

I. Choose the correct answer: 10x1=10

- The point whose ordinate is 4 and which lies on the y-axis is \_\_\_\_\_.  
a) (4,0)      b) (0,4)      c) (1,4)      d) (4,2)
- If  $(x + 2, 4) = (5, y - 2)$ , then the coordinates  $(x, y)$  are  
a) (7,12)      b) (6,3)      c) (3,6)      d) 2,1)
- The mid - point of the line joining  $(-a, 2b)$  and  $(-3a, -4b)$  is  
a)  $(2a, 3b)$       b)  $(-2a, -b)$       c)  $(2a, b)$       d)  $(-2a, -3b)$
- If the -y-coordinate of a point is zero, then the point always lies  
a) in the I quadrant      b) in the II quadrant  
c) on x - axis      d) on - y axis
- The distance between the two points  $(2,3)$  and  $(1,4)$  is \_\_\_\_  
a) 2      b)  $\sqrt{56}$       c)  $\sqrt{10}$       d)  $\sqrt{2}$
- The sum of the squares of two sides is equal to the squares of the third side, which is the \_\_\_\_\_ of the right angled triangle.  
a) opposite side      b) adjacent side  
c) hypotenuse      d) vertex
- A man goes 3km towards north and then 4km towards east.  
How far is he away from the initial position?  
a) 4.5km      b) 5km      c) 6km      d) 5.5km
- Cubic polynomial may have maximum of \_\_\_\_\_ linear factors.  
a) 1      b) 2      c) 3      d) 4
- GCD of any two prime numbers is \_\_\_\_\_.  
a) -1      b) 0      c) 1      d) 2
- The GCD of  $x^4 - y^4$  and  $x^2 - y^2$  is  
a)  $x^4 - y^4$       b)  $x^2 - y^2$       c)  $(x + y)^2$       d)  $(x + y)^4$

II. Answer any six of the following: 6x2=12

- Find the distance between the following pair of points.  
 $(3,4)$  and  $(-7,2)$
- Find the mid-points of the line segment  $(-2,3)$  and  $(-6,-5)$
- Find the coordinates of the point which divides the line segment joining the points  $(3,5)$  and  $(8,-10)$  internally in the ratio 3:2

- Find the centroid of the triangle whose vertices are  $(-5,-5)$ ,  $(1,-4)$  and  $(-4,-2)$

- Plot the following points in the Co-ordinate system and identify the quadrants P $(-7,6)$ , Q $(7,-2)$ , R $(-6,-7)$ , S $(3,5)$  and T $(3,9)$

- Find the quotient and remainder of the following  
 $(4x^3 + 6x^2 - 23x + 18) \div (x + 3)$

- Find the GCD of  $9a^2b^2c^3$ ,  $15a^3b^2c^4$

- Find the GCD of  $a^{m+1}$ ,  $a^{m+2}$ ,  $a^{m+3}$

III. Answer any four of the following: 4x5=20

- Show that the following points taken in order form an isosceles triangle.  
A $(6,-4)$ , B $(-2,-4)$ , C $(2,10)$
- Find the coordinates of the points of trisection of the line segment joining the points A $(-5,6)$  and B $(4,-3)$
- The vertices of a triangle are  $(1,2)$ ,  $(h,-3)$  and  $(-4,K)$ . If the centroid of the triangle is at the point  $(5,-1)$  then find the value of  $\sqrt{(h+k)^2 + (h+3k)^2}$
- If the quotient obtained on dividing  $(8x^4 - 2x^2 + 6x - 7)$  by  $(2x + 1)$  is  $(4x^3 + Px^2 - qx + 3)$ , then find p, q and also the remainder.
- Factorise the polynomial  $x^3 - 3x^2 - 10x + 24$
- The sum of  $(x + 5)$  observations is  $(x^3 + 125)$ . Find the mean of the observations.

IV. Graph: 1x8=8

- a) Draw the graph of  $y=4x - 1$   
(or)  
b) Solve graphically  
 $y=2x + 1$ ;  $y + 3x - 6 = 0$

SOCIAL SCIENCE

I. Choose the correct answer: 7x1=7

1. The founder of Han dynasty was \_\_\_\_\_.  
a) Wu-Ti b) Hung Chao c) Liupang d) Mangu Khan
2. The other name for Greeks was \_\_\_\_\_.  
a) Hellenists b) Hellenes c) Phoenicians d) Spartans
3. \_\_\_\_\_ was the old religion of Japan.  
a) Shinto b) Confucianism c) Taoism d) Animism
4. The Sunda Treneb lies in the \_\_\_\_\_ ocean.  
a) Atlantic b) Pacific c) Indian d) Antarctic
5. Apartheid was followed by \_\_\_\_\_.  
a) South Sudan b) South Africa c) Nigeria d) Egypt
6. The currency of Japan is \_\_\_\_\_.  
a) Yen b) Yuan c) Riyal d) Rupee
7. Assertion (A) : Buddhism went to China from India  
Reason (R) : The earliest Indian inhabitants in China were the followers of Buddhism  
a) (A) is correct: (R) is wrong  
b) Both (A) & (R) are wrong  
c) Both (A) & (R) are correct  
d) (A) is wrong (R) is irrelevant to (A)

II. Match the following: 5x1=5

- |                       |   |                        |
|-----------------------|---|------------------------|
| 8. i) Baghdad         | - | Japan                  |
| ii) Acropolis         | - | Rupee                  |
| iii) Kuroshio Current | - | Political rights       |
| iv) Right to Vote     | - | City of Arabian Nights |
| v) Srilanka           | - | A fortified city       |
|                       | - | China                  |

III. Fill in the blanks: 5x1=5

9. Greeks defeated the persians at \_\_\_\_\_.
10. \_\_\_\_\_ established Ottoman supremacy in the Balkans.
11. The universal Declaration of Human Rights Contain \_\_\_\_\_ articles.
12. \_\_\_\_\_ system can be considered as the first form of trade.

13. Money supply is divided into \_\_\_\_\_.

IV. Answer the following questions: 2+1=3

14. Distinguish between: Abyssal plains and Ocean deeps.
15. Give reason for continental shelf provides good fishing ground.

V. Answer any eight of the following: 8x2=16

16. What is hydrological cycle?
17. Mention the various relief features of ocean floor.
18. Write a note on The Great Wall of China.
19. What do you know of the Carthaginian leader Hannibal?
20. Highlight the main contribution of Constantine.
21. What are the factors that generate the ocean currents?
22. What is Human Right?
23. Define POCSO.
24. What is ancient money?
25. What were the items used as barter during olden days?

VI. Answer all the questions given under each caption by selecting any one: 1x4=4

26. Rule of Abbasids  
a) Who were Abbasids?  
b) What was the title assumed by Abbasid Caliph?  
c) Where did they have their new capital?  
d) In whose period was the Abbasid Empire at the height of its glory?

27. Han Dynasty  
a) Who was the founder of Han Empire?  
b) What was the capital of Han Empire?  
c) Where did they have their new capital?  
d) Who was the powerful ruler of the Han dynasty?

VI. Answer any two of the following questions in detail: 2x5=10

28. Discuss the rise and growth of Athens, pointing out its glorious legacy.
29. Who were the Mongols? How did they rule China?
30. Write in detail about the various functions of money.
31. What are the benefits for workers provided by labour law?