DAILY EXAM MATHS - 2 KEY 24-04-2020

1. 1

2. -1

3. $\dfrac{4}{3}$

4. $\dfrac{17}{15}$

5. $\dfrac{49}{64}$

6. $5\sqrt{3}$

7. $\sqrt{2}$

8. 1

9. $90°$

10. 0

11. 1

12. 1

13. decreases

14. $-\sin^2\theta$

15. $\dfrac{1}{9}$

16. $\dfrac{1}{k}$

17. Line of sight

18. $\sqrt{2}$

19. 45m

20. Undefined

21. $\dfrac{1}{\sqrt{1-\sin^2\theta}}$

22. When an object is at higher level than the eye, then the angle formed between the line of sight and horizontal through eye is an angle of elevation.

23. $\sin\theta = \dfrac{side\ opposite\ to\ angle\ \theta}{hypotenuse}$

$\cos\theta = \dfrac{side\ adjacent\ to\ angle\ \theta}{hypotenuse}$

$\tan\theta = \dfrac{side\ opposite\ to\ angle\ \theta}{side\ adjacent\ to\ angle\ \theta}$

$\cot\theta = \dfrac{side\ adjacent\ to\ angle\ \theta}{side\ opposite\ to\ angle\ \theta}$

$\sec\theta = \dfrac{hypotenuse}{side\ adjacent\ to\ angle\ \theta}$

$\cos ec\,\theta = \dfrac{hypotenuse}{side\ opposite\ to\ angle\ \theta}$

24. $\angle QPR = 60°$ and $\angle PRQ = 30°$

25. $\angle A = 45°$ and $\angle B = 15°$

26. $12°$

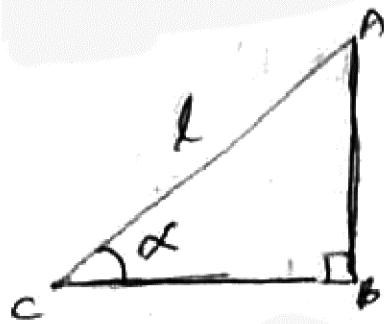27. $\cos 9° + \cot 9°$

28. Proof

29. Proof

30. Proof

31. Proof

32. Proof

33.

AB = vertical distance of the kite from the ground.
BC = horizontal distance of a person from the kite.
AC= distance between person and the kite.

34. $60°$

35. $7.5\ cm^2$

GENERAL SCIENCE - 2 KEY

1. anal sphincter

2. 1 to 1.5 litres of saliva is secreted per day.

3. Right kidney is placed slightly lower than left kidney due to the presence of liver above.

4. Bolus

5. Ivan Pavlov

6. Renal artery

7. Chyme

8. Proximal convoluted tubule

9. Olfactory receptors

10. Ghrelin

11. 300 - 800ml

12. Glomerulus

13. Palate

14. Platyhelminthes (flat worms)

15. 2009

16. Scopolamine

17. Raphides

18. Cholera, amoebiasis, typhoid, dysentry hepatitis

19. Rag pickers

20. Resin

21. Nervous system, circulatory system, muscular system, endocrine system.

22. The Urine is acidic in the beginning and becomes alkaline on standing because of decomposition of urea to form ammonia.

23. The wave like movement in the walls of digestive system with the help of circular and longitudinal muscles that propel the food is called peristalsis.

24. The materials which are not required for the growth and development of the plants are called secondary metabolites."Eg: alkaloids, resins etc.

25. Dental formula"Incisors:2, canines:1, premolars: 2, molars: 3 in each half of the jaw

26. The process of artificial filtration of blood with the help of dialysis machine is called hemodialysis.

27. The inner surface of the small intestine contains thousands of finger like projections called villi.

28. Oesophageal sphincter, cardiac sphincter, pyloric sphincter, ileocaecal sphincter, anal sphincter.

29. As weeds and wild plants synthesise toxic substances and store them in roots, leaves ,seeds for protection against herbivores. Herbivores do not prefer to eat such plants as most of the chemicals are unpleasant to taste.

30. Urine contains 96% of water, 2.5% of organic substances and 1.5% of inorganic salts

31. By the presence of mucous membrane on its inner wall the stomach gets protection against hydrochloric acid.

32. The process of the pyloric end of the stomach acting as a pump that delivers small amount of chyme into the duodenum and simultaneously forcing most of the contained material backwards into the stomach is called retropulsion.

33. The diameter of efferent arteriole is less than that of afferent arteriole so that the narrow outlet exerts more pressure in the glomerulus to bring about filtration.

34. The kidney failure is also called End Stage Renal Disease.

35. Deficiency of vasopressin causes excessive, repeated , dilute urination. This disease is called diabetes insipidus.