then $\angle POQ$ is _____.

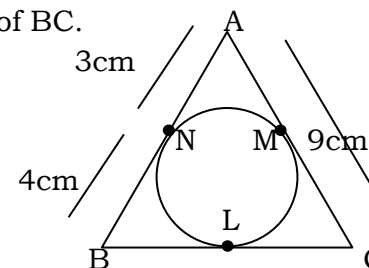


- 100°
 - 120°
 - 70°
 - 90°
- If $b < 0$, then the line $y=b$ lies _____.
 - above the x-axis
 - below the x-axis
 - above the y-axis
 - below the y-axis
 - The straight line given by the equation $x=11$ is
 - parallel to x-axis
 - parallel to y-axis
 - passing through the origin
 - passing through the point $(0,11)$
 - In ΔLMN , $\angle L=20^\circ$, $\angle M=50^\circ$. If $\Delta LMN \sim PQR$ then the value of $\angle R$ is
 - 40°
 - 70°
 - 30°
 - 110°
 - Two poles of heights 6m and 11m stand vertically on a plane ground. If the distance between their feet is 12m, what is the distance between their tops?
 - 13m
 - 14m
 - 15m
 - 12.8m
 - The slope of a vertical line is _____.
 - 0
 - 1
 - undefined
 - negative of x-axis
 - The slope of the line which is perpendicular to a line joining the points $(0,0)$ and $(-8,8)$ is
 - 1
 - 2
 - 1
 - $1/3$

- The equation of a line passing through the origin and perpendicular to the line $7x-3y+4=0$ is
 - $7x-3y+4=0$
 - $3x-7y+4=0$
 - $3x+7y=0$
 - $7x-3y=0$
- A straight has equation $8y=4x+21$. Which of the following is true?
 - The slope is 0.5 and the y-intercept is 2.6
 - The slope is 5 and the y-intercept is 1.6
 - The slope is 0.5 and the y-intercept is 1.6
 - The slope is 5 and the y-intercept is 2.6

II. Answer any five of the following: $5 \times 2 = 10$

- Find the slope of $7x - \frac{3}{17} = 0$
- Find the equation of a line through the given pair of points $(2,4)$ and $(-1,3)$
- The line R passes through the points $(-2,2)$ and $(5,8)$ and the line S passes through the points $(-8,7)$ and $(-2,0)$. Is the line 'R' perpendicular to 'S'?
- a) A chord is a subsection of _____.
 b) No tangent can be drawn from an _____ of the circle.
- In the given figure ΔABC is circumscribing a circle. Find the length of BC.

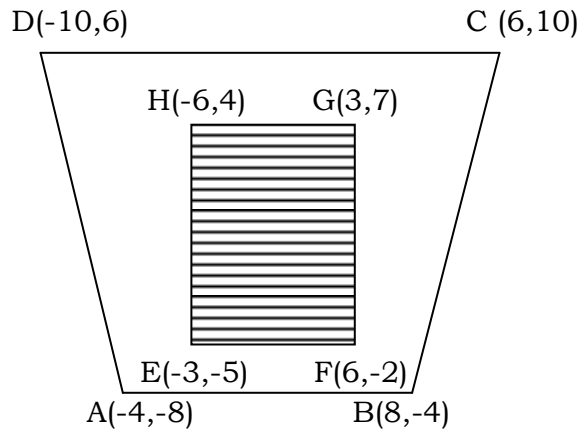


- Find the area of the triangle formed by the points $(-5,0)$, $(0,-5)$ and $(5,0)$.
- a) What is the inclination of a line whose slope is 1?
 b) Two straight lines $a_1x+b_1y+c_1=0$ and $a_2x+b_2y+c_2=0$ where the coefficients are non-zero, are parallel if and only if _____.
- Find the equation of a straight line perpendicular to the line $y = \frac{4}{3}x - 7$ and passing through the point $(7,-1)$.

III. Answer any four of the following: (Q.No.24 is compulsory)

$$4x^4=16+1$$

19. Find the equation of a straight line through the intersection of lines $5x-6y=2$, $3x+2y=10$ and perpendicular to the line $4x-7y+13=0$
20. A line makes positive intercepts on coordinate axes whose sum is 7 and it passes through $(-3,8)$. Find its equation.
21. Show that the given points form a right angled triangle and check whether they satisfy Pythagoras theorem .
 $L(0,5)$, $M(9,12)$ and $N(3,14)$
22. In the figure the quadrilateral swimming pool shown is surrounded by concrete patio. Find the area of the patio.



23. In ΔABC , with $\angle B=90^\circ$, $BC=6\text{cm}$ and $AB=8\text{cm}$, D is a point on AC such that $AD=2\text{cm}$ and E is the midpoint of AB. Join D to E and extend it to meet at F. Find BF.
24. State and prove alternate segment theorem. (5)
- IV. Answer the following: $1 \times 8 = 8$
25. Draw a tangent at any point R on the circle of radius 3.4cm and centre at P.

I. Choose the correct answer: 5x1=5

1. Who was the first director of Whampoa military academy____.
a) Sun - Yat - Sen b) Chiang-Kai-Shek
c) Chou-En-Lai d) Michael Borodis
2. The most abundant source of energy is _____.
a) Biomass b) Sun c) Coal d) Oil
3. One of shore based steel plants of India is located at _____.
a) Kolkata b) Tuticorin
c) Goa d) Vishakapatnam
4. Which of the following country is not the founder member of NAM?
a) Yugoslavia b) Indonesia c) Egypt d) Pakistan
5. How many countries are having membership in WTO at present?
a) 159 b) 164 c) 148 d) 128

II. Fill in the blanks: 5x1=5

6. Perestroika refers to the programme introduced by _____.
7. The first paper mill of India was started in 1812 at _____ in West Bengal.
8. India conducted its first nuclear test as _____.
9. The Dutch captured Pondicherry in _____.
10. French East India company established second factory at _____.

III. Match the following: 5x1=5

- | | |
|-----------------------|-------------------------------|
| 11. a) Dr.Sun-Yat-Sen | - Enforce International Trade |
| b) Bauxite | - 1954 |
| c) Detroit of India | - Chennai |
| d) WTO | - Aircraft |
| e) Panchsheel | - Kuomintang |
| | - 1955 |

IV. Answer any two of the captions: 2x2=4

12. COLD WAR:
a) Name the two military blocks that emerged in the post World War-II.

- b) Who coined the term “Cold War” and who used it first?
- c) What was the response of Soviet Russia to the formation of NATO?
- d) What was the context in which Warsaw pact was dissolved?

13. Kuomintang:

- a) Who is the leader of Kuomintang?
- b) Which place he conquered by the end of 1925?
- c) When did he sieged Shanghai and Nanking?
- d) Which government have formed in China?

IV. Distinguish between for any one of the following: 1x2=2

14. Renewable and non renewable resources.
15. Thermal power and nuclear power.

V. Answer any four of the following in brief: 4x1½=6

16. How was the Cuban missile crisis diffused?
17. What is Arab nationalism?
18. State the uses of Magnesium?
19. What is Byssinosis?
20. What is foreign policy?
21. List any four guiding principles of Panchsheel?
22. What is fair trade?
23. What are the main objectives of WTO?

VI. Answer any two of the following: 2x4=8

24. Explain how in 1928 Kuomintang and Chiang-Kai Shek established Central Government in China?
25. What are the non-conventional energy resources? Explain it?

26. What is MNC and explain the reasons for the growth of MNC?

VII. Mark the following places in India outline: 5x1=5

27. i) One Iron ore production centre.
ii) One coal mining centre.
iii) National Highway NH-7
iv) One nuclear gas
v) Ghataprabha River valley project.

I. Choose the correct answer: 5x1=5

- Dental formula of rabbit is _____.
a) $\frac{2033}{1023}$ b) $\frac{1023}{2033}$ c) $\frac{2023}{1033}$ d) $\frac{1033}{2023}$
- Mammals are _____.
a) Warm-blooded b) Homeotherm
c) Both of these d) None of these
- _____ contains carpels.
a) Sepals b) Petals c) Stamens d) Pistil
- Fertilization results in the formation of _____.
a) conidia b) zygote c) zoo spores d) Aplanospores
- The miracle rice which saved millions of lives and celebrated its 50th birthday is _____.
a) IR8 b) IR24 c) Atomita d) Ponni

II. Answer any four of the following: 4x2=8

- What is corpus callosum?
- What is the first event involved in the sexual reproduction of a flowering plant? Mention its types.

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- Differentiate between Binary fission from Multiple fission.
- Draw a neat labelled diagram of pollen grain.
- Define genetic engineering.
- Differentiate between somatic and germline gene therapy.

III. Answer any five in brief: 5x4=20

- How does locomotion take place in Leech?
- Explain the structure of pollen grain with a neat labelled diagram.
- Explain the structure of Human sperm with a labeled diagram.
- What are the phases of menstrual cycle? Indicate the changes in the ovary and uterus.
- What are the effects of hybrid vigour in animals.
- Write a note on Mass selection.
- Write a note on urinary tract infection.

IV. Answer any one of the following in detail: 1x7=7

- What is pollination? Mention its types. List out the advantages and disadvantages of both the types.
- Explain Biotechnology in medicine.

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26.11.19 (FN) EVERWIN MATRIC. HR. SEC. SCHOOL Time: 1.15hrs.
Std: X (A-E) COMPREHENSIVE REVISION PROGRAMME (CRP) -II Marks: 40
ENGLISH - PART-I